



Privileged & Confidential
Targeted Soil Assessment
Fiskville Training College,
4549 Geelong-Ballan Rd, Fiskville, VIC

Ref no: 212163.1

Prepared for Ashurst

March 2014

DOCUMENT CONTROL

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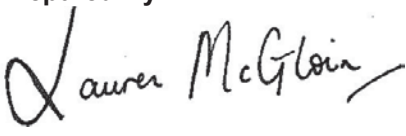

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Report Title:	<i>Privileged & Confidential</i> Targeted Soil Assessment Fiskville Training College, 4549 Geelong-Ballan Rd, Fiskville, VIC	
Doc. Ref:	212163.1Report04.7	
Date	19 March 2014	
Client:	Ashurst	
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TARGETED SOIL ASSESSMENT

Fiskville Training College

4549 Geelong-Ballan Rd, Fiskville, VIC

EXECUTIVE SUMMARY

Background

Cardno Lane Piper Pty Ltd was engaged by Ashurst (“the Client”), on behalf of the Country Fire Authority (CFA) to conduct a Targeted Soil Assessment at the Fiskville Training College (FTC) located at 4549 Geelong-Ballan Rd, Fiskville, Victoria (“the site”). The location of the site is shown on Figure 1 and the facilities and features¹ relevant to this investigation are shown on Figure 2 presented in Appendix A.

This was in response to the recommendations of the Independent Fiskville Investigation² by Professor Rob Joy (IFI Report).

Recommendation 1 stated: *That soil and groundwater quality be assessed in areas where fuel storage tanks are currently located or have been located in the past both above and below ground.*

Recommendation 2 stated: *That groundwater investigations be undertaken in the vicinity of: the historical flammable liquids PAD, the fuel mixing area, the historical foam training pits, the prop storage area and the area used to rehabilitate contaminated soils in 1998.*

Cardno Lane Piper advised CFA that each of these areas should be assessed for soil contamination as they are suspected source areas for both soil and groundwater contamination.

Subsequent to the commencement of this assessment, EPA issued two Clean Up Notices (CUN) to CFA for the site. These require a section 53X Environmental Audit and a section 53V Environmental Audit of the site to be carried out by an EPA accredited Environmental Auditor.

Purpose and Objectives

The purpose of this assessment is to provide the client with advice on the soil contamination status of the targeted areas identified for investigation in the IFI report included in this assessment (see Section 1.3.1) and the consequent implications for the suitability of the site for its continued use as a fire fighter training college.

The specific objectives of the assessment, subject to the limitations stated in Section 1.4, are to:

- Assess whether the protected beneficial uses of land appropriate for the current land use are impacted by contamination in the targeted areas.

¹ For example Feature 23a is the former location of an above ground fuels storage tank.

² Report prepared by Prof Robert Joy, *Understanding the Past to Inform the Future – Report of the Independent Fiskville Investigation*, June 2012

- In the event that significant contamination or potential for significant contamination is found, provide recommendations for further work necessary to define the need for remediation to make the site suitable for its current use.

Scope of Assessment

Cardno Lane Piper developed a work program to respond to Recommendation 1 and 2 of the IFI report, which refers to the investigation of contamination at several targeted areas of the site (shown on Figures 2, 3, 4 & 5 with the 'feature' numbers) including:

- Current and former aboveground (AST 1 and 2) (Features 23a and 23b) and underground storage tanks (UST 1 and 2) (Features 8a and 8b) for diesel and petrol
- Flammable Liquid Practice Area for Drills (FLP) (Feature 27)
- Fuel Mixing Area (FMA) (Feature 22)
- Former Foam Training Pits (FTP) (Feature 45)
- Prop Storage Area (PSA) (Feature 17)
- Soil Composting Area (SCA) (Feature 44)

This report details the works conducted at these locations and the soil results obtained. The assessment of groundwater was conducted as a separate phase of work, the results of which are presented in Cardno Lane Piper report titled *Groundwater Contamination Assessment – Fiskville Training College* (Cardno Lane Piper, 2014b).

Summary of Soil Contamination Results & Significance of Contamination

The results of soil testing in the areas targeted (identified by the IFI Report as those most likely to be contaminated) have indicated that there are isolated areas of soil impacts identified at the site, none of which presents an impediment to the continued use of the site for fire fighting training. The results of the targeted soil sampling and testing, which are presented in Section 4 and tabulated in Appendix B, indicate that:

- Total petroleum hydrocarbons (TPH) concentrations above the adopted ecological assessment criteria but below the human health assessment criteria have been reported in the vicinity of UST 1 and FMA. The compounds may present some impact on terrestrial ecosystems at a local scale, however, given the nature of the land use (commercial/industrial) in the operational area of the site, it is unlikely that this impact would present a significant detriment to this beneficial use of land (highly modified terrestrial ecosystems).
- All samples analysed in this targeted soil assessment reported TPH concentrations below the assessment criteria adopted for the protection of human health. Therefore it is unlikely to pose any risks to human health based on existing site use due to petroleum hydrocarbon contamination. However, hydrocarbon odour was observed in a few locations during this investigation and therefore, the soil may be odorous if excavated and requires management.
- Two soil samples in the vicinity of the FLP adjacent to Dam 1 are contaminated with Perfluorooctane Sulfonate (PFOS), in excess of the adopted criterion (for human health in a residential setting). The adopted human health investigation criterion for PFOS that are exceeded are conservative (i.e. residential land use which is much more conservative than the existing commercial/industrial land use). However, the risk is currently managed by normal OHS practices restricting access to this area. There are also a limited number of personnel accessing the contaminated area between the FLP and Dam 1.

- All soil samples collected in the vicinity of the FLP and former FTPs, and two soil samples from the windrows at the SCA have reported PFOS concentrations above the adopted terrestrial ecological protection criteria. In addition, chromium, nickel, 3- and 4- methyl phenol and vanadium were also detected at concentrations above ecological criteria in the vicinity of the FLP, FTPs and PSA. The recorded metal concentrations are probably naturally occurring and are not considered to be representative of confirmation. Furthermore, any impact from these contaminants to ecosystems at the affected areas is likely to be minimal based on the current use of the affected areas of the site, i.e. fire training PAD (FLP and former FTPs), props storage (PSA) and vacant land (SCA). It should be noted though that there may be risks to ecosystems outside of the targeted areas (e.g. open areas to the east and dams to the south) through migration of the contaminants via surface run-off, erosion, earthworks or wind transport.
- Soil at the SCA has relatively low soil pH (average 5.8) compared to the rest of the site. However, soil of this pH is not classified as 'aggressive' in terms of exposure to concrete piles for foundations of buildings and structures.
- Further review of the soil results indicates that the beneficial uses of land applicable to the operational area of the training college site (i.e. commercial/industrial land use) are not precluded by the contamination observed.

Management of Environmental Risks

CFA are in the process of developing an Environmental Management System (EMS) including a Site Contamination Management Plan to provide information on potential contamination hazards and their management. The future surveillance of any contaminated soil or hazardous material in the ground including the minor contamination identified in this report should be managed by this plan.

Recommendations

Following on from the conclusions reached in relation to the key objectives of this investigation, the following actions are recommended to assess the site for contamination beyond the areas identified in the IFI Report:

1. The soil at the FLP and former FTPs should be further investigated to delineate the PFOS and potentially 6:2 fluorotelomer sulfonate (6:2 FtS) contamination on the periphery of the area remediated in 1998. This includes lateral and vertical delineation at the base of the previously remediated area.
2. While risks to the health of the few persons potentially exposed to soil contaminated with PFOS in the FLP and former FTP area is assessed to be low, exposures should be minimised through the use of appropriate OHS procedures where direct contact with soil is likely, such as when cutting grass around Dam 1 or excavating soil near the adjacent oil-water separator.
3. The potential risk to ecosystems outside the FLP, former FTPs and SCA areas due to PFOS contaminated soils, as a result of migration of contaminants to stormwater drains, requires further assessment and management by improving the drainage system in the vicinity of Dams 1 and 2.
4. The impacted soil at UST 1 and FMA should be further investigated to delineate the TPH contamination. The contamination in these areas does not present a health risk, however it is odorous when exposed to air and should be managed by applying OHS and environmental procedures (to be contained in the proposed Site Contamination Management Plan) if excavation occurs in these limited areas.
5. The soil beneath AST 2 should be assessed as AST has now been removed.

6. All features listed in “Areas Not Yet Investigated” (refer to Section 4.1.2 of the Cardno Lane Piper’s *Site History Review* report (Cardno Lane Piper, 2014a)) which are not included in this investigation, are also recommended for further assessment.

Limitations

While this Executive Summary has endeavoured to accurately summarise the key points of the Report, the latter shall take precedence and the Executive Summary must be read in conjunction with the full report (Cardno Lane Piper document ref. 212163.1Report04.7).

While this report has been undertaken in accordance with the current industry guidelines and standards of practice, there may be some limitations on the meaning and use of this report. The reader is advised to read this report in conjunction with the attached document *Information About Environmental Reports* (Appendix I).

Cardno Lane Piper
March 2104

TARGETED SOIL ASSESSMENT

Fiskville Training College, 4549 Geelong-Ballan Rd, Fiskville, VIC

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LIST OF ABBREVIATIONS AND UNITS

Chemical Names

6:2 FtS	6:2 Fluorotelomer Sulfonate
BTEX	Benzene, Toluene, Ethylbenzene & Xylenes (subset of MAH)
MAH	Monocyclic Aromatic Hydrocarbons
OCP	OrganoChlorine Pesticides
OPP	OrganoPhosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PCDD	Polychlorinated Dibenzodioxins
PCDF	Polychlorinated Dibenzofurans
PFC	Perfluoro Compounds
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
PHC	Petroleum Hydrocarbons
SVOC	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
VOC	Volatile Organic Compounds

Technical Terms

4WD	Four Wheel Drive
AHD	Australian Height Datum
AMG	Australian Map Grid
ANZECC	Australian and New Zealand Environment and Conservation Council
ASC	Assessment of Site Contamination
AST	Aboveground Storage Tank
COC	Chain of Custody
CoEA	Certificate of Environmental Audit
COPC	Contaminants of Potential Concern
CUN	Clean Up Notice
DNAPL	Dense Non-Aqueous Phase Liquid
EIL	Environmental Investigation Levels
EMS	Environmental Management System
EPA	Environment Protection Authority
ESA	Environmental Site Assessment

GIS	Geographic Information System
GME	Groundwater Monitoring Event
HIL	Health Investigation Levels
LEL	Lower Explosive Limit
LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of Reporting
LPG	Liquefied Petroleum Gas
N/A	Not Applicable
NAPL	Non-Aqueous Phase Liquid
NDD	Non Destructive Digging
NEPM	National Environment Protection Measure
PID	Photo-ionisation detector (measures in ppm)
QA	Quality Assurance
QC	Quality Control
RL	Reduced Level
RPD	Relative Percentage Difference
SAQP	Sampling and Analysis Quality Plan
SEPP	State Environment Protection Policy
SoEA	Statement of Environmental Audit
TIT	Triple Interceptor Trap
UCL	Upper confidence Limit ("95% UCL of the mean" is a value for the mean concentration from sampling which has only a 5% chance of being greater than the true mean value.)
UST	Underground Storage Tank

Units

ha	Hectares
mbgl	Metres Below Ground Level
mg/kg	Milligram per Kilogram (approximately equivalent to ppm)
ppm	Parts per Million
µg/kg	Microgram per Kilogram (approximately equivalent to ppb)

Site Specific

AWA	Amalgamated Wireless (Australasia) Ltd
BA	Compressed Air Breathing Apparatus
CFA	Country Fire Authority
CSR	Confined Space Rescue
DBA	Drum Burial Area

DFA	Former Drum Fire Area
DET	Driver Education Training
EX	Explosives
FLP	Flammable Liquid Practice Area for Drills or PAD
FMA	Fuel Mixing area
FTC	Fiskville Training College
FTP	Foam training pits
IFI	Independent Fiskville Investigation
OTC	Overseas Telecommunications (Australia) Commission
PAD	Practice Area for Drills
PSA	Props Storage Area
RAR	Road Accident Rescue
RR	Rope Rescue
RTG	Regional Training Ground
SCA	Soil Composting Area
SFA	Structural Fire Attack
STP	Sewage Treatment Plant
TR	Trench Rescue
USR	Urban Search and Rescue
VUT	Victoria University of Technology
WF	Wildfire
WSP	Water Supply Pit

TARGETED SOIL ASSESSMENT

Fiskville Training College, 4549 Geelong-Ballan Rd, Fiskville, VIC

1 INTRODUCTION

1.1 Background

Cardno Lane Piper Pty Ltd was engaged by Ashurst (“the Client”) on behalf of the Country Fire Authority (CFA), to conduct a Targeted Soil Assessment at the CFA Fiskville Training College (FTC) located at 4549 Geelong-Ballan Rd, Fiskville, Victoria (“the site”). The location and key features of the site are shown on Figures 1 and 2 presented in Appendix A.

Cardno Lane Piper developed a work program in response to the recommendations of the Independent Fiskville Investigation³ by Professor Rob Joy (IFI Report).

Recommendation 1 stated: *That soil and groundwater quality be assessed in areas where fuel storage tanks are currently located or have been located in the past both above and below ground.*

Recommendation 2 stated: *That groundwater investigations be undertaken in the vicinity of: the historical flammable liquids PAD, the fuel mixing area, the historical foam training pits, the prop storage area and the area used to rehabilitate contaminated soils in 1998.*

Cardno Lane Piper advises CFA that each of these areas should be assessed for soil contamination as they are suspected source areas for both soil and groundwater contamination.

This report details the targeted assessment of soils in the vicinity of current and former fuel storage tanks, as well as other items considered to be strategic or prudent. The assessment of groundwater was conducted as a separate phase of work, the results of which are presented in Cardno Lane Piper report titled *Groundwater Contamination Assessment – Fiskville Training College* (Cardno Lane Piper, 2014b).

The areas targeted in this assessment are;

- Current and former aboveground storage tanks (AST) (Features 23a and 23b) and underground storage tanks (UST) (Features 8a and 8b) for diesel and petrol.
- Flammable Liquid Practice Area for Drills (FLP) (Feature 27). This is different from the former FLP (Feature 58) which largely coincides with the location of the FLP. The former FLP was demolished and remediated in 1998, and is not a target of this assessment.
- Fuel Mixing Area (FMA) (Feature 22).
- Former Foam Training Pits (FTP) (Feature 45).
- Props Storage Area (PSA) (Feature 17).
- Soil Composting Area (SCA) (Feature 44).

Subsequent to the commencement of this assessment, EPA issued two Clean Up Notices (CUN) for the site on 22 January 2013. These require a section 53X Environmental Audit and

³ Report prepared by Prof Robert Joy, *Understanding the Past to Inform the Future – Report of the Independent Fiskville Investigation*, June 2012

a section 53V Environmental Audit of the site to be carried out by an EPA accredited Environmental Auditor.

1.2 Purpose and Objectives

The purpose of this assessment is to provide the client with advice on the soil contamination status of the targeted areas included in this assessment (see Section 1.3.1) and the consequent implications for the suitability of the site for its continued use as a fire fighter training college.

The specific objectives of the assessment, subject to the limitations stated in Section 1.4, are to:

1. Assess whether the protected beneficial uses of land appropriate for the current land use are impacted by contamination in the targeted areas
2. In the event that significant contamination or potential for significant contamination is found, provide recommendations for further work necessary to define the need for remediation to make the site suitable for its current use

1.3 Scope of Assessment

1.3.1 Targeted Soil Investigation Areas

Cardno Lane Piper investigated the soil in the following targeted areas of the site, which are shown on Figure 3, Appendix A:

- AST 1 and AST 2 (Features 23a and 23b)
- UST 1 and UST 2 (Features 8a and 8b)
- FLP (Feature 27)
- FMA (Feature 22)
- FTP (Feature 45)
- PSA (Feature 17)
- SCA (Feature 44)

The assessment of groundwater was conducted as a separate phase of work, the results of which are presented in Cardno Lane Piper report titled *Groundwater Contamination Assessment – Fiskville Training College* (Cardno Lane Piper, 2014b).

1.3.2 Site Inspection

A site inspection was conducted with the aid of site plans to:

- Record site conditions and relevant observations in targeted areas by taking notes and photographs.
- Confirm the location of targeted areas as listed in Section 1.3.1. and identify the location of any fuel storage tanks (above or below ground) with potential to cause contamination of land.
- Mark out sampling locations, verification boreholes and targeted areas.

1.3.3 Non-Intrusive Site Investigations

Areas were surveyed using an underground service locator to indicate the location of services and utilities present at the targeted areas.

1.3.4 Intrusive Site Investigation Sampling & Testing

The following site investigation sampling and testing were carried out (further details are presented in Section 3):

- Implemented a Sampling and Analysis Quality Plan (SAQP) including laboratory analysis of field Quality Control (QC) samples.
- Performed intrusive investigation of soil conditions at the targeted areas by drilling and sampling at targeted locations using methods set out in the following sections of this report.
- Testing of selected soil samples for a broad range of analytes (by a NATA accredited laboratory).

1.3.5 Reporting

This site assessment report documents the investigation activities and results in order to provide findings and recommendations relevant to the objectives of the assessment.

1.4 Standard of Assessment & Limitations

This assessment has been undertaken in general accordance with the current “industry standards” for an ESA for the purpose, objectives and scope identified in this report. These standards are set out in:

- National Environment Protection [Assessment of Site Contamination] Measure (NEPM), December 1999, National Environment Protection Council (NEPC)
- AS4482.1-2005: Guide to the sampling and investigation of potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds, Standards Australia (2005).

The agreed scope of this assessment has been limited for the current purposes of the client. This assessment only relates to the targeted areas listed in Section 1.3.

Subsurface conditions may vary considerably away from the sample locations where information has been obtained, and other areas of the site which were not included in the scope of work for this assessment.

This assessment report is not any of the following:

- An Environmental Audit Report as defined under the *Environment Protection Act 1970*.
- A Detailed ESA or Environmental Site Investigation sufficient for an Environmental Auditor to be able to conclude a statutory Environmental Audit of the entire site.
- An assessment of any areas of the site outside of the targeted areas as listed in Section 1.3.
- A geotechnical report and the bore logs may not be sufficient as the basis for geotechnical advice.
- A detailed hydrogeological assessment in conformance with EPA Publication 668 *Hydrogeological Assessment (Groundwater Quality) Guidelines*, September 2006.
- A site history review.

An overview of environmental site assessments is included in Appendix I.

2 SITE DESCRIPTION AND SETTING

2.1 Site Definition

Table 2-1 summarises the key details defining the site. The location of the site is shown on Figure 1, Appendix A.

Table 2-1: Site Identification Details

Site Name	Fiskville Training College
Site Address	4549 Geelong-Ballan Rd, Fiskville, Vic
Site Area	150 ha (approximately)
Title Details	Lots 1, 2, 3 and 4 on Title Plan 845669K Volume 09503, Folio 693
Municipality	Moorabool Shire
Current Site Owner	Country Fire Authority
Planning Zone	Farming Zone (FZ)
Planning Overlay	Design and Development Overlay (DDO) Environmental Significance Overlay (ESO)

2.2 Geographic Setting

The site and its immediate surrounding area are in an elevated plateau about 440 m above sea level. The land to the east of the site falls away, steeping into the valley of the Yaloak Creek.

On site, the topography is dominated by the shallow valley occupied by Beremboke Creek and Lake Fiskville in the western area of the site, and the elevated fill platform constructed south of Dam 1 and around Dam 2. The lowest point on the site is near the south-western corner, where Beremboke Creek exits the site in a southerly direction. The maximum difference in elevation of the land across the site is approximately 8 m. The topography and site layout is presented in Figure 2-1. (Note that this figure contains a vertical exaggeration of 5 times the horizontal scale.)



Figure 2-1: Oblique Aerial Photo of Site

Surface water drainage of the undeveloped areas of the site is towards Beremboke Creek which was dammed several decades ago to form Lake Fiskville. The central area of the site drains to the west (apart from PADs and bunded areas) although some stormwater is directed towards Dam 3. Dams 1 and 2 were primarily designed and operated to contain water from the firewater system on the FLP and not for stormwater runoff.

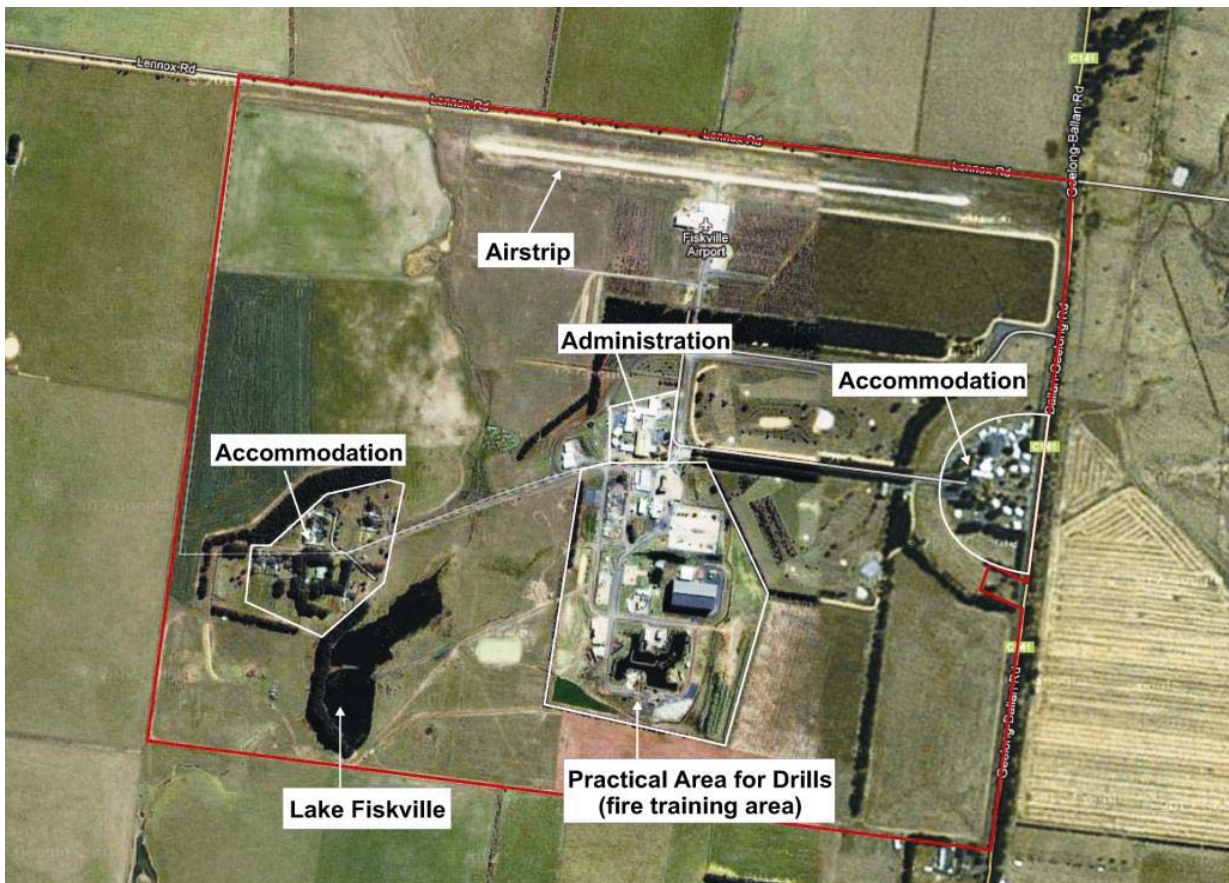


Figure 2-2: Main Site Facilities

2.3 Site Use and Infrastructure

The site is rectangular in shape, and is occupied by a number of fire training related facilities, as shown in Figure 2-2.

The site currently operates as a fire fighting training college, primarily used by CFA members, including instructors, trainees and administration/maintenance staff. The site is also used by other government agencies such as Metropolitan Fire Brigade (MFB), State Emergency Service (SES) and private companies for fire fighting training and other forms of operational and classroom-based training.

The training program includes hot fire training, emergency response and incident management, road accident rescue simulation, 4WD drivers training, leadership and other types of classroom training. While the site is open all year-round and 7 days per week, hot fire training does not generally occur during fire season between December and March.

In general, the fire training facilities are located in the centre of the site while the ancillary and support services and accommodation are located away from this area, in both the far eastern and western areas of the site. The operational area accounts for about 50 ha of the 150 ha site. The remaining 100 ha is either paddocks used for grazing or hay-cutting. There are also recreational spaces such as the golf course and a perimeter running track.

An aerial image of the site is presented in Figure 2-2. The site layout, key areas and current infrastructure at the site are presented in more detail in Figure 2 (Appendix A) and are summarised below. Each feature has been given a unique identifier. Targeted areas investigated in accordance with the IFI Report recommendations are shown in **bold text**.

The main buildings in the eastern part of the site are:

- Dining room and recreational facilities (Feature 9)
- Temporary accommodation cottages (Feature 10)
- Garden and maintenance shed (Feature 52)

Key buildings in the central operations area:

- Main reception building and learning centre (Features 2 and 3)
- Teaching centres (classrooms) (Feature 4)
- Maintenance workshops (Feature 6)
- Amenities building (Feature 16a and 16b) and nearby portable buildings

Key buildings in the western area:

- Temporary (trainee) residential area (Feature 11a)
- Permanent (staff) residential area (Feature 11b)

Key infrastructure facilities include:

- Airstrip and hangar building located in the northern portion of the site (Features 13 and 14)
- Sewage treatment plant (STP) and associated effluent soakage area (Features 5 and 40)
- A golf course north and south of Plantation Parade (Feature 54)
- Five shallow dams within the golf course used to water the golf course (Dams A, B, C, D and E)

The Practice Area for Drills (PAD) fire training area which includes:

- **Props storage areas (PSA) which include miscellaneous drums, tyres, cars and car batteries (Features 17)**
- **Fuel mixing area (FMA) (Feature 22)**
- **FLP (Feature 27)**

- Confined space training PAD (CSR PAD) and rope rescue PAD (RR PAD) (Feature 20)
- Standard and advanced LPG PADs (Features 32a and 32b)
- Victorian University of Technology (VUT) building (Feature 31)
- **Two areas of former diesel/petrol UST (UST 1 and UST 2) (Features 8a and 8b)**
- **Diesel AST (Features 23a and 23b)**
- Liquefied petroleum gas (LPG) AST (Feature 7a)
- Fire attack building (Feature 24)
- Water supply pit (WSP) (Feature 25)
- Parade ground water storage tank and pump house for fire training drills (Feature 26)
- Water storage tank (Features 57a and 57b)
- Material Storage (Feature 19)
- Tank formerly used as fire prop (Feature 30)
- Structural fire attack building (SFA PAD) (Features 33a and 33b)
- Great southern stand (Feature 34)
- Mess hall (Feature 35)
- Backup water tank and pump house (Feature 38)
- **Former foam training pits (FTPs) (Feature 45)**
- Remediated area of former flammable liquid PAD (Feature 58), which is located west of the former Foam Training Pits (Feature 45) inside and outside the boundary of the current FLP
- Shallow spoon drain connecting VUT building to Dam 1 (Feature 59)

The information provided anecdotally from site personnel and presented in the historical reports reviewed in the Cardno Lane Piper's report titled *Site History Review* (Cardno Lane Piper, 2014a) did not confirm whether underground infrastructure associated with former UST (Feature 8a and 8b) have been removed. However, above ground vent pipes were observed to be not present.

Other facilities surrounding the PAD:

- Driver education training PAD (DET PAD, also referred to as 4WD area) and explosives PAD (EX PAD) (both PADs are located at Feature 21a)
- Water crossing DET PAD (Feature 21b) and sand crossing DET PAD (Feature 21c) are components within the main DET PAD (Feature 21a)
- Trench rescue PAD (TR PAD) (Feature 36)
- Road accident rescue PAD (RAR PAD) (Feature 37)
- Urban search and rescue PAD (USR PAD) (Feature 39)
- LPG AST (Feature 7b)
- Fuel AST 3 (Feature 23c)
- Car storage (Feature 51)
- **Soil composting area (SCA) (Feature 44)**
- Fire truck storage (Feature 18)

The PAD also includes a series of water treatment facilities and dams used to contain effluent from the fire training drills. These are:

- Surge basin (Feature 29)
- Oil-water separator, (also called Triple Interceptor Trap (TIT) (Feature 28)
- Pump sump between the TIT and Dam 1 (Feature 41)
- Dam 1
- Dam 2
- Dam 3

To the west of the PAD is open ground and includes:

- Dam 4
- Lake Fiskville
- Beremboke Creek

Two former waste management areas are located in the far south western corner of the site known as:

- Landfill 1 (AWA) (Feature 42)
- Landfill 2 (CFA) (Feature 43)

Areas associated with drum storage, possible drum burial and buried drum removal include:

- Former drum fire area (DFA) (Feature 49)
- Drum burial area 1 (DBA 1) (Feature 46), to the south of the airstrip
- Inferred area drum burial removal (Feature 46a) within DBA 1
- Inferred additional area of drum burial removal (Feature 46b) within DBA 1
- Drum burial area 2 (DBA 2) (Feature 47), to the north of the administration building
- Drum burial area 3 (DBA 3) (Feature 48), on the golf course to the west of Dam A
- Drum burial area 3a (DBA 3a) (Feature 48a), on the golf course to the west of Dam A and south of DBA 3

Other site features include:

- Wildfire PAD (WF PAD) to the east of the airport hangar (Feature 15)
- Tree plantation area at the north-east corner of the site (Feature 55)
- Farming area (Feature 56)
- Vacant land (Feature 50)
- An area of stockpiles of unidentified soil/material located west of Beremboke Creek off Deep Creek Road (Feature 60)

The site features can be seen on Figure 2, Appendix A. A selection of photographs of some of these facilities is presented in Appendix D.

2.4 Geology and Soil

The geology of the site and its regional setting has been ascertained from the following sources:

- Ballan 1:50,000 Geological Map Series (Geological Survey of Victoria, 1986)
- Melbourne 1:250,000 Geological Map Series (Geological Survey of Victoria, 1997)

The site is underlain by Quaternary or Tertiary aged fractured basalt to a depth of between 24 and 29 mbgl. This is underlain by Tertiary sediments of the Werribee Formation. The surface soil at the site is generally basaltic clay of less than 2 m thickness and is typically grey silty clays of low permeability and high plasticity when moist.

Further details of site geology and aquifers are presented in the Cardno Lane Piper report titled *Groundwater Contamination Assessment – Fiskville Training College* (Cardno Lane Piper, 2014b). However, for the purposes of the current assessment, the soil profile to a depth of approximately 2 m is the most relevant geological unit.

3 SITE INVESTIGATIONS

3.1 Soil Investigation Program

3.1.1 Sampling Strategy & Methodology

The soil sampling fieldwork was conducted by Cardno Lane Piper between 9 August 2012 and 22 September 2012. The scope and method of the work are summarised in Table 3-1. Locations were chosen to assess the targeted areas identified in Section 1.3.1. Sampling locations are summarised in Table 3-2 and shown on Figures 4 and 5, Appendix A.

The location of boreholes and the recovery and analysis of soil samples was limited by the targeted nature of this assessment as well as access constraints.

Table 3-1: Soil Investigation Activity Summary

Activity	Details
Dates of Field Activity	9 August 2012 13 August 2012 14 August 2012 16 August 2012 5 September 2012 11 September 2012 22 September 2012
Service Location	Services were identified by Cardno AUS prior to any sub-surface works being undertaken.
Concrete Cutting	The boreholes targeting UST 2 (BH1 to BH5 and BH 9 to BH10) were concrete cut prior to Non Destructive Digging (NDD). Boreholes BH1 to BH10 were extended using NDD technique. The NDD was undertaken with water. Concrete thickness ranged between 145 and 160 mm. 10 to 15 mm rebar was located 80 to 110 mm beneath the concrete surface.
Naming of Investigation locations	Locations SB01 to SB30 targeted the following areas: <ul style="list-style-type: none"> ● SCA (Feature 44) ● PSA (Feature 17), FMA (Feature 22) and AST 1 (Feature 23a) ● FLP (Feature 27) including the TIT (Feature 28) and AST 2 (Feature 23b) Locations BH1 to BH10 were drilled as validation boreholes to assess the location of former USTs reported in previous assessments to have been located adjacent to the learning centre (Feature 3) and the amenities building (Feature 16).
Drilling	Boreholes SB01 to SB30 were extended by hand auger to the base of the borehole or to 1mbgl (whichever was encountered first) due to the potential presence of underground services, based on the results of service location. Boreholes were subsequently drilled using direct push method if required. The drill rigs used in this investigation were Cardno Lane Piper's Eziprobe direct push rig and a subcontractor's track-mounted geoprobe rig. Boreholes BH1 to BH10 were extended by 'air knife' to approximately 1.5 mbgl due to the potential presence of underground services, based on the results of service location. Boreholes were subsequently drilled using direct push method.

Activity	Details
Bores Drilled and Target Depths	<p>Boreholes BH1 to BH10 were generally drilled to refusal at a depth of up to 3.5 mbgl. The target depth of boreholes SB01 to SB28 is arbitrarily defined as 2 mbgl (or shallower if refusal on basalt was encountered) with the deepest borehole SB14 drilled to a depth of 2.5 mbgl.</p> <p>Boreholes SB29 and SB30 were located directly beneath AST 2 (since removed), which had insufficient clearance to drill a borehole directly underneath. As such, the borehole was extended on an angle using a hand auger operated from adjacent to the AST. These boreholes were targeted at shallow soil samples and were terminated at 0.5 mbgl due to access constraints.</p>
Soil Logging	<p>Soil encountered during drilling and hand augering was described and logged in accordance with Cardno Lane Piper's soil logging procedure. Bore logs are presented in Appendix C.</p>
Soil Sampling	<p>Soil samples were planned to be taken where there was an indication of potential contamination or a change in soil lithology, or at depths of 0.1, 0.5, 1.0 and 1.5 mbgl, to the base of the borehole for boreholes SB01 to SB30.</p> <p>Samples were planned for collection at 0.5 m and then for each change in lithology in boreholes BH1 to BH4. Only deeper samples were collected for boreholes BH9 and BH10. These boreholes were targeting UST 2 (Feature 8b).</p> <p>Samples were generally collected between 2.0 to 3.0 mbgl in boreholes BH5 to BH8 to target the expected base of former USTs at UST1 (Feature 8a).</p> <p>The sampling at the required depths that were cleared by NDD was conducted with a hand-auger into non-disturbed soils. While it is possible that water used in the NDD may impact on the sample representiveness, this is considered to be negligible as the water from NDD was first removed from the borehole prior to sample collection.</p> <p>Where possible, if indications of potential contamination were observed, such as fill, buried rubbish, odorous soils and soil staining, then soil sampling continued to natural or non-impacted soils or refusal on rock, to assess the nature and extent of potential contamination. Soil samples were stored in glass containers provided by the laboratory. The records of the soils encountered, the samples collected including depths and related observations are presented in the borehole records. All sample jars were labelled with an indelible marker pen on water resistant labels attached to the sample jars.</p>
Decontamination Procedure	<p>Reusable soil sampling equipment was rinsed with Decon 90 and deionised water prior to the collection of each sample.</p>
Soil Screening	<p>Soil samples were field screened using a calibrated PID and noting any odours or other olfactory signs of contamination. PID field screening was undertaken using a headspace method (soil placed into a disposable snap lock bag, left to reach equilibrium and the PID inserted through the bag to take a reading). A new bag was used for each sample. PID records are provided in bore logs presented in Appendix C.</p>
Sample Preservation and Transport	<p>Samples were stored on ice, in an esky while on-site and in transit to the laboratory under Chain of Custody documentation.</p>
Borehole Abandonment	<p>Boreholes SB01 to SB30 were abandoned and backfilled with soil cuttings produced during drilling. The bores located beneath concrete were backfilled with bentonite pellets to approximately 0.2 mbgl, which were covered with rapid set cement set flush with the surface.</p> <p>Boreholes BH2 to BH4 were backfilled with sand following NDD for OH&S reasons prior to further drilling occurring in order not to leave open holes in the concrete pad. Later this sand was removed from the pre-collars when the boreholes were extended using direct push method.</p>

Activity	Details
	Boreholes BH6 to BH8 not located beneath the concrete were backfilled with soil cuttings produced during drilling and sand.
Disposal of Soil Cuttings	Drill cuttings were stored in clean drums and transported and disposed off-site by an EPA licensed waste transport contractor in conjunction with soil cuttings from groundwater investigations (see report titled <i>Groundwater Contamination Assessment – Fiskville Training College</i> (Cardno Lane Piper, 2014b)). Waste Transport certificates are presented in Appendix F.

Table 3-2: Soil Sampling Locations

Location	Location Name	Maximum Depth of Investigation (mbgl)	Rationale for location
AST 1 (Feature 23a) and FMA (Feature 22)	SB04 to SB08	2.1 m	Assess for impacts resulting from the use and storage of fuels
AST 2 (Feature 23b)	SB29 and SB30	0.5 m	Assess for impacts resulting from the use and storage of fuels
UST 1 (Feature 8a) and UST 2 (Feature 8b)	BH1 to BH10	3.5 m	Assess for impacts resulting from the use and storage of fuels and chemicals. BH4 encountered significant gravel and fill and collapsed at 2.4 mbgl. Borehole BH10 was drilled immediately adjacent to borehole BH4 to confirm the depth to basalt. As such, no samples were analysed from borehole BH10.
FLP (Feature 27) and former FTPs (Feature 45)	SB09 to SB18, SB29 to SB30	2.4 m	Assess for impacts resulting from the storage and burning of fuels and chemicals. FLP was not accessible, so samples were located around the FLP, predominantly to the south and east consistent with the flow gradient of the FLP and surrounding land.
PSA (Feature 17)	SB01 to SB03	2.1 m	Assess for impacts resulting from the storage of props and associated use with fuels and chemicals.
SCA (Feature 44)	SB19 to SB28	2.3 m	Assess for impacts resulting from the presence of contaminated soil imported from the former FLP (Feature 58) area.

The fieldwork was undertaken by an experienced environmental scientist/engineer in accordance with the agreed scope of work and using methods set out in the Cardno Lane Piper soil sampling procedure which conforms to the industry standard of practice. A copy of Cardno Lane Piper soil sampling procedure will be provided separately to the Auditor for review.

The records and observations made during the fieldwork are shown in bore logs presented in the Appendix C. Copies of calibration certificates for PID and Lower Explosive Level (LEL) equipment used in this soil investigation are included in Appendix F.

3.1.2 Laboratory Analysis – Soil

All samples were submitted to the laboratory and selected samples subjected to laboratory testing. The selection of samples for laboratory analysis are based on field observations (visual and olfactory), PID screening and characteristics of the site features targeted based on findings from Cardno Lane Piper report titled *Site History Review* (Cardno Lane Piper, 2014a). The selected samples were tested for a broad range of inorganic and organic parameters as shown in Table 3-3.

Table 3-3: Laboratory Testing Program – Targeted Samples

Location	Samples	Analysis
AST 1 and AST 2 (Features 23a to 23b), UST 1 and UST 2 (Features 8a and 8b) and FMA (Feature 22)	SB04 to SB05 SB06 to SB08 SB29 to SB30 BH1 to BH9	TPH, BTEX, Lead, Naphthalene
FLP (Feature 27) and Former FTP (Feature 45)	SB09 to SB18	TPH, SVOC, VOC, Metals, PCB, pH, PFOS, PFOA, 6:2 FtS
Props Storage Area (Feature 17)	SB01 to SB03	TPH, SVOC, VOC, Metals, PCB, pH, PFOS, PFOA, 6:2FtS
Soil Composting Area (Feature 44)	SB19 to SB28	TPH, SVOC, VOC, Metals, PCB, pH, PFOS, PFOA, 6:2FtS
Analytical Definitions		
<p>Notes</p> <ol style="list-style-type: none"> 1. TPH - Total Petroleum Hydrocarbons 2. BTEX - Benzene, Toluene, Ethyl benzene, Xylene 3. SVOC - Semi-Volatile Organic Contaminates 4. VOC - Volatile Organic Contaminates 5. PCB - Polychlorinated Biphenyls 6. Metals - Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Manganese, Mercury, Nickel, Lead, Vanadium and Zinc 7. PFOS - Perfluorooctane Sulfonate 8. PFOA - Perfluorooctanoic Acid 9. 6:2FtS - 6:2 Fluorotelomer Sulfonate 		

It is recognised that the full polycyclic aromatic hydrocarbons (PAH) suite was not analysed at AST 1, AST 2, UST 1, UST 2 and FMA features even though PAH is listed as a contaminants of potential concern (COPC) in the Cardno Lane Piper report titled *Site History Review* (Cardno Lane Piper, 2014a) for these features. Naphthalene was tested for instead and if impacts were identified, further testing for the full PAH suite would be conducted.

Copies of the NATA stamped laboratory reports, Cardno Lane Piper Chain of Custody, sample receipt records and a data quality control/quality assurance (QA/QC) review of the soil sampling program are included in Appendix E. Tabulated laboratory results are presented in Appendix B.

3.2 Soil Assessment Criteria

This section discusses the sources of assessment criteria adopted for this assessment. The relevant assessment criteria are included and compared with the tabulated analytical data in Appendix B.

The *SEPP Prevention and Management of Contamination of Land* (2002) designates protected beneficial uses according to a site's land use. The site use for which this assessment is being conducted is:

- Commercial and Industrial (for the targeted areas).

This report has been completed following the general requirements of the ASC NEPM (1999). The ASC NEPM was amended in 2013 and came formally into operation on 16 May 2013. The ASC NEPM is implemented in Victoria through State Environment Protection Policy (SEPP). EPA Victoria has directed that all current investigations can use the 1999 NEPM during the transition period of 12 months before full implementation of the amended ASC NEPM (2013) in May 2014. This phase of the assessment was completed prior to the amended ASC NEPM becoming operational and the report has been completed prior to May 2014.

Therefore, the beneficial uses and assessment criteria commensurate with this land use are:

- NEPM Ecological Investigation Levels (EIL): to assess potential risks to natural ecosystems.
- NEPM Health Investigation Levels (HIL F): Commercial/Industrial. It includes premises such as shops and offices, as well as factories and industrial sites.

In October 2013, a re-evaluation the assessment criteria for Total Petroleum Hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylene (BTEX) and perfluoro compounds (PFC) was conducted in order to select the most appropriate in the context for FTC. This is presented as Appendix H. This has an effect on the overall findings and conclusions of this assessment with respect to protection of beneficial uses.

Where the relevant Australian guidelines do not include a criterion for a particular chemical, a suitable criterion can be sourced from authorities in other jurisdictions. Where these levels do not offer a value for a particular parameter, alternative and equivalent sources of investigation levels are used, including:

- US EPA (2009) – Soil Screening Levels for Perfluorooctanoic Acid (PFOA) (16 mg/kg) and Perfluorooctane Sulfonate (PFOS) (6 mg/kg). These are for a residential exposure setting.
- Environment Agency (2004) – Soil 'Practical No Effect Concentration' (PNEC) for PFOS (370 µg/kg or 0.37 mg/kg). This is an ecological criterion as the PNEC_{soil} for earthworm is adopted as the criteria for the soil medium.

In the absence of available criteria for 6:2 Fluorotelomer (FtS), adopting the conservative approach, the lowest of the available PFC criteria (which is PFOS) is adopted for 6:2 FtS for comparison purpose only.

The Canadian Council of Ministers of the Environment (CCME) criteria for benzene, toluene, ethylbenzene, xylene (BTEX) and Total Petroleum Hydrocarbons (TPH) fractions were adopted as consideration is given to both human health⁴ and environmental concerns⁵. The specific CCME criteria adopted are:

- CCME Canada-wide Standard for Petroleum Hydrocarbons (PHC) in Soil Guidance document (2008): to assess potential risk of TPH to human health and the environment for a commercial/industrial site.

⁴ Human Health: Includes ingestion of soil, dermal exposure to soil, inhalation of dusts, vapour intrusion and uptake in produce consumed.

⁵ Environmental considerations in deriving CCME criteria include soil contact, soil ingestion, nutrient cycling and contamination of groundwater.

- CCME Soil Quality Guidelines for the Protection of Environmental and Human Health (2004a, b, c and d) to assess potential risk of BTEX to human health and the environment for a commercial/industrial site.

CRC CARE (2010) provides criteria for TPH and BTEX. These criteria were not adopted for the current investigation as they were not yet endorsed by the Victorian EPA, and only consider potential risk to human health, not to environmental receptors.

There is no ecological criterion available for total chromium and therefore, NEPM EIL criterion for chromium VI is adopted for comparison only.

The aesthetics for the beneficial use of land may be precluded where land is considered offensive to the senses (e.g. through the presence of offensive odour or unusually coloured staining). It is therefore not possible to quantify preclusion of this protected beneficial use through physical measurement and, as such, quantitative criteria (such as a concentration in mg/kg) for the assessment of land aesthetics cannot be adopted.

Australian Standard Piling-Design and Installation, Standards Australia AS2159-2009 details some guidance on soil parameters that are considered to be aggressive to concrete and steel piles based on pH and sulfates values. This is adopted as the criteria for assessing the beneficial use of buildings and structures.

The ecological and human health “Investigation levels” are not intended to be interpreted as “maximum permissible levels”, “clean up levels” or “safe levels”, rather, they are levels at which further investigation or assessment should be undertaken to provide assurance that unacceptable contamination does not occur. Subsequent assessment on a site-specific basis often results in higher levels being acceptable. The initial screening levels for determining the “contamination status of land” are generally the most conservative of these levels, which are the EIL.

4 RESULTS OF TARGETED SOIL ASSESSMENT

4.1 Soil Profile

Soil conditions observed during the soil sampling program are summarised in Table 4-1. Detailed soil descriptions are provided in Appendix C Soil Bore Logs Construction Details.

Table 4-1: Typical Soil Profile

Sub-Surface Horizon	Typical Depth Range (mbgl)	Description
Fill	Surface to ~1 mbgl	<p>PSA (Feature 17), FMA (Feature 22), FLP (Feature 27), former FTPs (Feature 45), AST 1 and AST 2 (Features 23a and 23b) and SCA (Feature 44) - Bores SB01 to SB30</p> <p>Highly variable composition both within and between locations. Much of the fill was silty clay which is probably reworked natural soil, however silt, sand and gravel were also present at various locations. Glass fragments were encountered at one location in the PSA (Feature 17) but this was confined to the surface soil.</p> <p>Fill thickness varied between locations and the deepest fill was observed to be 2.4 mbgl. The depths of fill observed during this investigation are summarised as:</p> <ul style="list-style-type: none"> ● FLP (Feature 27) – approximately 0.6 mbgl (It should be noted that the fill observed adjacent to Dam 1 at SB16 and SB17 are much deeper at 2 mbgl or greater) ● PSA (Feature 17) – approximately 1 mbgl ● SCA (Feature 44) – approximately 0.3 mbgl ● FMA (Feature 22) – approximately 2 mbgl <p>UST 1 and UST 2 (Feature 8a and 8b) - Bores BH01 to BH10</p> <p>Deeper fill was encountered in boreholes BH1 to BH6 which targeted former UST pits compared to boreholes BH7 and BH8 which are located in the northern portion of the grassed courtyard among the buildings. At BH5 and BH6 (located at the southern portion of the same courtyard), fill was logged to extend to a maximum depth of 3.5 m (BH5). At some locations (e.g. BH1, BH5, BH6 and BH9) fill was observed to directly overlie basalt bedrock.</p> <p>The average fill thickness are summarised as:</p> <ul style="list-style-type: none"> ● UST 1 (Feature 8a) BH5 and BH6 – approximately 3.25 mbgl ● UST 2 (Feature 8b) BH1 to BH4, BH9 and BH10 – approximately 2.4 mbgl ● BH7 and BH8 (located in the northern portion of the courtyard to test for potential location of former UST) – highly variable with no fill recorded at BH8 and fill to 1.5 mbgl at BH7. The soil profile observed in these two boreholes is different to BH1 to BH6 and BH9 to BH10. <p>The fill was also variable and included sandy gravel, silty clay and clayey silt. Brick fragments, glass and cobbles were encountered in some of these boreholes. The depth and</p>

Sub-Surface Horizon	Typical Depth Range (mbgl)	Description
		nature of the fill, and presence of shallow (perched) groundwater in these bores indicate the soil bores were at the location of former UST pits.
Silty CLAY (Natural soil)	~1 m to ~2.5 m	High plasticity grey to brown residual basaltic clay generally underlying fill and overlying basalt. Was encountered at the surface or very near to surface in some boreholes. Not encountered at some locations where fill appears to lie directly over basalt bedrock, generally at location of former USTs.
BASALT (Bedrock)	~0.6 to ~3.5m to maximum depth of investigation	Refusal on inferred basalt bedrock occurred at several locations.

4.2 PID Screening Results and Field Observations

Soil samples were screened for the presence of VOC using a Photo-Ionisation Detector (PID) in the headspace of bagged samples. The results of PID screening are included in Appendix C. Table 4-2 presents a summary of locations where odours, staining and/or PID readings above 10 ppm were recorded.

Table 4-2: Field Observations of Potential Contamination in Sub Surface

Area	Borehole ¹	Depth (mbgl)	Maximum PID Reading (ppm)	Odour (max) ²	Visual (max) ²
UST 1 (Feature 8a)	BH5	2.0	20	2	2
	BH6	2.0	104	2	0
UST 2 (Feature 8b)	BH1	0.5	10	1	0
FMA (Feature 22)	SB06	2.0 - 2.1	51.7	1	0
	SB07	0 - 0.1	4.2	1	0
	SB08	0 - 0.1	5.3	2	0
AST 2 (Feature 23b)	SB29	0 - 0.1	70	1	0
	SB30	0 - 0.1	79.3	1	0
FLP (Feature 27)	SB09	0 - 0.1	0.7	1	0
	SB17	0 - 0.1	10.5	0	0
	SB18	0 - 0.1	15.1	0	0
Notes					
1 Only bores with PID readings >10ppm, or visual or odour observation ranked as 1 or 2 are shown in this table.					
2 The values used for visual and odour rankings are: 0 = no odour or visual evidence of contamination 1 = slight odour or visual evidence of contamination 2 = odour or visual evidence of contamination					

4.3 Laboratory Results for Soil

The results of laboratory analyses commissioned by Cardno Lane Piper are tabulated and presented in Appendix B. Laboratory reports are presented in Appendix E. The results have also been compared against adopted assessment criteria (the “assessment criteria”), which is presented in Appendix B.

The Cardno Lane Piper report titled *Site History Review* (Cardno Lane Piper, 2014a), includes a review of several previous assessments conducted at the site. Results from previous assessments conducted by Coffey Partners International (Coffey 1996a, 1996b, 1996c and 1998), Diomides & Associates (Diomides 1996) and Golder Associates (Golder 2012) have been used in this assessment, however, the detailed data and laboratory reports are not presented and can be found in the original reports. The previous assessment reports include data for soil that has been remediated and therefore the apparently high levels of contamination no longer remain at those locations. The current assessment only refers to data that could be representative of the current condition of the land.

The interpretation of results has been carried out in two stages. Firstly, the results are compared against assessment criteria to describe the location and degree of contamination of soil in the targeted areas. And secondly, the relevance of this to environmental quality objectives as set out in the *SEPP Prevention and Management of Contaminated Land (PMCL)* is assessed. The latter is discussed in Section 5 in relation to the protected beneficial uses of

land. The former is discussed in the following sections under the following headings for the targeted areas.

4.3.1 Fuel Mixing Area (Feature 22) and Aboveground Storage Tanks 1 and 2 (Features 23a and 23b)

The following presents a summary of analysis results for soil at the FMA (Feature 22) and in the vicinity of AST 1 and AST 2 (Features 23a and 23b):

- All samples analysed for lead, BTEX and naphthalene reported concentrations either below the laboratory's reporting limit (LOR) or the assessment criteria.
- TPH was detected at concentrations above the ecological assessment criteria at three locations in the FMA. No exceedance of criteria was recorded at AST 1 or AST 2.

Table 4-3 presents a summary of the results that exceed the assessment criteria.

4.3.2 Former Underground Storage Tank Area 1 (Feature 8a)

The following presents a summary of analysis results for soil in the vicinity of UST 1 (Feature 8a):

- TPH was detected at concentrations above the ecological assessment criteria at three locations.
- All samples analysed for lead, naphthalene and BTEX reported concentrations either below the LOR or the assessment criteria.

Table 4-3 presents a summary of the results that exceed the assessment criteria.

4.3.3 Former Underground Storage Area 2 (Feature 8b)

The following presents a summary of analysis results for soil from the former UST 2 (Feature 8b):

- All samples analysed for TPH, BTEX or lead reported concentrations either below the LOR or the assessment criteria.

Table 4-3: Summary of Soil Results Exceeding Ecological Assessment Criteria – FMA (Feature 22) and UST 1 (Feature 8a)

Analyte	Assessment Criteria (mg/kg)	Location	Sample ID	Reported Concentration (mg/kg) ³
TPH (C ₆ -C ₁₀ less BTEX)	217 ¹	UST 1	BH6/2.5	441
TPH (C ₁₀ -C ₁₆)	172 ¹	UST 1	BH5/2.0	2,110
			BH6/2.0	1,950
			BH6/2.5	5,410
TPH (C ₁₆ -C ₃₄)	2,500 ²	FMA	SB06/0.5-0.6	470
			SB07/0-0.1	4,750
			SB08/0-0.1	1,420
TPH (C ₁₆ -C ₃₄)	2,500 ²	UST 1	BH5/2.0	2,560
			BH6/2.5	6,290
		FMA	SB07/0-0.1	6,090

Analyte	Assessment Criteria (mg/kg)	Location	Sample ID	Reported Concentration (mg/kg) ³
			SB08/0-0.1	3,680
Notes				
1. Warne (2010)				
2. CCME (2008)				
3. The significance of the reported concentrations is discussed in Section 5				

4.3.4 Flammable Liquid PAD or FLP (Feature 27) and Former Foam Training Pits (Feature 45)

The following presents a summary of analysis results for soil from the FLP and former FTPs:

- PFOS, PFOA and 6:2 FtS were detected in all samples analysed for these chemicals. Two samples to the east and adjacent to Dam 1 recorded PFOS concentrations above the human health assessment criteria. All samples reported PFOS concentrations above the ecological assessment criteria (this is not shown in Table 4-4 below).
- As discussed in Section 3.2 above, the criteria for PFOS was used for comparison purpose for assessing 6:2FtS and four samples of 6:2 FtS were found to be above the PFOS ecological assessment criteria.
- All samples analysed for TPH reported concentrations either below the LORs or the assessment criteria.
- All samples analysed for metals reported concentrations either below the LORs or the assessment criteria with the exception of chromium, as well as several samples analysed for vanadium and nickel reported concentrations above the ecological assessment criteria. In the absence of an ecological criteria for total chromium, the criteria for chromium VI was adopted instead.

SB10, SB11 and SB13 located east and south-east of the FLP had surface samples collected but were not tested for PFC and the deeper 0.5 to 0.6 mbgl samples were analysed instead. However, the adjacent locations SB09, SB12 and SB14 had surface samples analysed for PFC. These locations are considered to be representative of SB10, SB11 and SB13 because they are located in close proximity to each other and to the FLP.

Table 4-4 presents a summary of the results that exceed the assessment criteria.

Table 4-4: Summary of Soil Results Exceeding Ecological and Human Health Assessment Criteria – FLP (Feature 27) and former FTPs (Feature 45)

Analyte	Adopted Criteria (mg/kg)	Sample ID	Reported Concentration (mg/kg) ⁴
Nickel	60 ¹	SB14/0-0.1	61
		SB15/0-0.1	84
Vanadium	50 ¹	SB09/0-0.1	56
		SB09/1.0-1.1	90
		SB10/0.5-0.6	147
		SB10/1.0-1.1	66
		SB11/0-0.1	92
		SB11/0.5-0.6	123
		SB12/0-0.1	71
		SB12/1.0-1.1	61

Analyte	Adopted Criteria (mg/kg)	Sample ID	Reported Concentration (mg/kg) ⁴
		SB13/0-0.1	104
		SB13/0.5-0.6	89
		SB14/1.0-1.1	96
		SB15/1.0-1.1	183
		SB16/0-0.1	70
		SB16/0.5-0.6	93
		SB17/0-0.1	87
		SB17/0.5-0.6	87
		SB18/0-0.1	68
		SB18/0.5-0.6	83
Chromium	1 ¹	SB09/0-0.1	29
		SB09/1.0-1.1	40
		SB10/0.5-0.6	70
		SB10/1.0-1.1	48
		SB11/0-0.1	55
		SB11/0.5-0.6	55
		SB12/0-0.1	38
		SB12/1.0-1.1	48
		SB13/0-0.1	41
		SB13/0.5-0.6	59
		SB14/0-0.1	21
		SB14/1.0-1.1	59
		SB15/0-0.1	9
		SB15/1.0-1.1	72
		SB16/0-0.1	32
		SB16/0.5-0.6	58
		SB17/0-0.1	49
		SB17/0.5-0.6	42
		SB18/0-0.1	58
		SB18/0.5-0.6	47
PFOS ³	6 ²	SB16/0-0.1	53.2
		SB17/0-0.1	6.5
6:2 FtS	0.37 ⁵	SB10/0.5-0.6	1.43
		SB11/0.5-0.6	2.1
		SB16/0-0.1	4.98
		SB17/0-0.1	2.41
Notes			
1. NEPM 1999 Ecological Investigation Level. Criterion is for Cr (VI) but reported concentrations are for Total Cr (conservatively reported as exceeding Cr(VI) criterion in the absence of specific Cr(VI) results			
2. US EPA 2009 Human Health Investigation Level			
3. PFOS concentrations are reported in µg/kg in results tables in Appendix B			
4. The significance of the reported concentrations is discussed in Section 5			
5. Ecological assessment criteria for PFOS adopted for 6:2 FtS for comparison purpose only			

4.3.5 Props Storage Area (Feature 17)

The following presents a summary of analysis results of soil from the PSA:

- One sample analysed for PFC reported PFOS and PFOA concentrations above the LOR but are below the assessment criteria. As no fire-fighting activities have taken place at PSA, the potential for PFC to be present in the soil in other locations within PSA is considered to be low. Additionally, discharge from PAD would not have reached the PSA.
- All samples analysed for vanadium and chromium, as well as one historical sample analysed for 3- and 4-methyl phenol (Golder 2012) reported concentrations above the ecological assessment criteria.
- All other samples analysed for 6:2 FtS, metals (excluding vanadium and chromium), TPH, BTEX, PCB, perchlorate, VOC and SVOC (excluding 3- and 4-methyl phenol) reported concentrations either below the LORs or the assessment criteria.

Table 4-5 presents a summary of the results that exceed the assessment criteria.

Table 4-5: Summary of Soil Results Exceeding Ecological Assessment Criteria – PSA (Feature 17)

Analyte	Assessment Criteria (mg/kg)	Sample ID	Reported Concentration (mg/kg) ⁴
Vanadium	50 ¹	SB01/0.05-0.1	66
		SB01/0-0.1	80
		SB02/0-0.1	95
		SB02/2.0-2.1	91
		SB03/0.06-0.1	83
		SB03/0.6-0.7	143
Chromium	1 ¹	SB01/0.05-0.1	60
		SB01/0-0.1	40
		SB02/0-0.1	32
		SB02/2.0-2.1	58
		SB03/0.06-0.1	32
		SB03/0.6-0.7	68
3- and 4- methyl phenol	2.6 ²	A8HA5/0.5-0.8 ³	4.6
Notes			
1. NEPM 1999 Ecological Investigation Level. Criterion is for Cr(VI) but reported concentrations are for Total Cr (conservatively reported as exceeding Cr(VI) criterion in the absence of specific Cr(VI) results)			
2. Golder 2012 Ecological Investigation Level			
3. Golder 2012 sample ID			
4. The significance of the reported concentrations is discussed in Section 5			

4.3.6 Soil Composting Area (Feature 44)

Samples were recovered from both the soil surface in the SCA as well as from the windrows. The following presents a summary of soil analysis results from the SCA:

- Two samples from SB24 and SB28 reported PFOS concentrations greater than the ecological criteria. All other samples analysed for PFOS, PFOA and 6:2 FtS reported concentrations above the LORs but below the assessment criteria. It should be noted that previously a four-part composite sample from this area recorded a PFOS concentration of 2.19 mg/kg (Golder 2012). This result could be above the assessment criterion if the PFOS is from only one of the constituent samples making the composite (see Table 4-6).
- All samples analysed for SVOC, BTEX, VOC, TPH, perchlorate and PCB reported concentrations below LOR.

- Soil pH at the SCA is generally lower than other areas investigated (ranging between 4.8 and 7.2) with an average of 5.8 (compared with average soil pH of 7.4 for the other areas investigated). Soil pH generally decreased with depth (average pH at a depth of 0.5 mbgl was 5.5) compared to shallower soil (average pH at a depth of 0.1 mbgl was 6.0).
- All samples analysed for chromium and vanadium reported concentrations above the assessment criteria as noted in Table 4-6.
- All samples analysed for other metals reported concentrations either below the LORs or the assessment criteria.

The surface soil samples at SB22, SB24, SB25 and SB28 were not analysed for PFC because they are located at the windrows at SCA. The soil beneath the surface (i.e. sample from 0.5 to 0.6 mbgl) are considered to be more representative of the soils within the windrows.

Table 4-6: Summary of Soil Results Exceeding Ecological and Human Health Assessment Criteria – SCA (Feature 44)

Analyte	Assessment Criteria (mg/kg)	Sample ID	Reported Concentration (mg/kg) ⁶
Vanadium	50 ¹	SB19/0-0.1	178
		SB19/1.0-1.1	69
		SB20/0-0.1	54
		SB20/0.5-0.6	68
		SB21/0-0.1	55
		SB21/1.0-1.1	50
		SB22/0-0.1	104
		SB22/0.5-0.6	87
		SB23/0-0.1	69
		SB23/1.0-1.1	72
		SB24/0-0.1	99
		SB24/0.5-0.6	77
		SB25/0-0.1	66
		SB25/0.5-0.6	70
		SB26/0-0.1	91
		SB26/1.0-1.1	60
		SB27/0-0.1	57
		SB27/1.0-1.1	73
SB28/0-0.1	107		
SB28/0.5-0.6	89		
Chromium	1 ¹	SB19/0-0.1	67
		SB19/1.0-1.1	36
		SB20/0-0.1	39
		SB20/0.5-0.6	44
		SB21/0-0.1	49
		SB21/1.0-1.1	42
		SB22/0-0.1	33
		SB22/0.5-0.6	50
		SB23/0-0.1	44
		SB23/1.0-1.1	40
SB24/0-0.1	36		

Analyte	Assessment Criteria (mg/kg)	Sample ID	Reported Concentration (mg/kg) ⁶
		SB24/0.5-0.6	52
		SB25/0-0.1	28
		SB25/0.5-0.6	44
		SB26/0-0.1	39
		SB26/1.0-1.1	44
		SB27/0-0.1	22
		SB27/1.0-1.1	47
		SB28/0-0.1	58
		SB28/0.5-0.6	45
PFOS ³	1.5 ²	A9HA2/3001 ⁴	2.19
	0.37 ⁵	SB24/0.5-0.6	0.436
		SB28/0.5-0.6	0.481
Notes			
1. NEPM 1999 Ecological Investigation Level. Criterion is for Cr(VI) but reported concentrations are for Total Cr (conservatively reported as exceeding Cr(VI) criterion in the absence of specific Cr(VI) results)			
2. Adjusted criterion for four part composite using US EPA 2009 (i.e. one quarter of the criterion value)			
3. PFOS concentrations are reported in µg/kg in results tables in Appendix B			
4. Golder 2012 sample ID			
5. Environment Agency (2004) PNECsoil for earthworm adopted			
6. The significance of the reported concentrations is discussed in Section 5			

4.3.7 Asbestos

Asbestos was not identified during site investigation works in any of the targeted areas in this assessment. However, asbestos fragments were encountered at the surface in the south-west corner of the site at the former landfills (not included in this targeted soil assessment). This is discussed under separate cover in Cardno Lane Piper's report titled *Investigation of Risks at Former Landfills* (Cardno Lane Piper, 2014c).

5 PROTECTION OF BENEFICIAL USES OF LAND

The results have also been interpreted with reference to *SEPP Prevention and Management of Contamination of Land* (2002). The following discusses the results of this assessment in relation to the existing site use in the targeted areas and the associated beneficial uses of the site protected by this policy (i.e. under a commercial/industrial setting).

Table 5-1 summarises the protected beneficial uses and relevant land uses defined in the *SEPP Prevention and Management of Contamination of Land* (June 2002). The “ticks” in the table indicate that the respective beneficial uses are protected for each land use described in this policy.

Table 5-1: Protected Beneficial Uses of Land

Beneficial Use	Land Use							Explanation
	Parks & Reserves	Agricultural	Sensitive Use (High density residential)	Sensitive Use (Other)	Recreation / Open space	Commercial	Industrial	
Maintenance of Natural Ecosystems	✓							Contamination must not adversely affect the maintenance of relevant ecosystems. Natural ecosystems include parks and forested areas. These are generally undisturbed by human activity and mainly occur in non-urban areas.
Maintenance of Modified Ecosystems	✓	✓		✓	✓			These land uses may contain ecosystems disturbed by human activity but with significant ecosystems remaining. Includes public open space and low density residential allotments.
Maintenance of Highly Modified Ecosystems		✓	✓	✓	✓	✓	✓	These land use areas may contain ecosystems highly modified by human disturbance. These would be expected in any residential, public open space or commercial/industrial area where there are landscaped garden and lawn areas.
Human Health	✓	✓	✓	✓	✓	✓	✓	If persons are exposed directly to soil then their health must be protected. Exposure might occur to residents digging in gardens, workers engaged in excavations for construction or maintenance of underground services. Exposure can also occur from volatile organic vapours migrating through the soil and structures.
Buildings & Structures	✓	✓	✓	✓	✓	✓	✓	Contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials.
Aesthetics	✓		✓	✓	✓	✓		Contamination must not cause the land to be offensive to the senses of human beings.
Production of Food, Flora & Fibre	✓	✓		✓				Contamination of the soil in these land use areas should not affect the quality or yield of produce, or affect the level of an indicator in the food, fibre or flora such that it exceeds the Australian and New Zealand Food Authority Standards Code.

Table 5-1 shows that for a commercial/industrial land use, the beneficial uses that are protected include maintenance of highly modified ecosystems, human health, buildings and structures, and aesthetics.

5.1.1 Maintenance of highly modified ecosystems

Phenolic compound (3- and 4-methyl phenol) was recorded at a concentration above the ecological criterion at just one sample (A8HA5/05-0.8) in the PSA (Feature 17) (Golder, 2012). The result is less than double the criterion, and it was not detected in any of the other 64 Cardno Lane Piper and Golder samples analysed for phenolic compounds. Adopting the conservative approach, the beneficial use of Maintenance of Highly Modified Ecosystems at PSA is considered to be precluded, however as the PSA is an area used for storage in a commercial/industrial setting, the impact on this beneficial use is not considered to be significant.

TPH C₆-C₁₀ (23 to 442 mg/kg), TPH C₁₀-C₁₆ (90 to 5410 mg/kg), TPH C₁₆-C₃₆ (240 to 6290 mg/kg) and TPH C₃₄-C₄₀ (140 mg/kg) and PAH, namely naphthalene (1 to 37 mg/kg), concentrations were detected at several locations but only TPH concentrations reported at UST 1 and FMA were identified to exceed the ecological assessment criteria. The compounds may present some impact on terrestrial ecosystems at a local scale, however, given the nature of the land use (commercial/industrial) in the operational area of the site, it is unlikely that this impact would present a significant detriment to this beneficial use of land (highly modified terrestrial ecosystems).

Slightly elevated concentrations of vanadium and chromium were recorded in soil at a number of the targeted areas investigated, often in fill. As there are no known sources of chromium VI at Fiskville Training College, chromium III is likely to be the dominant species of chromium present on-site. Similarly, nickel concentrations exceeding the ecological assessment criterion were also recorded within fill at a few locations.

Chromium, nickel and vanadium are often naturally occurring in basaltic soil and rock in Victoria and the values reported in this targeted soil assessment are considered to be of background concentrations. The measured total chromium concentrations range from 9 to 72 mg/kg (average 45 mg/kg) and this is similar to the background concentration range of 7.3 to 73 mg/kg (average 35.02 mg/kg) identified for Newer Volcanics soil (Diomides 2005). The nickel concentrations reported here (5 to 84 mg/kg, average 18 mg/kg) is also similar to the background concentrations (0 to 62 mg/kg, average 21 mg/kg) reported by Diomides (2005). The range of vanadium concentrations measured is between 15 and 183 mg/kg and this is well within the range of background values presented in Table 5-A of NEPM (1999). It is noted that background samples for soil have not been collected and further soil sampling can be proposed to collect a background sample for this purpose.

Based on the information from Section 3.2.10 and 3.2.11 of Cardno Lane Piper report titled *Site History Review* (Cardno Lane Piper, 2014a), the fill encountered at the site is most likely to have been sourced from the site. Under an industrial setting of the operational areas targeted, exposure of the contaminants in the soil to ecosystems would be reduced, especially where the areas are covered by concrete or hardstand. It is therefore considered that these metal concentrations are typical of background levels in soil in the area, and given the existing site use, the metal concentrations identified would be unlikely to present a detriment to this beneficial use of land.

Soil concentrations above the ecological assessment criteria for assessment of impacts from PFOS to terrestrial ecosystems were reported at all soil bore locations targeting the FLP (Feature 27) and former FTPs (Feature 45), and at two locations at the SCA (Feature 44). These features are associated with fire fighting activities where foams were used or in the

case of SCA, it contained soil from the former FLP (Feature 58). Selected locations at the FLP and former FTPs also reported 6:2 FtS results above the PFOS ecological assessment criterion (used for comparison due to the lack of available criteria for 6:2 FtS) and this suggests that 6:2 FtS may present an impact to the terrestrial ecosystem associated with landscaped area of the FTC.

Unpaved areas generally have healthy grass cover, indicating no detrimental impacts are occurring to these (highly modified) terrestrial ecosystems. However, bare patches of earth are evident in the vicinity of Dam 1. This corresponds with SB16 and SB17, which recorded the highest PFOS concentrations during this investigation.

Based on the current land use in the targeted areas, only highly modified terrestrial ecosystems, such as landscape garden areas including trees, shrubs and grass cover, would need to be protected under the SEPP Prevention and Management of Contamination of Land. Some of the targeted areas are paved and do not contain terrestrial ecosystems, therefore it is not considered relevant for these analytes. However, any impact from these contaminants to ecosystems at the affected areas is likely to be minimal based on the current use of the targeted areas i.e. fire training college (FLP/FTP's area) and vacant land (SCA). It should be noted though that there may be risks to terrestrial and aquatic ecosystems outside of the targeted areas (e.g. open areas to the north and south-east of FLP and dams to the south) through migration of the contaminants via surface run-off, erosion, earthworks or wind transport. This will need to be assessed as part of further investigation likely to be required by the EPA Environmental Auditor.

5.1.2 Human health

Contamination from Fuel Storage - TPH

All samples analysed in this targeted soil assessment reported TPH concentrations below the assessment criteria adopted for the protection of human health. The human health assessment criteria for TPH in soil are based on direct contact with the soil (soil ingestion or dermal contact), which is not expected to occur due to the existing site use as a fire training college. In addition the TPH identified is not of the 'volatile' type and it was identified in an outdoor area (not within buildings), and so vapour intrusion risks are likely to be negligible. The petroleum hydrocarbon results reported in this investigation is not considered to pose any risks to human health, based on the existing commercial/industrial site use.

Contamination from Fire Fighting Foams – PFOS, PFOA and 6:2 FtS

PFOS, PFOA and 6:2 FtS were detected at the FLP/FTP's area (Features 27 and 45 respectively), SCA (Feature 44) and PSA (Feature 17). Two samples from the FLP/FTP's area reported concentrations above the human health investigation criteria (surface soil <0.1 mbgl) to the east of Dam 1 and close to the drainage line to the dam. The soil impacts may be a result of either runoff or historical spillage of fire fighting foams in that area, overflow from the surge basin (Feature 29) or overflow from Dam 1.

These contaminants were also detected in all other samples from the FLP/FTP's area but are at concentrations below assessment criteria.

A 4-part composite sample from the windrows of SCA, collected during the Golder 2012 assessment, recorded a PFOS concentration that exceeds the adjusted PFOS criterion (for 4-part composite). However, all other SCA samples from the Golder 2012 and Cardno Lane Piper's assessments recorded PFOS concentrations below the assessment criteria. The criteria exceedance recorded by Golder is therefore probably due to the use of excessively conservative criteria (i.e. one quarter of adopted criteria) or is likely to be derived for the four-

part composite sample in accordance with AS4482. Given the number of samples analysed and the absence of any other criteria exceedances, concentrations of PFOS, PFOA and 6:2 FtS in soil at the SCA, in its current state and for the current land use, are unlikely to present a risk to human health.

The available human health investigation criteria that are exceeded in some locations are conservative (i.e. residential land use which is much more conservative than the existing industrial land use). However, the soil results indicate that impacts from PFOS, PFOA and 6:2 FtS are not widespread at concentrations that would be detrimental to human health based on the existing site use.

5.1.3 Buildings and Structures

In accordance with with AS2159 (Standards Australia 2009), the soil pH in the range of 4.8 to 7.8 as observed from the soil investigation conducted at SCA is classified as 'non-aggressive' or 'mild' for exposure to concrete piles in soil for low permeability soil such as clays and silts encountered. Therefore, the soil is not considered to be detrimental to the beneficial use of Buildings and Structure.

5.1.4 Aesthetics

Trace amount of solid inert waste such as brick and glass fragments as well as the occasional cobbles and gravels were observed in the fill present in the targeted areas and majority of these is the top 1 m of the soil profile. Due to the small quantity of the solid inert waste present, it is unlikely to present any detriment impacts to the beneficial use of aesthetics of the land.

Hydrocarbon odours were observed at only a few locations in the AST 1 and 2 (Feature 23a and 23b), former UST 1 and 2 (Feature 8a and 8b) and Fuel Mixing Area (Feature 22). These are generally observed at the surface less than 0.1 mbgl or at depth greater than 2 mbgl for the bores drilled to find former UST. Staining was observed at one sample at BH5 and this was at 2 mbgl, which also reported strong hydrocarbon odour at this depth. As the site is used for the fire fighting training activities, which will include intentional burning of fuel, these hydrocarbon odours observed at the surface in open space were unlikely to cause offense to the site users. However, if the area around the AST, former UST and FMA are to be excavated, the soil may be odorous and would require management.

In summary, the beneficial use of the land at the FTC which is a commercial use, is not impacted by any aesthetic issues.

6 CONCLUSIONS

The following conclusions are made in relation to the objectives of this investigation to assess the nature and degree of contamination in several targeted areas. The significance of the contamination was assessed with reference to the 'beneficial uses of land' protected under Victorian regulation. Conclusions on the need for any remediation or other actions were reached.

6.1 Targeted Areas

The following areas were targeted for investigation in this assessment;

- Former areas where diesel and petrol USTs (Features 8a and 8b) were located near the Amenities Building (Feature 16a) and the Learning Centre (Feature 3).
- AST 1 (Feature 23a) located adjacent to the FMA (Feature 22), and AST 2 (Feature 23b) located adjacent to the FLP (Feature 27). AST 2 was removed after Cardno Lane Piper completed the field works for the targeted investigation.
- The current FLP (Feature 27) and former FTPs (Feature 45), where fuels, oils, chemicals, solvents and foams for fire training drills have been burnt, stored and spilled.
- PSA (Feature 17) where flammable liquids were stored in drums or tanks.
- SCA (Feature 44) where approximately 4,200 to 5,300 m³ of contaminated soil was remediated in 1999. Much of the remediated soil has since been moved, and is understood to have been deposited at the DET PAD (Feature 21a).

6.2 Summary of Soil Contamination Results

The results of the targeted soil sampling and testing, which are presented in Section 4 and Appendix B, indicate that:

- Three soil samples in the vicinity of UST 1 (Feature 8a) at 2 mbgl or deeper, and three shallower soil samples in the FMA (Feature 22) have reported concentrations of TPH greater than the adopted ecological criteria, but below the adopted human health criteria. These concentrations are not considered to pose a health hazard but may be odorous if excavated and require management.
- Two soil samples in the vicinity of the FLP (Feature 27) adjacent to Dam 1 are contaminated with PFOS, in excess of the available criterion (for human health in a residential setting).
- All soil samples collected in the vicinity of the FLP (Feature 27) and former FTPs (Feature 45), and two soil samples from the windrows at the SCA (Feature 44) have reported PFOS concentrations above the adopted ecological assessment criteria.
- Vanadium and chromium were detected at concentrations above ecological protection criteria in the vicinity of the FLP, former FTPs and PSA.
- Nickel was detected at concentrations above the ecological protection criteria in the vicinity of the FLP and former FTPs.
- The combined 3- and 4- methyl phenol was detected at a concentration above ecological protection criterion in the vicinity of the PSA.
- Soil at the SCA has an average pH of 5.8 which is noticeably lower than other parts of the site (average pH 7.4). The pH also decreased slightly with depth.

6.3 Significance of Soil Contamination

Soil is impacted by petroleum hydrocarbons at the FMA (Feature 22) and UST 1 (Feature 8a) areas, however the contamination does not present an unacceptable human health risk or prevent ongoing use of these areas of the site for fire fighting training. The odorous nature of the soil remaining in these areas when excavated may cause some concern, despite the low hazard, and therefore appropriate OHS procedures should be used when excavating in these limited areas. A large volume of TPH contaminated soil was excavated from the former FLP (Feature 58) and former FTPs (Feature 45), bio-remediated and the area validated in 1998.

To the south of the FLP (Feature 27) and east of Dam 1, the soil is impacted with PFOS although the assessment criteria available are those for residential use and the contamination does not preclude the current commercial/industrial land use in this area. The extent of the PFOS contaminated soil at this area is not delineated. The exposure of personnel (such as a PAD operator or maintenance workers) to soil while working in the vicinity of the oil-water separator and Dam 1 should be minimised through appropriate OHS procedures. The elevated concentration of PFOS measured in the soil adjacent of Dam 1 correlates to the observed vegetation dieback around Dam 1. This area east of Dam 1 is also known to have flooded when the surge basin (Feature 29) overflows.

The concentrations of PFOS and potentially 6:2 FtS in the soil around the FLP (Feature 58) and former FTPs (Feature 45), and SCA (Feature 44) are considered to pose a potential impact to terrestrial ecosystem associated with the landscaped areas of the FTC. There is a potential risk to ecosystems outside the FLP, former FTPs and SCA areas due to PFOS contaminated soils if contaminants migrate or are transported outside these areas (e.g. via surface water runoff). Further assessment and management of this risk is required by improving the drainage systems in the vicinity of Dams 1 and 2.

Soil at the SCA has relatively low soil pH (average 5.8) compared to the rest of the site. However, soil of this pH is not classified as 'aggressive' in terms of exposure to concrete piles for foundations of buildings and structures. In its current vacant state, there is minimal risk to human health or terrestrial ecosystems due to the slight acidity of the soil. However, the potential for the low pH to impact on any planned works or use of the SCA will need to be taken into consideration.

Elevated concentrations of vanadium, nickel and chromium detected in the targeted areas are not considered to be representative of contamination. The metal concentrations were reviewed against literature data and this suggests that the recorded metal results are probably due to natural soil concentrations.

In summary, the results of soil testing in the areas targeted as those most likely to be contaminated has indicated that there is only minor contamination of soil at the site, none of which present an impediment to the continued use of the site for fire fighting training. Some limited additional areas have some potential for contamination and should be investigated, subject to advice from the EPA Environmental Auditor. However, the results indicate that the beneficial use of land applicable to the operational area of the training college site (i.e. industrial/commercial land use) is not precluded by contamination of land for the following reasons:

1. The types and degree of contamination are not excessive when compared with relevant investigation criteria for soil quality.
2. The occurrences of contamination are limited in area and do not coincide with areas where there is uncontrolled exposure to site occupants on a regular basis. The depth of contamination occurrence and the presence of uncontaminated soil cover and pavements provides protection where direct exposure would require excavation of soil.

3. The limited number of personnel accessing the contaminated area between the FLP and Dam 1 which is manageable by normal OHS practices.

6.4 Management of Environmental Risks

CFA are in the process of developing an Environmental Management System (EMS) to include the future promotion of ecological sustainability programs and management of environmental risks at the FTC. CFA are proposing a Site Contamination Management Plan under their EMS to provide information on potential contamination hazards and their management. The future surveillance of any contaminated soil or hazardous material in the ground including the minor contamination identified in this report should be managed by this plan. It is noted that the EPA Environmental Auditor would probably recommend such a plan therefore it should be developed in consultation with the Auditor.

7 RECOMMENDATIONS

Following on from the conclusions reached in relation to the key objectives of this investigation, the following actions are recommended to assess the site for contamination beyond the areas identified in the IFI Report:

1. The soil at the FLP and former FTPs should be further investigated to delineate the PFOS and potentially 6:2 FtS contamination on the periphery of the area remediated in 1998. This includes lateral and vertical delineation at the base of the previously remediated area.
2. While risks to the health of the few persons potentially exposed to soil contaminated with PFOS in the FLP and former FTP area is assessed to be low, exposures should be minimised through the use of appropriate OHS procedures where direct contact with soil is likely, such as when cutting grass around Dam 1 or excavating soil near the adjacent oil-water separator.
3. The potential risk to ecosystems outside the FLP, former FTPs and SCA areas due to PFOS contaminated soils, as a result of migration of contaminants to stormwater drains, requires further assessment and management by improving the drainage system in the vicinity of Dams 1 and 2.
4. The impacted soil at UST 1 and FMA should be further investigated to delineate the TPH contamination. The contamination in these areas does not present a health risk, however it is odorous when exposed to air and should be managed by applying OHS and environmental procedures (to be contained in the proposed Site Contamination Management Plan) if excavation occurs in these limited areas.
5. The soil beneath AST 2 (Feature 23b) should be assessed as AST 2 has now been removed.
6. All features listed in "Areas Not Yet Investigated" (Section 4.1.2 of the Cardno Lane Piper's *Site History Review* report (Cardno Lane Piper, 2014a)) which are not included in this investigation, are also recommended for further assessment.

8 REFERENCES

Legislation and Guidelines

1. *Environment Protection Act*, 1970 (Act No.8056/1970), Victoria.
2. Government of Victoria (1997) *State Environment Protection Policy (Groundwaters of Victoria)*. Victorian Government Gazette, S160, 17 December 1997.
3. Government of Victoria (2002). *State Environmental Protection Policy (Prevention and Management of Contamination of Land)*. Victorian Government Gazette, S95, 4 June 2002.
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General References

6. Australian & New Zealand Environment & Conservation Council (1992) *Australian Water Quality Guidelines for Fresh and Marine Waters*. National Water Quality Management Strategy.
7. Australian & New Zealand Environment & Conservation Council and Agriculture & Resource Management Council of Australia and New Zealand (2004). *Australian Drinking Water Guidelines*. National Water Quality Management Strategy.
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Appendix A

5 Pages

Figures

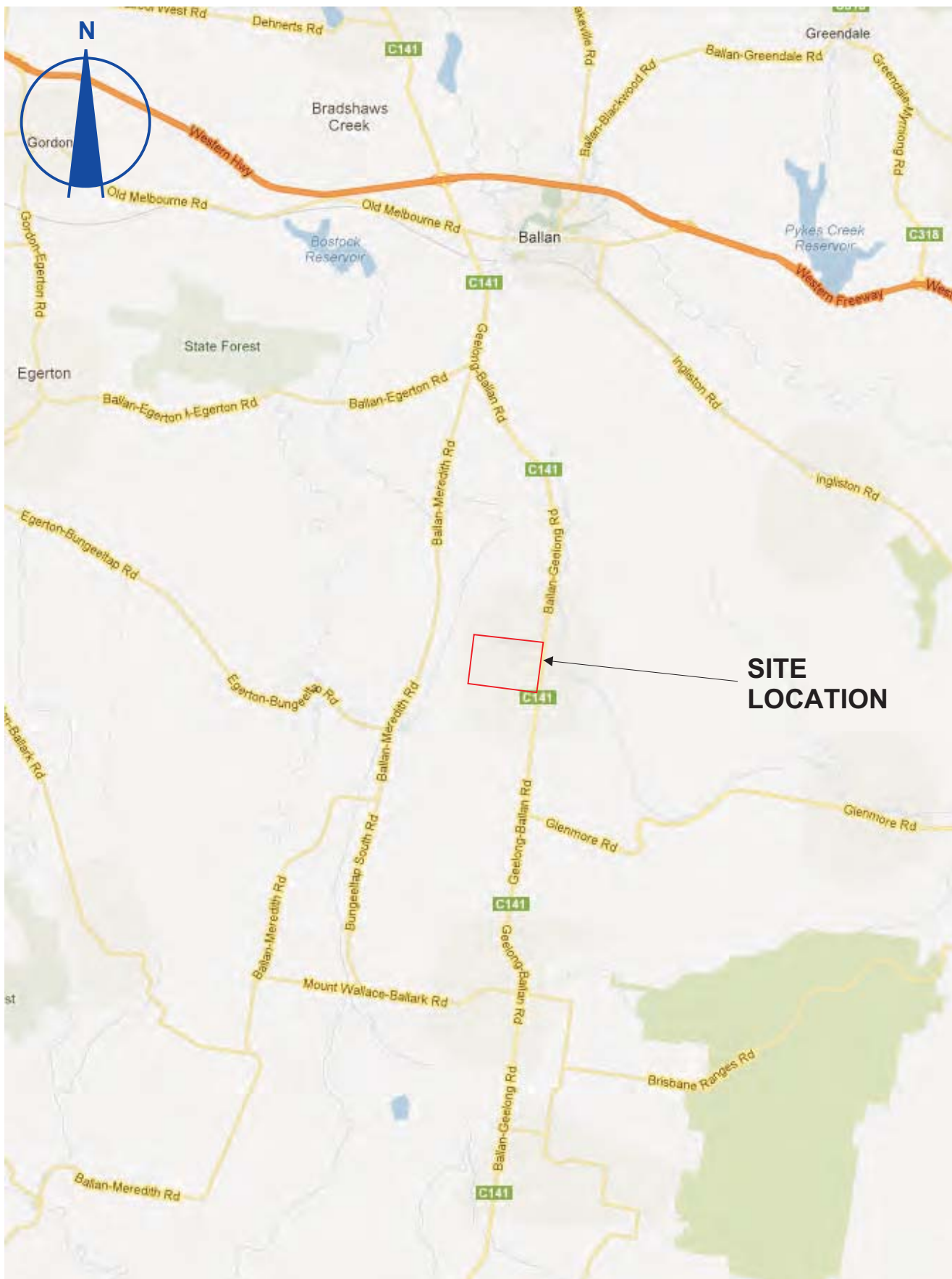
Figure 1: Site Locality

Figure 2: Site Features Plan

Figure 3: Targeted Soil Assessment Areas

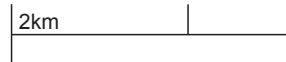
Figure 4: Targeted Soil Sample Locations - Soil Composting Area

Figure 5: Targeted Soil Sample Locations (Excluding Soil Composting Area)



After Google Maps 2012

— Approximate Site boundary



Cardno Lane Piper Pty Ltd

PROJECT: Targeted Soil Assessment
Fiskville Training College
Geelong-Ballan Rd, Fiskville, VIC

SCALE(A4): As shown

DRAWN/ CHECKED:
PAM/JCE

REF: 212163.1 Report 04.3

TITLE:

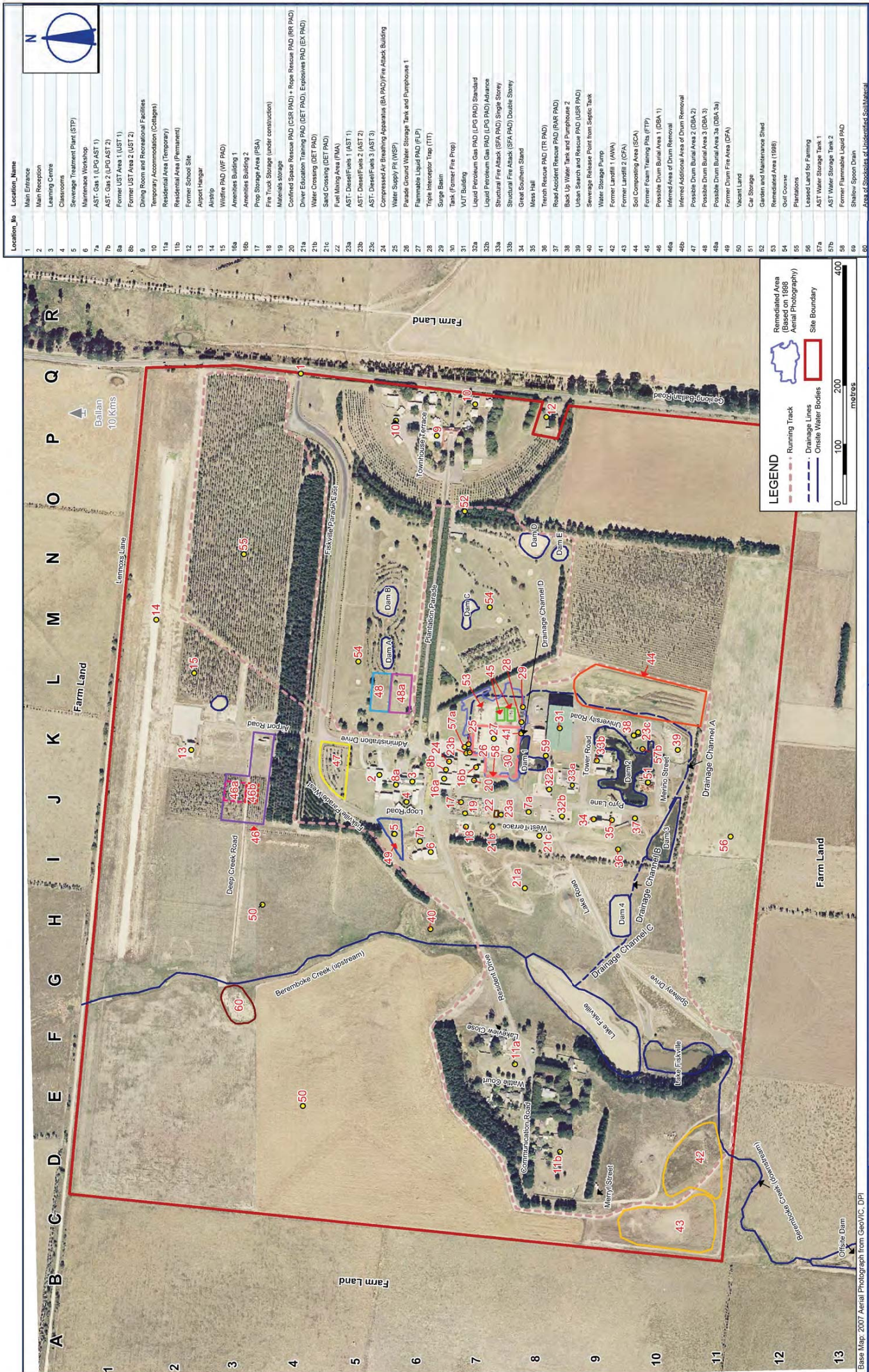
Site Locality

DATE: 10 Oct 2012

JOB No: 212163.1

REV: 1

FIG: 1



Location_No	Location_Name
1	Main Entrance
2	Learning Centre
3	Classrooms
4	Sewage Treatment Plant (STP)
5	Maintenance Workshop
6	AST-Gas 1 (LFG AST 1)
7a	AST-Gas 2 (LFG AST 2)
7b	Former LUST Area 1 (UST 1)
8a	Former LUST Area 2 (UST 2)
8b	Dining Room and Recreational Facilities
9	Temporary Accommodation (Cottages)
10	Residential Area (Temporary)
11a	Residential Area (Permanent)
11b	Former School Site
12	Support Hangar
13	Alatip
14	Vidfire PAD (VF PAD)
15	Amelias Building 1
16a	Amelias Building 2
16b	Prop Storage Area (PSA)
17	Fire Truck Storage (under construction)
18	Materials storage
19	Confined Space Rescue PAD (CSR PAD) - Rope Rescue PAD (RR PAD)
20	Driver Education Training PAD (DET PAD), Explosives PAD (EX PAD)
21a	Water Crossing (DET PAD)
21b	Sand Crossing (DET PAD)
21c	Fuel Mixing Area (FMA)
22	AST-Diesel/Fuels 1 (AST 1)
23a	AST-Diesel/Fuels 2 (AST 2)
23b	AST-Diesel/Fuels 3 (AST 3)
23c	Compressed Air Breathing Apparatus (BA PAD) Fire Attack Building
24	Water Supply Pit (WSP)
25	Parade Ground Water Storage Tank and Pumphouse 1
26	Flammable Liquid PAD (FLP)
27	Triple Interceptor Trap (ITT)
28	Surge Basin
29	Tank (Former Fire Prop)
30	VUT Building
31	Liquid Petroleum Gas PAD (LPG PAD) Standard
32a	Liquid Petroleum Gas PAD (LPG PAD) Advance
32b	Structural Fire Attack (SFA PAD) Single Storey
33a	Structural Fire Attack (SFA PAD) Double Storey
33b	Great Southern Stand
34	Mess Hall
35	Trench Rescue PAD (TR PAD)
36	Road Accident Rescue PAD (RAR PAD)
37	Back Up Water Tank and Pumphouse 2
38	Ultras Search and Rescue PAD (USR PAD)
39	Sewage Release Point from Siphon Tank
40	Water Storage Pump
41	Former Landfill 1 (AWA)
42	Former Landfill 2 (CFA)
43	Former Landfill 3 (CFA)
44	Former Landfill 4 (CFA)
45	Former Landfill 5 (CFA)
46	Possible Drum Burial Area 1 (DBA 1)
46a	Inferred Area of Drum Removal
46b	Inferred Additional Area of Drum Removal
47	Possible Drum Burial Area 2 (DBA 2)
48	Possible Drum Burial Area 3 (DBA 3)
48a	Possible Drum Burial Area 3a (DBA 3a)
48b	Possible Drum Burial Area 3b (DBA 3b)
49	Former Drum Fire Area (DFA)
50	Vacant Land
51	Car Storage
52	Garden and Maintenance Shed
53	Remediated Area (1998)
54	Soil Course
55	Plantations
56	Leased Land for Farming
57a	AST Water Storage Tank 1
57b	AST Water Storage Tank 2
58	Former Flammable Liquid PAD
59	Shallow Spill Drum
60	Area of Spoilpiles of Unidentified Soil Material

PROJECT: **Targeted Soil Assessment
Fiskville Training College,
Geelong-Ballan Road, Fiskville, Vic**

SCALE: As Shown

DATE: 14 OCT 2013

DRAWN/CHECKED: PXT/SYS

JOB NO. 212163.1

REF: 212163.1Report04.4

TITLE: **SITE FEATURES PLAN**

REV. NO. 1

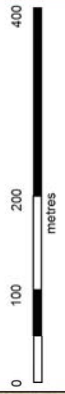
FIG. NO. 2



Location_No	Location_Name
8a	Former UST Area 1 (UST 1)
8b	Former UST Area 2 (UST 2)
17	Prop Storage Area (PSA)
22	Fuel Mixing Area (FMA)
23a	AST- Diesel/Fuels 1 (AST 1)
23b	AST- Diesel/Fuels 2 (AST 2)
27	Flammable Liquid PAD (FLP)
44	Soil Composting Area (SCA)
45	Former Foam Training Pits (FTP)
53	Remediated Area (1998)
58	Former Flammable Liquid PAD

LEGEND

- Targeted Areas
- Former Foam Training Pits (FTP)
- Remediated Area (Based on 1998 Aerial photograph)
- Fuel Mixing Area (FMA)
- Former Flammable Liquid PAD
- Site Boundary



PROJECT: Cardno LanePiper Shaping the Future	SCALE: As Shown DRAWN/CHECKED: PXT/SYS REF: 212163.1Report04.4	DATE: 16 OCT 2013 JOB NO. 212163.1	TITLE: TARGETED SOIL ASSESSMENT AREAS
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PROJECT: Cardno LanePiper Shaping the Future	SCALE: As Shown DRAWN/CHECKED: PXT/SYS REF: 212163.1Report04.4	DATE: 16 OCT 2013 JOB NO. 212163.1	TITLE: TARGETED SOIL ASSESSMENT AREAS
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PROJECT: Cardno LanePiper Shaping the Future	SCALE: As Shown DRAWN/CHECKED: PXT/SYS REF: 212163.1Report04.4	DATE: 16 OCT 2013 JOB NO. 212163.1	TITLE: TARGETED SOIL ASSESSMENT AREAS
PROJECT: Targeted Soil Assessment Fiskville Training College Geelong-Ballian Road, Fiskville, Vic			REV. NO. 1 FIG. NO. 3

Base Map: 2007 Aerial Photograph from GeoVIC, DPI

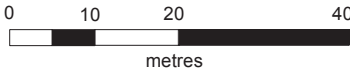


Base Map: 2007 Aerial Photograph from GeoVIC, DPI

LEGEND:

 Targeted Areas

 Soil Bore Sample Location



PROJECT: Targeted Soil Assessment
Fiskville Training College
Geelong-Ballan Road, Fiskville, Vic

TITLE: TARGETED SOIL
SAMPLE LOCATIONS
SOIL COMPOSTING AREA

SCALE: As Shown

DRAWN/CHECKED:
PXT/JCE

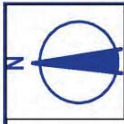
DATE: 19 NOV 2012

JOB NO.: 212163.1

REF: 212163.1Report04.3

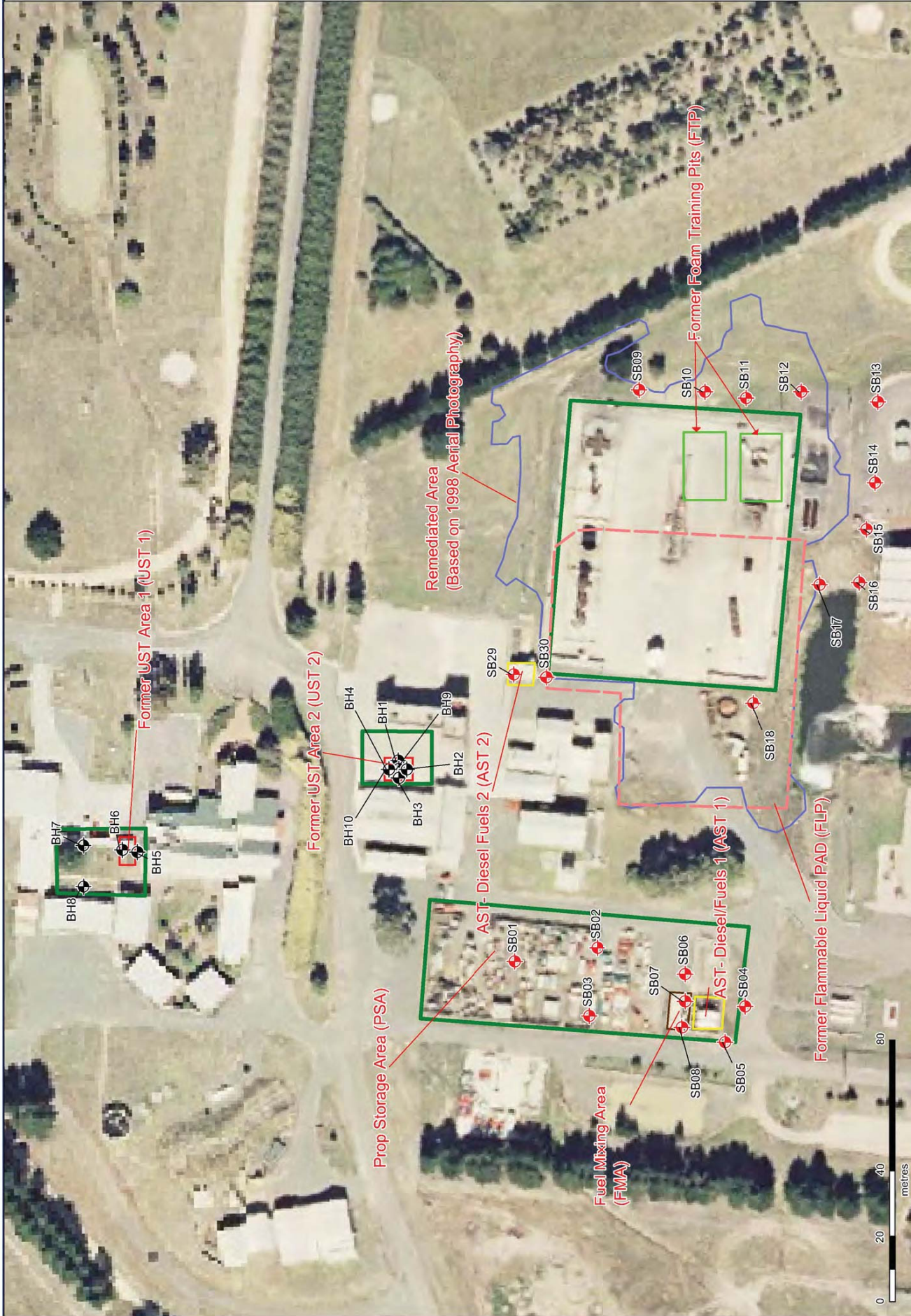
REV. NO.: 1

FIG. NO.: 4



LEGEND

- SB Targeted Soil Sample Locations
- BH Targeted Soil Sample Locations
- Targeted Areas
- Former Foam Training Pits (FTP)
- Remediated Area (Based on 1998 Aerial Photography)
- Fuel Mixing Area (FMA)
- Former Flammable Liquid PAD
- AST Area
- Former UST Area



Base Map: 2007 Aerial Photograph from GeoVIC, DPI

PROJECT: Targeted Soil Assessment Fiskville Training College Geelong-Ballan Road, Fiskville, Vic	SCALE: As Shown DRAWN/CHECKED: PXT/SYS	DATE: 16 OCT 2013 JOB NO.: 212163.1	TITLE: TARGETED SOIL SAMPLE LOCATIONS (EXCLUDING SOIL COMPOSTING AREA)
	REF: 212163.1Report04.4	REV. NO.: 1	FIG. NO.: 5



Appendix B

26 Pages

Tables of Test Results

Table 1: Soil Analytical Results for Underground Storage Tanks (Features 8a and 8b), Aboveground Storage Tanks (Feature 23a and 23b) and Fuel Mixing Area (Feature 22)

Table 2: Soil Analytical Results for Flammable Liquid PAD (Feature 27) and Former Foam Training Pits (Feature 45)

Table 3: Soil Analytical Results for Props Storage Area (Feature 17)

Table 4: Soil Analytical Results for Soil Composting Area (Feature 44)

Table 5: RPD Results

Table 6: Field Blanks

Table 1 : Soil Analytical Results for USTs (Features 8a and 8b), ASTs (Features 23a and 23b) and Fuel Mixing Area (Feature 22)

Chem_Group	ChemName	Units	EQL	NEPM 1999 EIL	Human Health	Sample ID																			
						UST 1 (Feature 8a)					UST 1 (Feature 8b)					UST 2 (Feature 8a)					UST 2 (Feature 8b)				
						BH6/2.0	BH5/3.0	BH6/2.0	BH6/2.5	BH7/2.0	BH8/0.5	BH8/1.5	BH1/3.0	BH2/2.0	BH3/2.6	BH4/2.3	BH5/2.4	BH6/2.0	BH5/3.0	BH6/2.0	BH6/2.5	BH7/2.0	BH8/0.5	BH8/1.5	BH1/3.0	BH2/2.0	BH3/2.6	BH4/2.3	BH5/2.4
BTEX	Benzene	mg/kg	0.2	310 ^(5.7)	11 ^(0.8)	<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	<0.2	<0.2	<0.2
	Ethylbenzene	mg/kg	0.5	430 ^(6.7)	36000 ^(8.9)	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Toluene	mg/kg	0.5	330 ^(5.7)	82000 ^(8.9)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Xylene (m & p)	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Xylene (o)	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Xylene Total	mg/kg	0.5	230 ^(4.7)	560000 ^(4.8)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Inorganics	Total BTEX	mg/kg	0.2			<0.2	<0.2	0.8	<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	
	Moisture	%	1			21.9	20.9	27.9	35.2	36.4	20.8	32.9	14.2	34.7	29	19	20	20.8	32.9	14.2	34.7	29	19	20	20.8
PAH	Lead	mg/kg	5	600	1500	9	<5	8	29	20	9	12	19	19	19	19	19	9	12	19	19	19	19	19	19
	Naphthalene	mg/kg	0.5		100 ^(1.8)	5	<1	9	37	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	C8 - C9	mg/kg	10			37	<10	64	288	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	C10 - C14	mg/kg	50			940	<50	850	2500	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
	C15 - C28	mg/kg	100			<100	<100	3150	8530	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	C29-C36	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	C37-C40	mg/kg	50			4370	<50	4000	11000	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
	∑C10 - ∑C36 (Sum of total)	mg/kg	50			4420	<250	4050	11080	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
	∑C6-C10 less BTEX (F1)	mg/kg	10			60	<10	94	442	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	∑C10-C16	mg/kg	50			217 ^(1.27)	<50	1950	5410	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
∑C16-C34	mg/kg	100			172 ^(1.27)	<100	2110	6290	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
∑C34-C40	mg/kg	100			6600 ^(6.7)	<100	4420	<11,700	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
∑C10 - ∑C40 (Sum of total)	mg/kg	50			<4870	<50	<4240	<11,700	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	

Comments:

- Chromium VI criterion for NEPM 1999
- CCME (2008) for TRH. RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
- CCME (2004a) for Benzene.
- CCME (2004b) for Xylenes.
- CCME (2004c) for Toluene.
- CCME (2004d) for Ethylbenzene.
- The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
- The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
- Environment Agency (2004) for PFOS, PNEC_{soil} for earthworm adopted as criteria for soil.
- US EPA (2009) for PFOS and FDA.
- Soil criteria for PFOS are adopted for 6.2 FS due to lack of suitable criteria as a conservative measure.
- Waime M. (2010) review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for incorporation into the NEPM (ASC).
- Total PAH criterion for NEPM 1999.

Table 1 : Soil Analytical Results for USTs (Features 8a and 8b), ASTs (Features 23a and 23b) and Fuel Mixing Area (Feature 22)

Field ID	SB04/0-0.1	SB04/0.5-0.6	SB05/0-0.1	SB05/1.0-1.1	SB230/0.1	SB230/0.5-0.6	SB230/1.0-1.1	SB290/0.1	SB290/0.5-0.6	SB290/1.0-1.1	SB06/0.5-0.6	SB06/1.0-1.1	SB07/0-0.1	SB07/0.5-0.6	SB07/1.0-1.1	SB08/0-0.1	SB08/0.5-0.6	SB08/1.0-1.1							
Sampled Date/Time	14/08/2012	14/08/2012	14/08/2012	14/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012							
Lab Report Number	EM1208305	EM1208305	EM1208305	EM1208305	EM1208440	EM1208440	EM1208440	EM1208440	EM1208440	EM1208440	EM1208305	EM1208305	EM1208305	EM1208305	EM1208305	EM1208305	EM1208305	EM1208305							
LocCode	SB04/0-0.1	SB04/0.5-0.6	SB05/0-0.1	SB05/1.0-1.1	SB230/0.1	SB230/0.5-0.6	SB230/1.0-1.1	SB290/0.1	SB290/0.5-0.6	SB290/1.0-1.1	SB06/0.5-0.6	SB06/1.0-1.1	SB07/0-0.1	SB07/0.5-0.6	SB07/1.0-1.1	SB08/0-0.1	SB08/0.5-0.6	SB08/1.0-1.1							
Feature Name	AST 1 (Feature 23a)				AST 2 (Feature 23b)				Fuel mixing area (Feature 22)																
Chem_Group	Chem Name	Units	EQL	NEPM 1999 EIL	Human Health	NEPM 1999 HI L F																			
BTEX	Benzene	mg/kg	0.2	310 ^(5,7)	11 ^(5,8)		<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					
	Ethylbenzene	mg/kg	0.5	430 ^(6,7)	36000 ^(6,8)		<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					
	Toluene	mg/kg	0.5	330 ^(6,7)	82000 ^(6,8)		<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					
	Xylene (m & p)	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					
Inorganics	Xylene (o)	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					
	Xylene Total	mg/kg	0.5	230 ^(4,7)	560000 ^(4,8)		<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					
	Total 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					
	Moisture	%					27.3	28.2	26.6	28.4	22.5	19.5	21.2	25.2	27.1	27.1	25.2	28.2	27.1	21.1					
Metals	Lead	mg/kg	5	600	1500		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1					
	Naphthalene	mg/kg	0.5		100 ^(5,8)		<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					
TPH	C6 - C9	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10					
	C10 - C14	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50					
	C15 - C28	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
	C29 - C36	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
	C37 - C38 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50					
	H-C10 - C38 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50					
	C6-C10	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10					
	C6-C10 less BTEX (F1)	mg/kg	10	217 ^(5,7)	19000 ^(5,8)		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10					
	C10-C16	mg/kg	50	172 ^(5,7)	10000 ^(5,8)		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50					
	C16-C34	mg/kg	100	2500 ^(5,7)	23000 ^(5,8)		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
TRH	C34-C40	mg/kg	100	6600 ^(5,7)	RES ^(5,8)		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
	C10 - C40 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50					

Comments:

- Chromium VI criterion for NEPM 1999
- CCME (2008) for TRH. RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
- CCME (2004a) for Benzene.
- CCME (2004b) for Xylenes.
- CCME (2004c) for Toluene.
- CCME (2004d) for Ethylbenzene.
- The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
- The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
- Environment Agency (2004) for PPOS. PNEC_{soil} for earthworm adopted as criteria for soil.
- US EPA (2009) for PPOS and FOA.
- Soil criteria for PPOS are adopted for 6.2 FS due to lack of suitable criteria as a conservative measure.
- Warne M. (2010) review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for Incorporation into
- Total PAH criterion for NEPM 1999.

Table 2 : Soil Analytical Results for Flammable Liquid PAD (Feature 27) and Former Foam Training Pits (Feature 45)

Field ID	SB09/0-0.1	SB09/10-1.1	SB10/0.1-1.1	SB10/0.5-0.6	SB10/1.0-1.1	SB11/0.0-0.1	SB11/0.5-0.6	SB12/0.0-0.1	SB12/10.0-1.1	SB13/0.5-0.6	SB13/10.0-1.1	SB14/0.0-0.1	SB14/10.0-1.1
Sample Depth, Range	0.0-1	0.0-1	1-1.1	0.5-0.6	0.5-0.6	0.0-0.1	0.5-0.6	0.0-0.1	1-1.1	0.5-0.6	0.0-0.1	0.0-0.1	1-1.1
Sample Date, Time	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Lab Report Number	EM1209305	EM1209305	EM1209305	EM1209305	EM1209305	EM1209305	EM1209305	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440
LocCode	SB09/0-0.1	SB09/10-1.1	SB10/0.1-1.1	SB10/0.5-0.6	SB10/1.0-1.1	SB11/0.0-0.1	SB11/0.5-0.6	SB12/0.0-0.1	SB12/10.0-1.1	SB13/0.5-0.6	SB13/10.0-1.1	SB14/0.0-0.1	SB14/10.0-1.1
Chem Group	ChemName	Units	EQL	NEPM 1998 EIL	Human Health	NEPM 1999 HIL F							
Amino Aliphatics	N-Nitrosodiethylamine	mg/kg	0.5										
	N-Nitrosodimethylamine	mg/kg	0.5										
	N-Nitrosopropylamine	mg/kg	0.5										
	N-Nitrosomethylamine	mg/kg	0.5										
	N-Nitrosopiperazine	mg/kg	0.5										
	N-Nitrosopyrrolidine	mg/kg	0.5										
	2-Nitroethanamine	mg/kg	1										
	3-Nitroaniline	mg/kg	1										
	4-Chloroaniline	mg/kg	0.5										
	4-Nitroaniline	mg/kg	0.5										
	2-Nitro-5-Nitroaniline	mg/kg	0.5										
	Aniline	mg/kg	0.5										
BTEX	Benzene	mg/kg	0.2	310 (67)	11 (6.8)								
	Ethylbenzene	mg/kg	0.5	430 (67)	36000 (6.8)								
Chlorinated Hydrocarbons	Toluene	mg/kg	0.5	330 (67)	82000 (6.8)								
	Xylene (m & p)	mg/kg	0.5										
	Xylene (o)	mg/kg	0.5										
	Total BTEX	mg/kg	0.2	230 (67)	560000 (4.8)								
	1,1,1,2-tetrachloroethane	mg/kg	0.5										
	1,1,1-trichloroethane	mg/kg	0.5										
	1,1,2,2-tetrachloroethane	mg/kg	0.5										
	1,1,2-trichloroethane	mg/kg	0.5										
	1,1-dichloroethane	mg/kg	0.5										
	1,1-dichloroethene	mg/kg	0.5										
	1,2-dichloropropane	mg/kg	0.5										
	1,2-dibromo-3-chloropropane	mg/kg	0.5										
1,2-dichloroethane	mg/kg	0.5											
1,3-dichloropropane	mg/kg	0.5											
2,2-dichloropropane	mg/kg	0.5											
Bromodichloromethane	mg/kg	0.5											
Bromoform	mg/kg	0.5											
Carbon tetrachloride	mg/kg	0.5											
Chlorobromomethane	mg/kg	0.5											
Chloroethane	mg/kg	0.5											
Chloroform	mg/kg	0.5											
Chloromethane	mg/kg	0.5											
cis-1,2-dichloroethene	mg/kg	0.5											
cis-1,3-dichloropropene	mg/kg	0.5											
Dibromomethane	mg/kg	0.5											
Hexachlorobutadiene	mg/kg	0.5											
Hexachlorocyclopentadiene	mg/kg	0.5											
Trichloroethane	mg/kg	0.5											
Trichloroethene	mg/kg	0.5											
Tetrachloroethane	mg/kg	0.5											
trans-1,2-dichloroethene	mg/kg	0.5											
trans-1,3-dichloropropene	mg/kg	0.5											
Vinyl chloride	mg/kg	0.5											
Explosives	1,3,5-Trinitrobenzene	mg/kg	0.5										
	2,4-Dinitrotoluene	mg/kg	1										
Halogenated Benzenes	2,6-Dinitrotoluene	mg/kg	1										
	Nitrobenzene	mg/kg	0.5										
	1,2,3-trichlorobenzene	mg/kg	0.5										
	1,2,4-trichlorobenzene	mg/kg	0.5										
	1,2-dichlorobenzene	mg/kg	0.5										
	1,3-dichlorobenzene	mg/kg	0.5										
	1,4-dichlorobenzene	mg/kg	0.5										
	2-chlorotoluene	mg/kg	0.5										
	4-chlorotoluene	mg/kg	0.5										
	Bromobenzene	mg/kg	0.5										
	Chlorobenzene	mg/kg	0.5										
	Hexachlorobenzene	mg/kg	1										
	Pentachlorobenzene	mg/kg	0.5										
	Perchlorate	ug/kg	10										

Table 2 : Soil Analytical Results for Flammable Liquid PAD (Feature 27) and Former Foam Training Pits (Feature 45)

Field ID	SB09/0-0.1	SB09/1.0-1.1	SB10/0.5-0.6	SB10/1.0-1.1	SB11/0-0.1	SB11/0.5-0.6	SB12/0-0.1	SB12/1.0-1.1	SB13/0.5-0.6	SB13/1.0-1.1	SB14/0.0-1.1	SB14/1.0-1.1
Sample Depth Range	0.0-1	1-1.1	0.5-0.6	1-1.1	0.0-1	0.5-0.6	0.0-1	1-1.1	0.5-0.6	0.0-1	0.0-1	1-1.1
Sample Date/Time	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Lab Report Number	EM1208305	EM1208305	EM1208305	EM1208305	EM1208305	EM1208305	EM1208440	EM1208440	EM1208440	EM1208440	EM1208440	EM1208440
LocCode	SB09/0-0.1	SB09/1.0-1.1	SB10/0.5-0.6	SB10/1.0-1.1	SB11/0-0.1	SB11/0.5-0.6	SB12/0-0.1	SB12/1.0-1.1	SB13/0.5-0.6	SB13/1.0-1.1	SB14/0-0.1	SB14/1.0-1.1
Chem_Group	ChemName	Units	EQL	NEPM 1998 EIL	Human Health	NEPM 1999 HIL F						
TPH	C6 - C8	mg/kg	10				<10	<10	<10	<10	<10	<10
	C10 - C14	mg/kg	50				<10	<10	<10	<10	<10	<10
	C15 - C28	mg/kg	100				<100	<100	<100	<100	<100	<100
	C29-C36	mg/kg	100				<100	<100	<100	<100	<100	<100
	C10 - C36 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50
TRH	C6-C10	mg/kg	10				<10	<10	<10	<10	<10	<10
	C6-C10 less BTEX (F1)	mg/kg	10	217 (2.7)	19000 (2.8)		<10	<10	<10	<10	<10	<10
	C10-C16	mg/kg	50	172 (2.7)	10000 (2.8)		<50	<50	<50	<50	<50	<50
	C16-C24	mg/kg	100	2500 (2.7)	23000 (2.8)		<100	<100	<100	<100	<100	<100
	C34-C40	mg/kg	100	6600 (2.7)	RES (2.8)		<100	<100	<100	<100	<100	<100
C10 - C40 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50	

Comments:

- Chromium VI criteria for NEPM 1999
- CCME (2008) for TRH. RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
- CCME (2004a) for Benzene.
- CCME (2004b) for Xylenes.
- CCME (2004c) for Toluene.
- CCME (2004d) for Ethylbenzene.
- The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
- The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
- Environment Agency (2004) for PFOs; PNEC_{soil} for earthworm adopted as criteria for soil.
- US EPA (2009) for PFOs and FOA.
- Soil criteria for PFOs are adopted for 6.2 FS due to lack of suitable criteria as a conservative measure.
- Wanne M. (2010) review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for Incorporation into the NEPM (ASC).

Table 2 : Soil Analytical Results for Flammable Liquid PAD (Feature 27) and Former Foam Training Pits (Feature 45)

Field ID	SB15/0-0.1	SB15/1/0-1.1	SB16/0-5-0.6	SB16/0-0.1	SB17/0-5-0.6	SB17/0-0.1	SB18/0-5-0.6	SB18/0-0.1
Sample Depth Range	0.0-1	1.1-1.1	0.5-0.6	0.0-1	0.5-0.6	0.0-1	0.5-0.6	0.0-1
Sampled Date/Time	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Lab Report Number	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440
LocCode	SB15/0-0.1	SB15/1/0-1.1	SB16/0-5-0.6	SB16/0-0.1	SB17/0-5-0.6	SB17/0-0.1	SB18/0-5-0.6	SB18/0-0.1
Chem. Group	NEPM 1999 HIL F							
Human Health	NEPM 1999 EIL							
EQL	EQL							
Units	Units							
Chem Name	Chem Name							
Amino Aliphatics	Amino Aliphatics							
N-nitrosodiethylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-nitrosodi-n-butylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-nitrosodipropylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-nitrosomethylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-nitrosodiphenyl & Diphenylamine	mg/kg	<1	<1	<1	<1	<1	<1	<1
Amino Aromatics	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anilines	mg/kg	<1	<1	<1	<1	<1	<1	<1
2-nitroaniline	mg/kg	<1	<1	<1	<1	<1	<1	<1
3-nitroaniline	mg/kg	<1	<1	<1	<1	<1	<1	<1
4-chloroaniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitroaniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl-5-nitroaniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BTEX	mg/kg	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (m & p)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (o)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene Total	mg/kg	<1	<1	<1	<1	<1	<1	<1
Chlorinated Hydrocarbons	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-tetrachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-trichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-tetrachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromo-3-chloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,2-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobromomethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	mg/kg	<5	<5	<5	<5	<5	<5	<5
Chloroform	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	mg/kg	<5	<5	<5	<5	<5	<5	<5
cis-1,2-dichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-dichloropropene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Hexachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-dichloropropene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	mg/kg	<5	<5	<5	<5	<5	<5	<5
Explosives	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trinitrobenzene	mg/kg	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	mg/kg	<1	<1	<1	<1	<1	<1	<1
2,6-dinitrotoluene	mg/kg	<1	<1	<1	<1	<1	<1	<1
Nitrobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Halogenated Benzenes	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trichlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-trichlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dichlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-chlorotoluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-chlorotoluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene	mg/kg	<1	<1	<1	<1	<1	<1	<1
Pentachlorobenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perchlorate	ug/kg	<10	<10	<10	<10	<10	<10	<10

Table 2 : Soil Analytical Results for Flammable Liquid PAD (Feature 27) and Former Foam Training Pits (Feature 45)

Field ID	Sample Depth	Sample Date	Lab Report Number	LocCode	SB16/0-0.1	SB16/0.5-0.6	SB17/0.0-0.1	SB17/0.5-0.6	SB18/0.0-0.1	SB18/0.5-0.6
Sample Depth Range	Sample Date-Time	Lab Report Number	LocCode	SB16/0-0.1	SB16/0.5-0.6	SB17/0.0-0.1	SB17/0.5-0.6	SB18/0.0-0.1	SB18/0.5-0.6	
PAH	7,12-dimethylbenz(a)anthracene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PAH/Phenols	2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	2-chlorophthalene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	2-methylnaphthalene	mg/kg	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	
	3,4,4-trimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	3-methylcholanthrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	4-chloro-3-methylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Acenaphthene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Anthracene	mg/kg	0.5	<0.5	<0.5	<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	<0.5	
	Benzofl(uore)nylene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Benzofl(uore)anthracene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Benzofl(uore)perylene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Chrysene	mg/kg	0.5	<0.5	<0.5	<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	<0.5	
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Fluorene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Phenanthrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Pesticides	Chlorobenzilate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Phthalates	mg/kg	5	<5	<5	<5	<5	<5	<5	
	Bis(2-ethylhexyl) phthalate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Butyl benzyl phthalate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Diethylphthalate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Dimethyl phthalate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Dih-n-butyl phthalate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Dih-n-octyl phthalate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Polychlorinated Biphenyls	PCBs (Sum of total)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Solvents	Methyl Ethyl Ketone	mg/kg	5	<5	<5	<5	<5	<5	<5	
	2-hexanone (MEK)	mg/kg	5	<5	<5	<5	<5	<5	<5	
	4-Methyl-2-pentanone	mg/kg	5	<5	<5	<5	<5	<5	<5	
	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Isophorone	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Vinyl acetate	mg/kg	5	<5	<5	<5	<5	<5	<5	
VOCs	cis-1,4-Dichloro-2-butene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Pentachloroethane	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	trans-1,4-Dichloro-2-butene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	2-(acetilamino) fluorene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SVOCs	3,3-Dichlorobenzidine	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	4-(dimethylamino) azobenzene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	4-bromophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	4-chlorophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	4-Nitroquinoline-N-oxide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Azobenzene	mg/kg	1	<1	<1	<1	<1	<1	<1	
	Bis(2-chloroethoxy) methane	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Bis(2-chloroisopropyl) ether	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Carbazole	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Dibenzofuran	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Hexachloropropene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	Hexaphenylene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	N-nitrosomorpholine	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	N-nitrosopyrrolidine	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	N-nitrosopyrrolidine	mg/kg	1	<1	<1	<1	<1	<1	<1	
	Phenacetyl	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 2 : Soil Analytical Results for Flammable Liquid PAD (Feature 27) and Former Foam Training Pits (Feature 45)

Field ID	Sample Depth_Range	Sampled Date-Time	Lab_Report_Number	LocCode	SB15/0-0.1	SB15/1.0-1.1	SB16/0.5-0.6	SB16/0-0.1	SB17/0.5-0.6	SB17/0-0.1	SB18/0.5-0.6	SB18/0-0.1
	0.0 - 0.1	16/08/2012	EM1209440	SB15/0-0.1	0.0 - 0.1	16/08/2012	EM1209440	0.0 - 0.1	16/08/2012	EM1209440	0.5-0.6	16/08/2012
	1.1 - 1.1	16/08/2012	EM1209440	SB15/1.0-1.1	0.5-0.6	16/08/2012	EM1209440	0.5-0.6	16/08/2012	EM1209440	0.5-0.6	16/08/2012
	0.0 - 0.1	16/08/2012	EM1209440	SB16/0.5-0.6	0.0 - 0.1	16/08/2012	EM1209440	0.0 - 0.1	16/08/2012	EM1209440	0.5-0.6	16/08/2012
	1.1 - 1.1	16/08/2012	EM1209440	SB16/1.0-1.1	0.5-0.6	16/08/2012	EM1209440	0.5-0.6	16/08/2012	EM1209440	0.5-0.6	16/08/2012
Chem_Group	ChemName	Units	EQL	NEPM 1999 EIL	Human Health	NEPM 1999 HIL F						
TPH	C6 - C9	mg/kg	10				<10	<10	<10	<10	<10	<10
	C10 - C14	mg/kg	50				<50	<50	<50	<50	<50	<50
	C15 - C28	mg/kg	100				<100	<100	<100	<100	<100	<100
	C29-C36	mg/kg	100				<100	<100	<100	<100	<100	<100
	H-C10 - C36 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50
TRH	C6-C10	mg/kg	10				<10	<10	<10	<10	<10	<10
	C6-C10 less BTEX (F1)	mg/kg	10	217 (132)	19000 (2,8)		<10	<10	<10	<10	<10	<10
	C10-C16	mg/kg	50	172 (127)	10000 (2,8)		<50	<50	<50	<50	<50	<50
	C16-C34	mg/kg	100	2500 (2,7)	23000 (2,8)		<100	<100	<100	<100	<100	<100
	C34-C40	mg/kg	100	6600 (2,7)	RES (2,8)		<100	<100	<100	<100	<100	<100
C10 - C40 (Sum of total)	mg/kg	50				<50	<50	<50	<50	<50	<50	

Comments:

- Chromium VI criteria for NEPM 1999
- CCME (2008) for TRH. RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
- CCME (2004a) for Benzene.
- CCME (2004b) for Xylenes.
- CCME (2004c) for Toluene.
- CCME (2004d) for Ethylbenzene.
- The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
- The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
- Environment Agency (2004) for PFOS, PNEC_{soil} for earthworm adopted as criteria for soil.
- US EPA (2005) for PFOS and PFOA.
- Soil criteria for PFOS are adopted for 6:2 FIS due to lack of suitable criteria as a conservative measure.
- Waste M: (2010) review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for Incorporation into the NEPM (AS)

Table 3 : Soil Analytical Results for Props Storage Area (Feature 17)

Chem_Group	ChemName	Units	EQL	NEPM 1999 EIL	Human Health	NEPM 1999 HIL F	Field ID			
							SB010.05-0.1	SB017.0-1.1	SB022.0-2.1	SB030.06-0.1
							0.05-0.1	1.1-1.1	0.0-1	0.06-0.1
							14/08/2012	14/08/2012	14/08/2012	14/08/2012
							EM1209305	EM1209305	EM1209305	EM1209305
							Lab_Report_Number	Lab_Report_Number	Lab_Report_Number	Lab_Report_Number
							SB010.05-0.1	SB017.0-1.1	SB022.0-2.1	SB030.06-0.1
							LocCode	LocCode	LocCode	LocCode
Amino Aliphatics	N-nitrosodimethylamine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	N-nitrosodi-n-butylamine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	N-nitrosodi-n-propylamine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	N-nitrosomethylamine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	N-nitrosodimethyl & Diethylamine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1-nitroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	2-nitroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	3-nitroethane	mg/kg	1				<1	<1	<1	<1
	4-chloroaniline	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	4-nitroaniline	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
BTEX	2-methyl-5-nitroaniline	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Aniline	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Benzene	mg/kg	0.2	310 (53)			<0.2	<0.2	<0.2	<0.2
	Ethylbenzene	mg/kg	0.5	3600 (66)			<0.5	<0.5	<0.5	<0.5
	Toluene	mg/kg	0.5	430 (67)	11 (58)		<0.5	<0.5	<0.5	<0.5
	Xylene (m & p)	mg/kg	0.5	330 (67)	8200 (66)		<0.5	<0.5	<0.5	<0.5
	Xylene (o)	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Xylene Total	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,1,1-Trichloroethane	mg/kg	0.2	230 (47)	56000 (48)		<0.2	<0.2	<0.2	<0.2
	1,1,1,2-Tetrachloroethane	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2
Chlorinated Hydrocarbons	1,1,2,2-Tetrachloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,1,2-Trichloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,1-dichloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,1-dichloroethene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,1-dichloropropane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,2,3-trichloropropane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,2-dichloropropane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,2-dichloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,3-dichloropropane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	2,2-dichloropropane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
Explosives	Bromodichloromethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Bromotoluene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Carbon tetrachloride	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Chlorobromomethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Chloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Chloroethene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Chloromethane	mg/kg	5				<5	<5	<5	<5
	cis-1,2-dichloroethene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	cis-1,3-dichloropropene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Dibromomethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
Halogenated Benzenes	Hexachlorobutadiene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Hexachlorocyclopentadiene	mg/kg	2.5				<2.5	<2.5	<2.5	<2.5
	Hexachloroethane	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2
	Tetrachloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	trans-1,2-dichloroethene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	trans-1,3-dichloropropene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Vinyl chloride	mg/kg	5				<5	<5	<5	<5
	1,3,5-Trinitrobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	2,4-Dinitrotoluene	mg/kg	1				<1	<1	<1	<1
	2,6-Dinitrotoluene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
Halogenated Benzenes	1,2,3-Trichlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,2,4-Trichlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,2-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,3-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,4-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	2-chlorotoluene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	4-chlorotoluene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Bromobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	1,2,3-Trinitrobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Hexachlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
Explosives	Pentachlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5
	Perchlorate	mg/kg	10				<10	<10	<10	<10

Table 3 : Soil Analytical Results for Props Storage Area (Feature 17)

Chem_Group	ChemName	Units	EQL	NEMF 1999 EIL	Human Health	NEMF 1999 HIL F	Field ID				
							SB010.05-0.1	SB010.05-0.1	SB017.0-1.1	SB022.0-2.1	SB030.06-0.7
Halogenated Hydrocarbons	1,2-dibromoethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Bromomethane	mg/kg	5				<5	<5	<5	<5	<5
	Dichlorodifluoromethane	mg/kg	5				<5	<5	<5	<5	<5
	Iodomethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Trichlorofluoromethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	1,2-dichloroethane	mg/kg	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
	2,4-dichlorophenol	mg/kg	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
	2-chlorophenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
Herbicides Inorganics	Promazine	mg/kg	1				<1	<1	<1	<1	<1
	Moisture	%	0.5				25.2	24.4	27.7	26.7	23.8
MAH	pH (Lab)	pH Units	0.1				8.2	6.4	7.4	7.7	6.4
	1-methylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	1,3,5-trimethylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Isopropylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	n-butylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	n-propylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	p-isopropyltoluene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	sec-butylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Styrene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	tert-butylbenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
Metals	Barium	mg/kg	20				20	40	40	70	20
	Beryllium	mg/kg	300				20	40	40	70	20
	Cadmium	mg/kg	1				<1	<1	<1	<1	<1
	Chromium (III-VI)	mg/kg	3				60	40	32	58	32
	Cobalt	mg/kg	2	1 ⁽¹⁾			3	3	5	8	7
	Copper	mg/kg	5	100			<5	6	7	10	7
	Lead	mg/kg	5	600			13	13	13	11	11
	Manganese	mg/kg	5	500			35	53	21	32	18
	Mercury	mg/kg	0.1	1			0.1	<0.1	<0.1	<0.1	<0.1
	Nickel	mg/kg	0.1	75			0.1	0.1	0.1	0.1	0.1
Nitroaromatics	Vanadium	mg/kg	5	50			66	80	95	91	83
	Zinc	mg/kg	5	200			5	9	9	6	7
	2-Picoline	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	4-aminobiphenyl	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Pentachloronitrobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	4,4-DDE	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	a-BHC	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Aldrin + Dieldrin	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	γ-BHC	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	δ-BHC	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
Organochlorine Pesticides	DDD	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	DDT	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	DDT+DDE+DDD	mg/kg	1				<1	<1	<1	<1	<1
	Dieldrin	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Endosulfan I	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Endosulfan II	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Endosulfan sulphate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Edrin	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	g-BHC (Lindane)	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Heptachlor	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
Organophosphorus Pesticides	Heptachlor epoxide	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Chlorfenvinphos	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Chlorpyrifos	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Chlorpyrifos-methyl	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Diazinon	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Disulfoton	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Dimethoate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Ethion	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Fenitrothion	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	Malathion	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
Other	Prothiofos	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5
	6:2 Fluoroelomer Sulfonate (6:2 FIS)	mg/kg	0.005	0.37	6		-	-	-	-	-
	PFCA	mg/kg	0.0005	370 ⁽⁶⁾	16 ⁽⁶⁾	6000 ⁽⁶⁾	-	-	-	-	-
PFOS	mg/kg	0.5				-	-	-	-	-	

Table 3 : Soil Analytical Results for Props Storage Area (Feature 17)

Chem_Group	ChemName	Units	EQL	NEPM 1999 EIL	Human Health	NEPM 1999 HIL F	Field ID					
							SB010.05-0.1	SB071.0-1.1	SB021.0-0.1	SB022.0-2.1	SB030.06-0.1	
PAH/Phenols	7,12-dimethylbenz(a)anthracene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	0.6-0.7
	2,4-dimethylphenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	14/08/2012
	2-chloronaphthalene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	14/08/2012
	2-methylnaphthalene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	2-methylphenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	1-methylphenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	3,4-dimethylphenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	3-methylchlorobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	4-chloro-3-methylphenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	Acenaphthene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	Acenaphthylene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	Acetophenone	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
	Anthracene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305
Benz(a)anthracene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Benz(b)fluoranthene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Benz(g,h,i)perylene	mg/kg	1				<1	<1	<1	<1	<1	EM1209305	
Chrysene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Dibenz(a,h)anthracene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Fluoranthene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Fluorene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Indeno(1,2,3-cd)pyrene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
1,2,3,4-dibenzopyrene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
PAHs (Sum of total)	mg/kg	100				<100	<100	<100	<100	<100	EM1209305	
Phenanthrene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Phenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Pyrene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Chlorobenzilate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Perchlorates	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Bis(2-ethylhexyl) phthalate	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
Bis(2-ethylhexyl) phthalate	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
Di-n-butyl phthalate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Di-n-butyl phthalate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Di-n-octyl phthalate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Polychlorinated Biphenyls	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1	EM1209305	
Methyl Ethyl Ketone	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
Solvents	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
2-Hexanone (MBK)	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
4-Methyl-2-pentanone	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
Carbon disulfide	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Styrene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
VOCs	mg/kg	5				<5	<5	<5	<5	<5	EM1209305	
cis-1,4-Dichloro-2-butene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Pentachloroethane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
trans-1,4-Dichloro-2-butene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
2-(acetyl amino) fluorene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
3,3-Dichlorobenzidine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
4-(dimethylamino) azobenzene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
4-bromophenyl phenyl ether	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
4-nitrophenyl phenyl ether	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
4-Nitrophenyl-N-oxide	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Azobenzene	mg/kg	1				<1	<1	<1	<1	<1	EM1209305	
Bis(2-chloroethoxy) methane	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Bis(2-chloroisopropyl) ether	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Carbazole	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Dibenzofuran	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Hexachloropropene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Methoxypropene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
Nitrobenzidine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
N-nitrosopyrrolidine	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	
N-nitrosopyrrolidine	mg/kg	1				<1	<1	<1	<1	<1	EM1209305	
Phenacetin	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	EM1209305	

Table 3 : Soil Analytical Results for Props Storage Area (Feature 17)

Field ID	SB01/0.05 - 0.1	SB01/1.0 - 1.1	SB02/0.0 - 0.1	SB02/1.0 - 2.1	SB03/0.06 - 0.1	SB03/0.6 - 0.7
Sample Depth Range	0.05-0.1	1.1-1.1	0.0-1.1	2-2.1	0.06-0.1	0.6-0.7
Sample Date/Time	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012	14/08/2012
Lab Report Number	EM1209305	EM1209305	EM1209305	EM1209305	EM1209305	EM1209305
LocCode	SB01/0.05 - 0.1	SB01/1.0 - 1.1	SB02/0.0 - 0.1	SB02/1.0 - 2.1	SB03/0.06 - 0.1	SB03/0.6 - 0.7
Chem_Group	ChemName	Units	EQL	NEPM 1999 EIL	Human Health	NEPM 1999 HLF
TPH	C6 - C9	mg/kg	10			
	C10 - C14	mg/kg	50			
	C15 - C28	mg/kg	100			
	C29-C36	mg/kg	100			
	C10 - C36 (Sum of total)	mg/kg	50			
TRH	C8-C10 (less BTEX (F1))	mg/kg	10	217 ^(13,7)	19000 ^(2,8)	
	C10-C16	mg/kg	50	172 ^(13,7)	1000 ^(2,8)	
	C16-C34	mg/kg	100	2500 ^(2,7)	2000 ^(2,8)	
	C34-C40	mg/kg	100	6600 ^(2,7)	RES ^(2,8)	
	C10 - C40 (Sum of total)	mg/kg	50			

Comments:

- Chromium VI criteria for NEPM 1999
- CCME (2008) for TPH, RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
- CCME (2004a) for Benzene.
- CCME (2004b) for Xylenes.
- CCME (2004c) for Toluene.
- CCME (2004d) for Ethylbenzene.
- The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
- The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
- Environment Agency (2004) for PFOS, PNEC_{soil} for earthworm adopted as criteria for soil.
- US EPA (2009) for PFOS and PFOA.
- Sol criteria for PFOS are adopted for 6.2 F15 due to lack of suitable criteria as a conservative measure.
- Warne M. (2010) review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for Incorporation into the NEPM (ASC).

Table 4 : Soil Analytical Results for Soil Composting Area (Feature 44)

Field ID	SB19/0-0.1	SB19/1/0-1.1	SB20/0-0.1	SB20/0.5-0.6	SB21/0.0-1	SB21/0.1	SB21/1/0-1.1	SB22/0-0.1	SB22/0.5-0.6
Sample Depth Range	0-0.1	1-1.1	0-0.1	0.5-0.6	0-0.1	0-0.1	1-1.1	0-0.1	0.5-0.6
Sampled Date/Time	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Lab Report Number	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440
LocCode	SB19/0-0.1	SB19/1/0-1.1	SB20/0-0.1	SB20/0.5-0.6	SB21/0.0-1	SB21/0.1	SB21/1/0-1.1	SB22/0-0.1	SB22/0.5-0.6
Chem Group	Chem Name	Units	EQL	NEPM 1998 EIL	Human Health	NEPM 1999 HLL F			
Amino Aliphatics	Nitrosodethylamine	mg/kg	0.5						
	Nitrosodipropylamine	mg/kg	0.5						
	Nitrosodi-n-butylamine	mg/kg	0.5						
	Nitrosodipropylamine	mg/kg	0.5						
	Nitrosodibutylamine	mg/kg	0.5						
	Nitrosodiphenyl & Diphenylamine	mg/kg	0.5						
	Nitrosodimethylamine	mg/kg	0.5						
Amino Aromatics	1-naphthylamine	mg/kg	0.5						
	2-nitroaniline	mg/kg	1						
	4-chloroaniline	mg/kg	0.5						
	2-nitroaniline	mg/kg	0.5						
	2-nitro-5-chloroaniline	mg/kg	0.5						
BTEX	Aniline	mg/kg	0.5						
	Benzene	mg/kg	0.2	310 (57)	11 (5,8)				
	Ethylbenzene	mg/kg	0.5	430 (67)	36000 (6,8)				
	Toluene	mg/kg	0.5	330 (67)	82000 (6,8)				
	Xylene (m & p)	mg/kg	0.5						
	Xylene (o)	mg/kg	0.5						
	Xylene Total	mg/kg	0.5	230 (47)	560000 (6,8)				
	Total BTEX	mg/kg	0.2						
	Chlorinated Hydrocarbons	1,1,1,2-tetrachloroethane	mg/kg	0.5					
		1,1,1-trichloroethane	mg/kg	0.5					
		1,1,2,2-tetrachloroethane	mg/kg	0.5					
		1,1,2-trichloroethane	mg/kg	0.5					
1,1-dichloroethane		mg/kg	0.5						
1,1-dichloroethene		mg/kg	0.5						
1,1-dichloropropane		mg/kg	0.5						
1,2,3-trichloropropane		mg/kg	0.5						
1,2-dibromo-3-chloropropane		mg/kg	0.5						
1,2-dichloroethane		mg/kg	0.5						
1,2-dichloropropane		mg/kg	0.5						
1,3-dichloropropane		mg/kg	0.5						
2,2-dichloropropane		mg/kg	0.5						
Bromodichloromethane		mg/kg	0.5						
Bromofom		mg/kg	0.5						
Carbon tetrachloride		mg/kg	0.5						
Chlorodibromomethane		mg/kg	0.5						
Chloroethane		mg/kg	5						
Chloroform		mg/kg	0.5						
Chloromethane		mg/kg	5						
cis-1,2-dichloroethene		mg/kg	0.5						
cis-1,3-dichloropropene		mg/kg	0.5						
Dibromomethane		mg/kg	0.5						
Hexachlorobutadiene		mg/kg	0.5						
Hexachlorocyclopentadiene	mg/kg	2.5							
Trichloroethane	mg/kg	0.5							
Trichloroethene	mg/kg	0.5							
Tetrachloroethane	mg/kg	0.5							
trans-1,2-dichloroethene	mg/kg	0.5							
trans-1,3-dichloropropene	mg/kg	0.5							
Vinyl chloride	mg/kg	5							
Explosives	1,3,5-Trinitrobenzene	mg/kg	0.5						
	2,4-Dinitrotoluene	mg/kg	1						
	2,6-dinitrotoluene	mg/kg	1						
	Nitrobenzene	mg/kg	0.5						
Halogenated Benzenes	1,2,4-trichlorobenzene	mg/kg	0.5						
	1,2,3-trichlorobenzene	mg/kg	0.5						
	1,2-dichlorobenzene	mg/kg	0.5						
	1,3-dichlorobenzene	mg/kg	0.5						
	1,4-dichlorobenzene	mg/kg	0.5						
	2-chlorotoluene	mg/kg	0.5						
	4-chlorotoluene	mg/kg	0.5						
	Bromobenzene	mg/kg	0.5						
	Chlorobenzene	mg/kg	0.5						
	Hexachlorobenzene	mg/kg	1						
Pentachlorobenzene	mg/kg	0.5							
Perchlorate	ug/kg	10							

Table 4 : Soil Analytical Results for Soil Composting Area (Feature 44)

Field ID	SB19/0-0.1	SB19/1.0-1.1	SB20/0-0.1	SB20/0.5-0.6	SB21/0.0-1	SB21/0.1-1	SB21/1.0-1.1	SB22/0-0.1	SB22/0.5-0.6
Sample Depth Range	0-0.1	1-1.1	0-0.1	0.5-0.6	0-0.1	1-1.1	0-0.1	0-0.1	0.5-0.6
Sampled Date/Time	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Lab Report Number	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440	EM1209440
LocCode	SB19/0-0.1	SB19/1.0-1.1	SB20/0-0.1	SB20/0.5-0.6	SB21/0.0-1	SB21/0.1-1	SB21/1.0-1.1	SB22/0-0.1	SB22/0.5-0.6
Chem_Group	ChemName	Units	EQL	NEPM 1999 EIL	Human Health	NEPM 1999 HIL F			
TPH	C6 - C9	mg/kg	10				<10	<10	<10
	C10 - C14	mg/kg	50				<50	<50	<50
	C15 - C28	mg/kg	100				<100	<100	<100
	C29 - C36	mg/kg	100				<100	<100	<100
	C10 - C36 (Sum of total)	mg/kg	50				<50	<50	<50
TRH	C8-C10 less BTEX (F1)	mg/kg	10	217 ^(12.7)	19000 ^(2.8)		<10	<10	<10
	C10-C16	mg/kg	50	172 ^(12.7)	10000 ^(2.8)		<50	<50	<50
	C16-C34	mg/kg	100	2500 ^(2.7)	20000 ^(2.8)		<100	<100	<100
	C34-C40	mg/kg	100	6600 ^(2.7)	RES ^(2.8)		<100	<100	<100
	C10 - C40 (Sum of total)	mg/kg	50				<50	<50	<50

- Comments:
- Chromium VI criteria for NEPM 1999
 - COME (2008) for TRH. RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
 - COME (2004a) for Benzene.
 - COME (2004b) for Xylenes.
 - COME (2004c) for Toluene.
 - COME (2004d) for Ethylbenzene.
 - The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
 - The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
 - Environment Agency (2004) for PPOS; PNEC_{soil} for earthworm adopted as criteria for soil.
 - Soil criteria for PPOS and POC
 - Soil criteria for PPOS are adopted for 6.2 FS due to lack of suitable criteria as a conservative measure.
 - Warne M. (2010) Review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for Incorporation into the NEPM (ASC).

Table 4 : Soil Analytical Results for Soil Composting Area (Feature 44)

Chem_Group	Chem Name	Units	EOL	NEPM 1999 EIL	Human Health	NEPM 1999 HIL F	Field ID	Sample Depth Range	Sample Date-Time	Lab Report Number	LocCode	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6
TPH	C6 - C9	mg/kg	10				SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C10 - C14	mg/kg	50				SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C15 - C28	mg/kg	100				SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C29-C36	mg/kg	100				SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C37 - C38 (Sum of total)	mg/kg	50				SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
TRH	C6-C10 less BTEX (F1)	mg/kg	10	217 ^(12.7)	19000 ^(2A)		SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C10-C16	mg/kg	50	172 ^(16.2)	10000 ^(2B)		SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C16-C34	mg/kg	100	2500 ⁽²⁷⁾	23000 ^(2A)		SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C34-C40	mg/kg	100	6600 ⁽²⁷⁾	RES ^(2A)		SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	
	C10 - C40 (Sum of total)	mg/kg	50				SB23/0-0.1	16/08/2012	EM1209440	EM1209440	SB23/0-0.1	SB23/1.0-1.1	SB24/0-0.1	SB24/0.5-0.6	SB25/0-0.1	SB25/0.5-0.6	SB26/0-0.1	SB26/1.0-1.1	SB27/0-0.1	SB27/1.0-1.1	SB28/0-0.1	SB28/0.5-0.6	

Comments:

- Chromium VI criteria for NEPM 1999
- CCME (2008) for TRH, RES = Residual petroleum hydrocarbons, calculated value exceeds 30,000 mg/kg and solubility limit for fraction.
- CCME (2004a) for Benzene.
- CCME (2004b) for Xylenes.
- CCME (2004c) for Toluene.
- CCME (2004d) for Ethylbenzene.
- The ecological guideline for direct soil contact and soil ingestion for fine soil for commercial/industrial land uses.
- The lowest human health guidelines for direct contact (soil ingestion or dermal contact) for commercial/industrial land uses.
- Environment Agency (2004) for PFOs, PNEC_{soil} for earthworm adopted as criteria for soil.
- US EPA (2009) for PFOs and PFOS.
- Soil criteria are applied for 6.2 FES due to lack of suitable criteria as a conservative measure.
- Warne M. (2010) Review of the Appropriateness of the Canadian Petroleum Hydrocarbon Country Wide Standards in Soil for Incorporation into the NEPM (ASX)

Table 5 : RPD Results

Field Duplicates (SOIL) Filter: ALL		SDG Field_ID	EM1209305 SB09/0 - 0.1	EM1209305 QC01/14082012	EM1209440 SB20/0-0.1	EM1209440 QC10/16082012	EM1209440 SB20/0-0.1	EM1209440 QC12/16082012	EM1211183 BH8/0.5	EM1211183 QC7/22092012	RPD
		Sampled_Date-Time	14/08/2012	14/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	22/09/2012	22/09/2012	RPD
Chem_Group	ChemName	Units	EOI	EOI	EOI	EOI	EOI	EOI	EOI	EOI	RPD
Amino Aliphatics	N-nitrosodiethylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	N-nitrosodimethylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	N-nitrosodipropylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	N-nitrosodipropylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	N-nitrosodiphenylamine	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0
Amino Aromatics	1-naphthylamine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Anilines	2-nitroaniline	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0
	3-nitroaniline	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0
	4-chloroaniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	4-nitroaniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	2-methyl-5-nitroaniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Aniline	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
BTEX	Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0
	Ethylbenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Ethylbenzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Xylene (m & p)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Xylene (m & p)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Xylene (o)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Xylene (o)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Xylene Total	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Total BTEX	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0
Chlorinated Hydrocarbons	1,1,1,2-tetrachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,1,1-trichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,1,2,2-tetrachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,1,2-trichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,1-dichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,1-dichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,1-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,2-dibromo-3-chloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,2-dichloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,2-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1,3-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	2,2-dichloropropane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Bromodichloromethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Bromoform	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Carbon tetrachloride	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Chlorodibromomethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Chloroethane	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0
	Chloroform	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0
	Chloromethane	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0
	cis-1,2-dichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	trans-1,2-dichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Dibromomethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Hexachlorobutadiene	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	0
	Hexachlorocyclopentadiene	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	0
	Hexachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Trichloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Tetrachloroethane	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	trans-1,3-dichloropropene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	trans-1,3-dichloropropene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Vinyl chloride	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0

Table 5 : RPD Results

Field Duplicates (SOIL) Filter: ALL		SDG Field_ID Sampled_Date-Time	EM1209305 SB09/0 - 0.1 14/08/2012	EM1209305 QC01/14082012 14/08/2012	EM1209440 SB20/0-0.1 16/08/2012	EM1209440 QC10/16082012 16/08/2012	EM1209440 SB25/0-0.1 16/08/2012	EM1209440 QC12/16082012 16/08/2012	EM1211183 BH8/0.5 22/09/2012	EM1211183 QC2/122092012 22/09/2012	RPD
Explosives		1,3,5-Trinitrobenzene mg/kg 0.5 (Primary); 0.5 (Interlab)	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		2,4-Dinitrotoluene mg/kg 0.5 (Primary); 0.5 (Interlab)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<1.0	0
		2,6-Dinitrotoluene mg/kg 0.5 (Primary); 0.5 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
Halogenated Benzenes		Nitrobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		1,2,3-Trichlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		1,2,4-Trichlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		1,2-Dichlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		1,3-Dichlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		1,4-Dichlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		2-Chlorotoluene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		4-Chlorotoluene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Bromobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Chlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Hexachlorobenzene mg/kg 1 (Primary); 0.5 (Interlab)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<1.0	0
		Penta-chlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Perchlorate ug/kg 10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0	<0.5	0
Halogenated Hydrocarbons		1,2-dibromoethane mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Bromomethane mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	0
		Dichlorodifluoromethane mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	0
		Iodomethane mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Trichlorofluoromethane mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	0
Halogenated Phenols		2,4,5-Trichlorophenol mg/kg 0.5 (Primary); 1 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		2,4,6-Trichlorophenol mg/kg 0.5 (Primary); 1 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		2,4-Dichlorophenol mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		2,6-Dichlorophenol mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		2-Chlorophenol mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Penta-chlorophenol mg/kg 1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<1.0	0
Herbicides		Pronamide mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
Inorganics		Moisture %	18.8	20.2	7	20.1	18.3	9	22.5	27.5	20
		pH (Lab) pH (Lab)	8.5	8.3	2	5.4	6.2	14	6.1	5.2	16
MAH		1,2,4-trimethylbenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		1,3,5-trimethylbenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Isopropylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		n-butylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		n-propylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		p-Isopropyltoluene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		sec-butylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		Styrene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
		tert-butylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	0
Metals		Arsenic mg/kg 5 (Primary); 2 (Interlab)	<5.0	6.0	18	<5.0	<5.0	0	<5.0	<5.0	0
		Barium mg/kg 10	90.0	40.0	22	20.0	20.0	0	30.0	40.0	29
		Beryllium mg/kg 1 (Primary); 2 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
		Cadmium mg/kg 1 (Primary); 0.4 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
		Chromium (III+VI) mg/kg 2 (Primary); 5 (Interlab)	29.0	56.0	67	39.0	30.0	26	28.0	48.0	53
		Cobalt mg/kg 2 (Primary); 5 (Interlab)	14.0	10.0	33	3.0	<2.0	40	2.0	3.0	40
		Copper mg/kg 5	23.0	13.0	56	8.0	6.0	29	5.0	9.0	57
		Lead mg/kg 5	20.0	32.0	46	13.0	11.0	17	12.0	13.0	8
		Manganese mg/kg 5	280.0	216.0	26	19.0	18.0	5	28.0	20.0	33
		Mercury mg/kg 0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
		Nickel mg/kg 2 (Primary); 5 (Interlab)	47.0	24.0	65	7.0	6.0	15	6.0	10.0	50
		Vanadium mg/kg 5 (Primary); 10 (Interlab)	81.0	132.0	81	54.0	46.0	16	66.0	78.0	17
		Zinc mg/kg 5	39.0	29.0	29	8.0	6.0	29	8.0	10.0	22
Nitroaromatics		2-Picoline mg/kg 0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
		4-aminobiphenyl mg/kg 0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
		Penta-chloro-1,3-benzene mg/kg 0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0

Table 5 : RPD Results

Field Duplicates (SOIL) Filter: ALL	SDG Field_ID Sampled_Date-Time	EM1209305 SB09/0 - 0.1 14/08/2012	EM1209305 QC01/14082012 14/08/2012	RPD	EM1209440 SB20/0-0.1 16/08/2012	EM1209440 QC10/16082012 16/08/2012	RPD	EM1209440 SB25/0-0.1 16/08/2012	EM1209440 QC12/16082012 16/08/2012	RPD	EM1211193 BH8/0.5 22/09/2012	EM1211193 QC2/12092012 22/09/2012	RPD	
														mg/kg
Organochlorine Pesticides														
	4,4-DDE	0.5	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	a-BHC	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Aldrin	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	b-BHC	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	γ-BHC	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	DDD	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	DDT	mg/kg	<1.0	<1.0	0	<1.0	0	<1.0	<1.0	0	<1.0	0		
	1 (Primary); 0.5 (Interlab)	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Dieldrin	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Endosulfan I	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Endosulfan II	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Endosulfan sulphate	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Endrin	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	g-BHC (Lindane)	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Heptachlor	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Heptachlor epoxide	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
Organophosphorous Pesticides														
	Chlorfenvinphos	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Chlorpyrifos	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Chlorpyrifos-methyl	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Diazinon	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Dichlorvos	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Dimethoate	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Ethion	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Fenitrothion	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Malathion	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Phosphorodithioic acid	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
Other														
	6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.163	0.163	6	0.163	6	0.163	0.163	6	0.163	6		
	PFCA	mg/kg	0.0044	0.0044	10	0.0044	10	0.0044	0.0044	10	0.0044	10		
	PFOS	µg/kg	968.0	968.0	6	968.0	6	968.0	968.0	6	968.0	6		
PAH														
	7,12-dimethylbenz[<i>a</i>]anthracene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
PAH/Phenols														
	2,4-dimethylphenol	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	2-chloronaphthalene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	2-methylnaphthalene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	2-methylphenol	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	2-nitrophenol	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	3,4-methylolanthrene	mg/kg	<1.0	<1.0	0	<1.0	0	<1.0	<1.0	0	<1.0	0		
	3-methylolanthrene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	4-chloro-3-methylphenol	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Acenaphthene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Acenaphthylene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Acetophenone	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Anthracene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Benzo[<i>a</i>]anthracene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Benzo[<i>a</i>]pyrene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Benzo[<i>b</i>]fluoranthene	mg/kg	<1.0	<1.0	0	<1.0	0	<1.0	<1.0	0	<1.0	0		
	Benzo[<i>k</i>]fluoranthene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Benzo[<i>ghi</i>]perylene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Chrysene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Dibenz[<i>a,h</i>]anthracene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Fluoranthene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Fluorene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Indeno[1,2,3- <i>c,d</i>]pyrene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Naphthalene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Naphthalene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	PAHs (Sum of total)	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Phenanthrene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Phenol	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		
	Pyrene	mg/kg	<0.5	<0.5	0	<0.5	0	<0.5	<0.5	0	<0.5	0		

Table 5 : RPD Results

Field ID	Sampled Date-Time	EM1209305 SB09/0 - 0.1 14/08/2012	EM1209305 QC01/14082012 14/08/2012	EM1209440 SB20/0-0.1 16/08/2012	EM1209440 QC10/16082012 16/08/2012	EM1209440 SB25/0-0.1 16/08/2012	EM1209440 QC12/16082012 16/08/2012	EM1211183 BH8/0.5 22/09/2012	EM1211183 QC2/122092012 22/09/2012	RPD	RPD	RPD	RPD
SDG	Field_ID	Sampled Date-Time	RPD	RPD	RPD	RPD	RPD	RPD	RPD	RPD	RPD	RPD	RPD
Pesticides	Chlorobenzilate mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Pirimphos-ethyl mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
Phthalates	Bis(2-ethylhexyl) phthalate mg/kg 5 (Primary); 0.5 (Interlab)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	<5.0	0
	Butyl benzyl phthalate mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Diethylphthalate mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Dimethyl phthalate mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	D-n-butyl phthalate mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	D-n-octyl phthalate mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
Polychlorinated Biphenyls	PCBs (Sum of total) mg/kg 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1	0
Solvents	Methyl Ethyl Ketone mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	<5.0	0
	2-hexanone (MBK) mg/kg 5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	<5.0	0
	4-Methyl-2-pentanone mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	<5.0	0
	Carbon disulfide mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Isophorone mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Vinyl acetate mg/kg 5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0	<5.0	<5.0	0
SVOCs	2-(aceylamino) fluorene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	3,3-Dichlorobenzidine mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	4-(dimethylamino) azobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	4-bromophenyl phenyl ether mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	4-chlorophenyl phenyl ether mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	4-Nitroquinoline-N-oxide mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Azobenzene mg/kg 1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<1.0	<1.0	0
	Bis(2-chloroethoxy) methane mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Bis(2-chloroisopropyl) ether mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Carbazole mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Dibenzoturan mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Hexachloropropene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Methapyliene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	N-nitrosomorpholine mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	N-nitrosopiperidine mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	N-nitrosopyrrolidine mg/kg 1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<1.0	<1.0	0
	Phenacetin mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
TPH	C6 - C9 mg/kg 10 (Primary); 20 (Interlab)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0	<10.0	<10.0	0
	C10 - C14 mg/kg 50 (Primary); 20 (Interlab)	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	0	<50.0	<50.0	0
	C15 - C28 mg/kg 100 (Primary); 50 (Interlab)	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	0	<100.0	<100.0	0
	C29-C36 mg/kg 100 (Primary); 50 (Interlab)	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	0	<100.0	<100.0	0
	C10 - C36 Fraction (sum) mg/kg 50	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	0	<50.0	<50.0	0
	+C10 - C36 (Sum of total) mg/kg 50	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	0	<50.0	<50.0	0
TRH	C6-C10 mg/kg 10 (Primary); 20 (Interlab)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0	<10.0	<10.0	0
	C6-C10 less BTEX (F1) mg/kg 10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0	<10.0	<10.0	0
	C10-C16 mg/kg 50	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	0	<50.0	<50.0	0
	C16-C34 mg/kg 100	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	0	<100.0	<100.0	0
	C34-C40 mg/kg 100	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	0	<100.0	<100.0	0
	C10 - C40 (Sum of total) mg/kg 50	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	0	<50.0	<50.0	0
VOCs	o,s-1,4-Dichloro-2-butene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Pentachloroethane mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0
	trans-1,4-Dichloro-2-butene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5	<0.5	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 50 (1-10 x EQL); 50 (10-30 x EQL); 50 (> 30 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table 5 : RPD Results

Field Duplicates (SOIL)
Filter: ALL

Chem. Group	ChemName	Units	EOI	EM1211193 BH8.0.5 22/09/2012	EM1211193 QC22/09/2012 22/09/2012	EM1209305 SB090 - 0.1 14/08/2012	QC02/14/08/2012 14/08/2012	EM1209440 SB20/0-0.1 16/08/2012	QC11/16/08/2012 16/08/2012	EM1209440 SB25/0-0.1 16/08/2012	QC13/16/08/2012 16/08/2012	RPD	RPD	
Field_ID	Sampled_Date-Time													
Amino Aliphatics	N-nitrosodiethylamine	mg/kg	0.5											
	N-nitrosodi-n-butylamine	mg/kg	0.5											
	N-nitrosodi-n-propylamine	mg/kg	0.5											
	N-nitrosodimethylamine	mg/kg	0.5											
	N-nitrosodiphenyl & Diphenylamine	mg/kg	1											
	1-naphthylamine	mg/kg	0.5											
	2-nitroaniline	mg/kg	1 (Primary); 0.5 (Interlab)											
	3-nitroaniline	mg/kg	1											
	4-chloroaniline	mg/kg	0.5											
	4-nitroaniline	mg/kg	0.5											
Amino Aromatics	2-methyl-5-nitroaniline	mg/kg	0.5											
	Aniline	mg/kg	0.5											
	Benzene	mg/kg	0.2 (Primary); 0.05 (Interlab)											
	Benzene	mg/kg	0.2											
	Ethylbenzene	mg/kg	0.5 (Primary); 0.05 (Interlab)											
	Ethylbenzene	mg/kg	0.5											
	Toluene	mg/kg	0.5 (Primary); 0.05 (Interlab)											
	Toluene	mg/kg	0.5											
	Xylene (m & p)	mg/kg	0.5 (Primary); 0.1 (Interlab)											
	Xylene (m & p)	mg/kg	0.5											
BTX	Xylene (o)	mg/kg	0.5											
	Xylene (o)	mg/kg	0.5											
	Xylene (o)	mg/kg	0.5 (Primary); 0.05 (Interlab)											
	Xylene (o)	mg/kg	0.5											
	Xylene Total	mg/kg	0.5											
	Total BTX	mg/kg	0.2											
	Chlorinated Hydrocarbons	1,1,1,2-tetrachloroethane	mg/kg	0.5 (Primary); 0.05 (Interlab)										
		1,1,1,2-tetrachloroethane	mg/kg	0.5										
		1,1,1,2-tetrachloroethane	mg/kg	0.5 (Primary); 0.05 (Interlab)										
		1,1,2,2-tetrachloroethane	mg/kg	0.5 (Primary); 0.05 (Interlab)										
1,1,2,2-tetrachloroethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
1,1-dichloroethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
1,1-dichloroethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
1,1-dichloroethane		mg/kg	0.5											
1,2-dibromo-3-chloropropane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
1,2-dibromo-3-chloropropane		mg/kg	0.5											
1,2-dichloroethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
1,2-dichloroethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
1,3-dichloropropane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
2,2-dichloropropane		mg/kg	0.5											
Bromodichloromethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
Bromodichloromethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
Carbon tetrachloride		mg/kg	0.5 (Primary); 0.05 (Interlab)											
Carbon tetrachloride		mg/kg	0.5 (Primary); 0.05 (Interlab)											
Chlorodibromomethane		mg/kg	0.5 (Primary); 0.05 (Interlab)											
Chloroethane		mg/kg	5 (Primary); 0.05 (Interlab)											
Chloroform		mg/kg	5 (Primary); 0.05 (Interlab)											
Chloroform		mg/kg	5 (Primary); 0.05 (Interlab)											
Chloroform		mg/kg	5 (Primary); 0.05 (Interlab)											
cis-1,2-dichloroethene		mg/kg	0.5 (Primary); 0.05 (Interlab)											
trans-1,2-dichloroethene		mg/kg	0.5 (Primary); 0.05 (Interlab)											
Dibromomethane	mg/kg	0.5 (Primary); 0.05 (Interlab)												
Hexachlorobutadiene	mg/kg	0.5												
Hexachlorocyclopentadiene	mg/kg	2.5 (Primary); 0.5 (Interlab)												
Hexachloroethane	mg/kg	0.5												
Trichloroethene	mg/kg	0.5 (Primary); 0.05 (Interlab)												
Tetrachloroethene	mg/kg	0.5 (Primary); 0.05 (Interlab)												
trans-1,3-dichloropropene	mg/kg	0.5 (Primary); 0.05 (Interlab)												
trans-1,3-dichloropropene	mg/kg	0.5 (Primary); 0.05 (Interlab)												
Vinyl chloride	mg/kg	5 (Primary); 0.05 (Interlab)												

Table 5 : RPD Results

Field Duplicates (SOL) Filter: ALL	SDG Field_ID Sampled_Date-Time	EM1211193 BH8/0.5 22/09/2012	EM1211193 OC22/09/2012 22/09/2012	EM1209005 SB090 - 0.1 14/08/2012	QC02/14082012 14/08/2012	EM1209440 SB200-0.1 16/08/2012	QC11/16082012 16/08/2012	EM1209440 SB250-0.1 16/08/2012	QC13/16082012 16/08/2012	RPD	RPD
Explosives	1,3,5-Trinitrobenzene mg/kg 0.5 1 (Primary); 0.5 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	2,4-Dinitrotoluene mg/kg 0.5 1 (Primary); 0.5 (Interlab)	<1.0	<1.0	<0.5	<0.5	<1.0	<0.5	<1.0	<0.5	0	<0.5
	2,6-Dinitrotoluene mg/kg 0.5 1 (Primary); 0.5 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
Halogenated Benzenes	Nitrobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,2,3-Trichlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,2,4-Trichlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,2,4,5-Tetrachlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,2-Dichlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,3-Dichlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,4-Dichlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	2-Chlorotoluene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	4-Chlorotoluene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Bromobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Chlorobenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Hexachlorobenzene mg/kg 1 (Primary); 0.5 (Interlab)	<1.0	<1.0	<0.5	<0.5	<1.0	<0.5	<1.0	<0.5	0	<0.5
	Pentachlorobenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Perchlorate ug/kg 10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0	<0.5
Halogenated Hydrocarbons	1,2-dibromoethane mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Bromomethane mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	0	<0.5
	Dichlorodifluoromethane mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Iodomethane mg/kg 0.5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	0	<0.5
	Trichlorofluoromethane mg/kg 5 (Primary); 0.05 (Interlab)	<5.0	<5.0	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	0	<0.5
Halogenated Phenols	2,4,5-trichlorophenol mg/kg 0.5 (Primary); 1 (Interlab)	<0.5	<0.5	<1.0	<1.0	<0.5	<1.0	<0.5	<1.0	0	<0.5
	2,4,6-trichlorophenol mg/kg 0.5 (Primary); 1 (Interlab)	<0.5	<0.5	<1.0	<1.0	<0.5	<1.0	<0.5	<1.0	0	<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	<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	<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	<0.5
	Pentachlorophenol mg/kg 1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<1.0
Herbicides	Pronamide mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
Inorganics	Moisture % 1	20.8	25.2	19	18.8	20.1	22.5	22.5	22.5		22.5
	pH (Lab) pH Units 0.1				8.5	5.4	6.1	6.1	6.1		6.1
MAH	1,2,4-trimethylbenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	1,3,5-trimethylbenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Isopropylbenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	n-butylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	n-propylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	p-isopropyltoluene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	sec-butylbenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	tert-butylbenzene mg/kg 0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
Metals	Arsenic mg/kg 5 (Primary); 2 (Interlab)										
	Barium mg/kg 10	<5.0	<5.0	3.1	48.0	<5.0	<2.0	<5.0	<2.0	0	<2.0
	Beryllium mg/kg 1 (Primary); 2 (Interlab)	50.0	48.0	4	20.0	30.0	14.0	35	30.0	0	45.0
	Cadmium mg/kg 1 (Primary); 0.4 (Interlab)	<1.0	<1.0	0	<1.0	<2.0	<2.0	0	<1.0	0	<2.0
	Chromium (III-VI) mg/kg 2 (Primary); 5 (Interlab)	<1.0	<1.0	0.6	<1.0	<1.0	<0.4	0	<1.0	0	0.5
	Cobalt mg/kg 2 (Primary); 5 (Interlab)	29.0	50.0	63	39.0	32.0	20	28.0	53.0	62	62
	Copper mg/kg 5 (Primary); 5 (Interlab)	14.0	10.0	33	14.0	3.0	<5.0	0	2.0	110	6.9
	Lead mg/kg 5	23.0	15.0	42	8.0	5.6	35	5.0	9.9	66	66
	Manganese mg/kg 5	5.0	18	6.0	23.0	14	13.0	8	12.0	20.0	50
	Mercury mg/kg 0.1	280.0	190.0	38	19.0	28.0	38	28.0	93.0	107	107
	Nickel mg/kg 2 (Primary); 5 (Interlab)	<0.1	<0.1	0	<0.1	<0.1	<0.1	0	<0.1	0	<0.1
	Vanadium mg/kg 5 (Primary); 10 (Interlab)	56.0	94.0	51	61.0	5.7	12	6.0	16.0	91	16.0
	Zinc mg/kg 5	39.0	38.0	3	8.0	6.9	15	8.0	30.0	116	30.0
Nitroaromatics	2-Picoline mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	4-aminobiphenyl mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5
	Penta-chlorotribenzene mg/kg 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0	<0.5

Table 5 : RPD Results

Field Duplicates (SOIL) Filter: ALL		SDG Field_ID	EM1211193 BH8/0.5	EM1211193 QC22/09/2012	EM1209305 SB090 - 0.1	EM1209440 SB200-0.1	EM1209440 QC13/16/08/2012	EM1209440 SB250-0.1	EM1209440 QC13/16/08/2012	RPD	RPD
		Sampled_Date-Time	22/09/2012	22/09/2012	14/08/2012	14/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012	16/08/2012
Organochlorine Pesticides											
	4,4-DDE	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	a-BHC	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Aldrin	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	b-BHC	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	γ-BHC	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	DDD	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	DDT	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	1 (Primary); 0.5 (Interlab)	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Dieldrin	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Endosulfan I	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Endosulfan II	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Endosulfan sulphate	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Endrin	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	g-BHC (Lindane)	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Heptachlor	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Heptachlor epoxide	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Organophosphorus Pesticides											
	Chlorfenvinphos	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Chlorpyrifos	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Chlorpyrifos-methyl	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Diazinon	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Dichlorvos	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Dimethoate	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Ethion	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Fenitrothion	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Malathion	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Prothiofos	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
Other											
	6:2 Fluorotelomer Sulfonate (6:2 F1S)	mg/kg	0.005		0.153						
	PF-CA	mg/kg	0.0005		0.0044						
	PF-OS	µg/kg	0.5		968.0						
PAH											
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
PAH/Phenols											
	2,4-dimethylphenol	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	2-chloronaphthalene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	2-methylnaphthalene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	2-methylphenol	mg/kg	0.5 (Primary); 0.2 (Interlab)		<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	0
	2-nitrophenol	mg/kg	0.5 (Primary); 1 (Interlab)		<0.5	<1.0	<1.0	<0.5	<1.0	<1.0	0
	3,3,4-trimethylphenol	mg/kg	0.5 (Primary); 0.4 (Interlab)		<1.0	<0.4	<0.4	<1.0	<0.4	<0.4	0
	3-methylcholanthrene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	4-chloro-3-methylphenol	mg/kg	0.5 (Primary); 1 (Interlab)		<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	0
	Acenaphthene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Acenaphthylene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Acetophenone	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Anthracene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Benzo(a)anthracene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Benzo(b)fluoranthene	mg/kg	1		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0
	Benzo(k)fluoranthene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Benzo(g,h)perylene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Chrysene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Dibenz(a,h)anthracene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Fluoranthene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Fluorene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Naphthalene	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0
	Naphthalene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	PAHs (Sum of total)	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Phenanthrene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Phenol	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0
	Pyrene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0

Table 5 : RPD Results

Field ID	Sampled Date-Time	EM121193 BH8/0.5 22/09/2012	EM121193 OC2/09/2012 22/09/2012	EM120905 SB090 - 0.1 14/08/2012	QC02/14082012 14/08/2012	EM1209440 SB200-0.1 16/08/2012	QC11/16082012 16/08/2012	EM1209440 SB250-0.1 16/08/2012	QC13/16082012 16/08/2012	RPD	RPD	RPD	RPD
Pesticides	Chlorobenzilate mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Phitrimpro-ethyl mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
Phthalates	Bis(2-ethylhexyl) phthalate mg/kg	5 (Primary); 0.5 (Interlab)		<5.0	<5.0	<5.0		<5.0		<5.0		<5.0	
	Butyl benzyl phthalate mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Diethylphthalate mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Dimethyl phthalate mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	D-n-butyl phthalate mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	D-n-octyl phthalate mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
Polychlorinated Biphenyls	PCBs (Sum of total) mg/kg	0.1		<0.1	<0.1	<0.1		<0.1		<0.1		<0.1	
Solvents	Methyl Ethyl Ketone mg/kg	5 (Primary); 0.05 (Interlab)		<5.0	<0.05	<5.0		<5.0		<5.0		<5.0	
	2-hexanone (MBK) mg/kg	5		<5.0	<5.0	<5.0		<5.0		<5.0		<5.0	
	4-Methyl-2-pentanone mg/kg	5 (Primary); 0.05 (Interlab)		<5.0	<0.05	<5.0		<5.0		<5.0		<5.0	
	Carbon disulfide mg/kg	0.5 (Primary); 0.05 (Interlab)		<0.5	<0.05	<0.5		<0.5		<0.5		<0.5	
	Isophorone mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Vinyl acetate mg/kg	5		<5.0	<5.0	<5.0		<5.0		<5.0		<5.0	
SVOCs	2-(acetylamino) fluorene mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	3,3-Dichlorobenzidine mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	4-(dimethylamino) azobenzene mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	4-bromophenyl phenyl ether mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	4-chlorophenyl phenyl ether mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	4-Nitroquinoline-N-oxide mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Azobenzene mg/kg	1		<1.0	<1.0	<1.0		<1.0		<1.0		<1.0	
	Bis(2-chloroethoxy) methane mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Bis(2-chloroisopropyl) ether mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Carbazole mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Dibenzofuran mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Hexachloropropene mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Methapyrene mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	N-nitrosomorpholine mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	N-nitrosophthalidine mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	N-nitrosopyrrolidine mg/kg	1		<1.0	<1.0	<1.0		<1.0		<1.0		<1.0	
	Phenacetin mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
TPH	G6 - C9 mg/kg	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0		<10.0		<10.0	
	G10 - C14 mg/kg	<50.0	<50.0	<50.0	<50.0	<50.0		<50.0		<50.0		<50.0	
	C15 - C28 mg/kg	<100.0	<100.0	<100.0	<100.0	<100.0		<100.0		<100.0		<100.0	
	C29-C36 mg/kg	<100.0	<100.0	<100.0	<100.0	<100.0		<100.0		<100.0		<100.0	
	C10 - C36 Fraction (sum) mg/kg	<50.0	<50.0	<50.0	<50.0	<50.0		<50.0		<50.0		<50.0	
	+C10 - C36 (Sum of total) mg/kg	50		<50.0	<50.0	<50.0		<50.0		<50.0		<50.0	
TPRH	G6-C10 mg/kg	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0		<10.0		<10.0	
	G6-C10 less BTEX (F1) mg/kg	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0		<10.0		<10.0	
	C10-C16 mg/kg	<50.0	<50.0	<50.0	<50.0	<50.0		<50.0		<50.0		<50.0	
	C16-C34 mg/kg	<100.0	<100.0	<100.0	<100.0	<100.0		<100.0		<100.0		<100.0	
	C34-C40 mg/kg	100		<100.0	<100.0	<100.0		<100.0		<100.0		<100.0	
	C10 - C40 (Sum of total) mg/kg	50		<50.0	<50.0	<50.0		<50.0		<50.0		<50.0	
VOCs	gs-1,4-Dichloro-2-butene mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	Pentachloroethane mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	
	trans-1,4-Dichloro-2-butene mg/kg	0.5		<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 50 (1-10 x EQL); 50 (10-30 x EQL); 50 (> 30 x EQL).
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the i

Table 6 : Field Blanks

Field Blanks (WATER)
Filter: ALL

Chem Group	ChemName	Units	EQI	EM1209440 OC06/14/08/2012 14/08/2012 Rinsate	EM1209440 OC08/14/08/2012 14/08/2012 Rinsate	EM1209440 OC19/16/08/2012 16/08/2012 Rinsate	EM1209440 OC24/14/08/2012 14/08/2012 Trip_B	EM1209440 OC09/14/08/2012 14/08/2012 Trip_B	EM1209440 OC14/16/08/2012 16/08/2012 Trip_B	EM1209440 OC19/16/08/2012 16/08/2012 Trip_B	EM1209440 OC17/16/08/2012 16/08/2012 Trip_B	EM1209440 OC20/16/08/2012 16/08/2012 Trip_B	
BTEX	Benzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
	Ethylbenzene	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	Toluene	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	Xylene (m & p)	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	Xylene (o)	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	Xylene (tota)	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	Total BTEX	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	Metals	Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
		Barium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
		Beryllium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
		Cadmium	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
		Chromium (III+V)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
		Cobalt	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper		mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead		mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese		mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Nickel		mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Niocal		mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Vanadium		mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc		mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
PAH/Phenols	Naphthalene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	Phenols	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
TPH	C6 - C9	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
	C10 - C14	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50		
	C15 - C28	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100		
	C29-C38	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50		
	C10 - C36 (Sum of total)	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50		
	C6-C10	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
	C6-C10 less BTEX (FT)	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
TRH	C10-C16	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
	C16-C34	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
	C34-C40	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
	C10 - C40 (Sum of total)	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100		

Appendix C

41 Pages

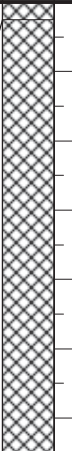

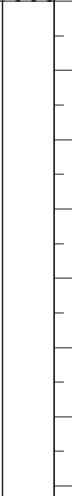
Bore Logs

SB01-SB30

BH1- BH10

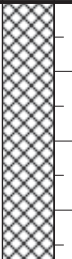
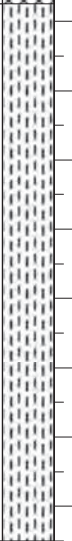
Cardno Lane Piper Unified Classification System (Environmental)

Project: Targeted Soil Assessment	Position: 0254748 mE 5825745 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0 0.05	FILL: Sandy SILT (ML) low plasticity, grey brown, very stiff, slightly moist, with occasional gravel and glass fragments FILL: Silty CLAY (CH) high plasticity, mottled orange brown, stiff, slightly moist Becoming dark grey at 0.6m		0.0	SB01/0.05-0.1	V=0 O=0 PID=0.1	
			1.0	SB01/0.6-0.7	V=0 O=0 PID=0	
1.3	Silty CLAY (CH) high plasticity, mottled grey brown, stiff, slightly moist		2.0	SB01/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB01 at 2.2m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254711 mE 582542 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH), high plasticity, mottled orange brown, stiff, slightly moist, with occasional root matter and gravel		0.0	SB02/0.05-0.1	V=0 O=0 PID=0	
				SB02/0.6-0.7	V=0 O=0 PID=0	
0.75	Clayey SILT (MH) high plasticity, brown, firm, moist-wet, with traces of gravel		1.0	SB02/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB02/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SBO2 at 2.3m due to refusal from weathered basalt		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.75m
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Project: Targeted Soil Assessment	Position: 254741 mE 5825768 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0 0.06	FILL: Sandy SILT (ML) low plasticity, orange, stiff, slightly moist, with occasional gravel Silty CLAY (CH) high plasticity, mottled orange yellow brown, very stiff, slightly moist		0.0	SB03/0.06-0.1	V=0 O=0 PID=0	
	Becoming grey brown at 0.64m			SB03/0.6-0.7	V=0 O=0 PID=0	
			1.0	SB03/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB03/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB03 at 2.2m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254721 mE 5825701 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Silty CLAY (CH) high plasticity, mottled yellow brown, stiff, moist, with occasional root matter		0.0	SB04/0-0.1	V=0 O=0 PID=0	
	Becoming grey brown and wet at 0.5m			SB04/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB04/1.0-1.1	V=0 O=0 PID=0.9	
2.0	Silty CLAY (CH) high plasticity, blue grey brown, stiff, slightly wet, with weathered basalt fragments		2.0	SB04/2.0-2.1	V=0 O=0 PID=0	
2.1	Clayey SILT (ML) low plasticity, white grey, very stiff, slightly moist					
	End of borehole SB04 at 2.3m		3.0			

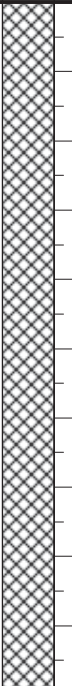

Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.75m
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Project: Targeted Soil Assessment	Position: 254715 mE 5825709 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Silty CLAY (CH) high plasticity, mottled orange yellow brown, stiff, moist		0.0	SB05/0-0.1	V=0 O=0 PID=0	
				SB05/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB05/1.0-1.1	V=0 O=0 PID=0.9	
1.5	Silty CLAY (CH) high plasticity, grey brown, stiff, wet Becoming white-grey brown at 1.9m		2.0	SB05/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB05 at 2.3m		3.0			

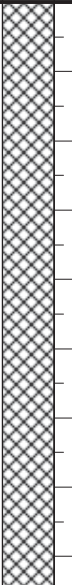
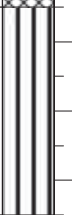
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.9m
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Project: Targeted Soil Assessment	Position: 254728 mE 5825719 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Sandy SILT (ML) low plasticity, grey brown, stiff, slightly moist with occasional gravel		0.0	SB06/0-0.1	V=0 O=1 PID=10	Strong Hydrocarbon odour
				SB06/0.5-0.6	V=0 O=1 PID=14	Strong Hydrocarbon odour
			1.0	SB06/1.0-1.1	V=0 O=1 PID=5.2	Strong Hydrocarbon odour
2.0	Sily CLAY (CH) high plasticity, grey brown, stiff to very stiff, slightly moist		2.0	SB06/2.0-2.1	V=0 O=1 PID=51.7	Strong Hydrocarbon odour
	End of borehole SB06 at 2.4m		3.0			

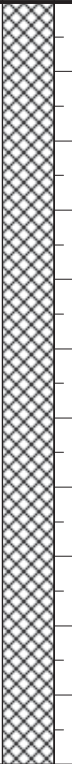

Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254725 mE 5825719 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Sandy SILT (ML) low plasticity, grey brown, stiff to very stiff, moist with occasional gravel		0.0	SB07/0-0.1	V=0 O=1 PID=4.2	
				SB07/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB07/1.0-1.1	V=0 O=0 PID=0	
	Becoming dark grey at 1.5m					
1.7	Silty CLAY (CH) high plasticity, grey brown, stiff, moist		2.0	SB07/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB07 at 2.3m					
			3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254721 mE 5825720 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Sandy SILT (ML) low plasticity, grey brown, stiff, slightly moist with occasional gravel		0.0	SB08/0-0.1	V=0 O=1 PID=5.3	Hydrocarbon odour
				SB08/0.5-0.6	V=0 O=2 PID=0.8	Strong Hydrocarbon odour
	Becoming dark grey at 1.0m		1.0	SB08/1.0-1.1	V=0 O=2 PID=0.8	Strong Hydrocarbon odour
			2.0	SB08/2.0-2.1	V=0 O=2 PID=0	Strong Hydrocarbon odour
2.2	Silty CLAY (CH) high plasticity, blue grey-brown, stiff to very stiff, slightly moist					
	End of borehole SB08 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254915 mE 5825712 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Silty CLAY (CH) high plasticity, brown, stiff to very stiff, slightly moist with occasional root matter		0.0	SB09/0.0-0.1	V=0 O=1 PID=0.7	Hydroncarbon odour
	Becoming dark grey at 0.4m			SB09/0.5-0.6	V=0 O=0 PID=0.3	
	Becoming wet at 1.0m		1.0	SB09/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB09/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB09 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: QC01/14082012 is a duplicate of SB09/0.00-0.1 QC02/14082012 is a triplicate of SB09/0.00-0.1	Groundwater Observations: Groundwater encountered at 1.0m
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Project: Targeted Soil Assessment	Position: 254914 mE 5825701mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, brown, stiff to very stiff, moist, with occasional root matter and gravel		0.0	SB10/0.0-0.1	V=0 O=0 PID=0.2	
0.3	Silty CLAY (CH) high plasticity, brown, very stiff, moist			SB10/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB10/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB10/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB10 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.3m
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Project: Targeted Soil Assessment	Position: 254917 mE 5825687 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level:	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Top of Casing: NA	Drilling Method: Hand Auger Direct Push
	Inclination: Vertical	Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, brown, stiff, slightly moist		0.0	SB11/0-0.1	V=0 O=0 PID=0.3	
0.6	Silty CLAY (CH) high plasticity, brown, very stiff, slightly moist		1.0	SB11/0.5-0.6	V=0 O=0 PID=0.2	
			2.0	SB11/1.0-1.1	V=0 O=0 PID=0	
			3.0	SB11/2.0-2.1	V=0 O=0 PID=0	
	End of borehole SB11 at 2.4m					


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254917 mE 5825666 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, mottled grey brown, stiff, slightly moist, with occasional gravel		0.0	SB12/0-0.1	V=0 O=0 PID=0	
0.6	Silty CLAY (CH) high plasticity, brown, very stiff, slightly moist		0.6	SB12/0.5-0.6	V=0 O=0 PID=1.9	
			1.0	SB12/1.0-1.1	V=0 O=0 PID=2	
			2.0			
			2.2-2.3	SB12/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB12 at 2.45m		3.0			






Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254891 mE 5825661 mN	Date Drilled: 14 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks	
0	Silty CLAY (CH) high plasticity, grey brown, stiff, slightly moist with occasional gravel		0.0	SB13/0-0.1	V=0 O=0 PID=0.7		
	Becoming mottled brown at 0.5m						
0.6	Silty CLAY (CH) high plasticity, red brown, very stiff, wet			1.0	SB13/0.5-0.6	V=0 O=0 PID=0.8	
				2.0	SB13/1.0-1.1	V=0 O=0 PID=0	
			3.0	SB13/2.2-2.3	V=0 O=0 PID=0		
	End of borehole SB13 at 2.4m						

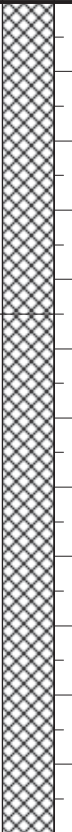
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.8m
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Project: Targeted Soil Assessment	Position: 254885 mE 5825662 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Silty CLAY (Cl) medium plasticity, grey, stiff, slightly moist with occasional gravel		0.0	SB14/0-0.1	V=0 O=0 PID=5.3	
0.3	Clayey SILT (MH) high plasticity, red, stiff, wet, with occasional gravel			SB14/0.5-0.6	V=0 O=0 PID=6.0	
	Becoming brown at 0.8m		1.0	SB14/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB14/2.3-2.4	V=0 O=0 PID=0	
	End of borehole SB14 at 2.5m		3.0			

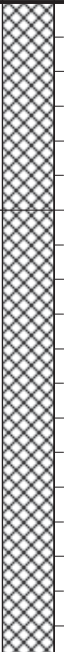
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.5m
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Project: Targeted Soil Assessment	Position: 254866 mE 5825664 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (ML) low plasticity, red, firm, slightly moist, with occasional gravel		0.0	SB15/0-0.1	V=0 O=0 PID=3.9	
	Becoming wet at 0.5m			SB15/0.5-0.6	V=0 O=0 PID=4.0	
0.9	FILL: Silty CLAY (CI) medium plasticity, grey brown, stiff, wet		1.0	SB15/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB15/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB15 at 2.4m		3.0			

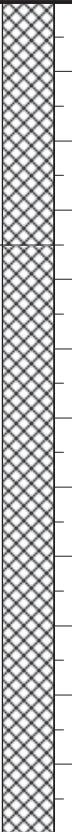
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.5m
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Project: Targeted Soil Assessment	Position: 254862 mE 5825670 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, orange yellow brown, firm, slightly moist, with occasional gravel		0.0	SB16/0-0.1	V=0 O=0 PID=5.6	
	Becoming mottled red brown and stiff at 0.5m			SB16/0.5-0.6	V=0 O=0 PID=0	
0.6	FILL: Silty CLAY (CH) high plasticity, red brown, very stiff, slightly moist		1.0	SB16/1.0-1.1	V=0 O=0 PID=0	
				SB16/1.8-1.9	V=0 O=0 PID=0	
	End of borehole SB16 at 1.9m due to refusal from basalt		2.0			
			3.0			

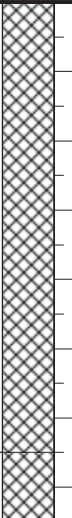

Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254863 mE 5825683 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, mottled orange yellow brown, stiff, slightly moist, with occasional gravel Becoming grey brown at 0.4m		0.0	SB17/0-0.1	V=0 O=0 PID=10.5	
				SB17/0.5-0.6	V=0 O=0 PID=5.6	
0.7	FILL: Silty CLAY (CH) high plasticity, red brown, stiff, wet, with occasional gravel		1.0	SB17/1.0-1.1	V=0 O=0 PID=2.0	
			2.0	SB17/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB17 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 0.8m
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Project: Targeted Soil Assessment	Position: 254846 mE 5825695 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, yellow brown, firm, slightly moist		0.0	SB18/0-0.1	V=0 O=0 PID=15.1	
				SB18/0.5-0.6	V=0 O=0 PID=10.1	
			1.0	SB18/1.0-1.1	V=0 O=0 PID=3.2	
1.3	FILL: Clayey SILT (ML), low plasticity, mottled grey brown, very stiff, slightly moist					
1.5	Silty CLAY (CH) high plasticity, mottled orange brown, very stiff, slightly moist		2.0			
				SB18/2.2-2.3	V=0 O=0 PID=1	
	End of borehole SB18 at 2.4m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254944 mE 5825551 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level:	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Top of Casing: NA	Drilling Method: Hand Auger Direct Push
	Inclination: Vertical	Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Clayey SILT (MH) high plasticity, brown, firm moist		0.0	SB19/0-0.1	V=0 O=0 PID=0.3	
0.4	Silty CLAY (CH) high plasticity, yellow brown, stiff, moist		1.0	SB19/0.5-0.6 SB19/1.0-1.1	V=0 O=0 PID=0.2 V=0 O=0 PID=0	
			2.0	SB19/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB19 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254944 mE 5825551 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Clayey SILT (MH) high plasticity, brown, firm, moist with traces of root matter Silty CLAY (CH) high plasticity, mottled orange grey brown, stiff, moist		0.0	SB20/0-0.1	V=0 O=0 PID=0	
0.1					SB20/0.5-0.6		V=0 O=0 PID=0
			1.0	SB20/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB20/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB20 at 2.4m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: QC10/16082012 is a duplicate of SB20/0.00-0.1 QC11/16082012 is a triplicate of SB20/0.00-0.1	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254922 mE 5825554 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (MH) high plasticity, brown, firm, moist with occasional root matter and gravel		0.0	SB21/0-0.1	V=0 O=0 PID=0.7	
0.2	Silty CLAY (CH) high plasticity, mottled yellow brown, very stiff, moist, with traces of root matter			SB21/0.5-0.6	V=0 O=0 PID=0	
	Becoming wet at 0.8m		1.0	SB21/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB21/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB21 at 2.4m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.0m
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Project: Targeted Soil Assessment	Position: 254929 mE 5825520 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Silty CLAY (CH) high plasticity, mottled yellow grey brown, stiff, moist, with traces root matter		0.0	SB22/0-0.1	V=0 O=0 PID=0	
				SB22/0.5-0.6	V=0 O=0 PID=0	
	Becoming very stiff at 1.0m		1.0	SB22/1.0-1.1	V=0 O=0 PID=0	
	Becoming wet at 1.2m					
			2.0			
				SB22/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB22 at 2.4m					
			3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.3m
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Project: Targeted Soil Assessment	Position: 254906 mE 5825497 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Silty CLAY (CH) high plasticity, mottled orange brown, firm, moist, with traces of root matter		0.0	SB23/0-0.1	V=0 O=0 PID=0.1	
	Becoming stiff at 0.8m			SB23/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB23/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB23/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB23 at 2.4m		3.0			




Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.4m
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Project: Targeted Soil Assessment	Position: 254919 mE 5825480 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	Clayey SILT (MH) high plasticity, grey brown, firm, moist, with traces root matter		0.0	SB24/0-0.1	V=0 O=0 PID=0	
0.3	Silty CLAY (CH) high plasticity, mottled orange brown, stiff, moist			SB24/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB24/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB24/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB24 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.4m
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Project: Targeted Soil Assessment	Position: 254936 mE 5825470 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (MH) high plasticity, grey brown, firm, moist, with traces root matter		0.0	SB25/0.0-0.1	V=0 O=0 PID=0	
0.4	Silty CLAY (CH) high plasticity, mottled orange yellow brown, stiff, moist		1.0	SB25/0.5-0.6 SB25/1.0-1.1	V=0 O=0 PID=0 V=0 O=0 PID=0	
	End of borehole SB25 at 2.4m		2.0 3.0	SB25/2.2-2.3	V=0 O=0 PID=0	



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: QC12/16082012 is a duplicate of SB25/0.00-0.1 QC13/16082012 is a triplicate of SB25/0.00-0.1	Groundwater Observations: Groundwater encountered at 1.4m
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Project: Targeted Soil Assessment	Position: 254919 mE 5825463 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (MH) high plasticity, grey brown, firm, moist, with traces root matter		0.0	SB26/0-0.1	V=0 O=0 PID=0	
0.2	Silty CLAY (CH) high plasticity, mottled orange brown, stiff, moist			SB26/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB26/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB26/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB26 at 2.4m		3.0			



Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.3m
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Project: Targeted Soil Assessment	Position: 254091 mE 5825434 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Silty CLAY (CH) high plasticity, grey brown, firm, wet, with traces root matter		0.0	SB27/0-0.1	V=0 O=0 PID=0.1	
0.2	Clayey SILT (MH) high plasticity, mottled orange brown, stiff, moist			SB27/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB27/1.0-1.1	V=0 O=0 PID=0	
			2.0	SB27/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB27 at 2.4m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.2m
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Project: Targeted Soil Assessment	Position: 254902 mE 5825466 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (MH) high plasticity, grey brown, firm, moist		0.0	SB28/0-0.1	V=0 O=0 PID=0.3	
0.3	Silty CLAY (CH) high plasticity, mottled orange brown, stiff, moist			SB28/0.5-0.6	V=0 O=0 PID=0	
			1.0	SB28/1.0-1.1	V=0 O=0 PID=0	
			2.0			
				SB28/2.2-2.3	V=0 O=0 PID=0	
	End of borehole SB28 at 2.4m		3.0			


Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Groundwater encountered at 1.4m
---	---------------	---

Project: Targeted Soil Assessment	Position: 0254754 mE 5825858 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (MH) high plasticity, black grey, firm to stiff, moist, with occasional gravel		0.0	SB29/0-0.1	V=0 O=1 PID=70	Hydrocarbon odour
	End of borehole SB29 at 0.5m		1.0 2.0 3.0	SB29/0.4-0.5	V=0 O=1 PID=30	

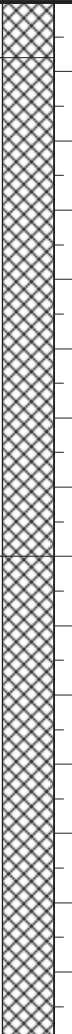
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
---	---------------	--

Project: Targeted Soil Assessment	Position: 0254754 mE 5825858 mN	Date Drilled: 16 August 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Geoprobe 7730DT
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Hand Auger Direct Push
		Logged/Checked: MCD/ JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0	FILL: Clayey SILT (MH) high plasticity, grey black, firm to stiff, moist, with occasional gravel		0.0	SB30/0-0.1	V=0 O=1 PID=79.3	Hydrocarbon odour
	End of borehole SB30 at 0.5m		1.0 2.0 3.0	SB30/0.4-0.5	V=0 O=1 PID=50	

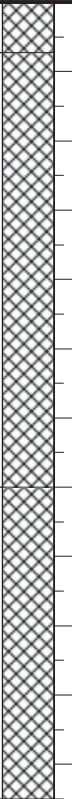
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: None encountered
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Project: Targeted Soil Assessment	Position: 254799 mE 5825786 mN	Date Drilled: 11th September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks	
0.0	Reinforced concrete		0.0				
0.16	FILL: Sandy GRAVEL (GW) medium to coarse grained, grey, medium dense, wet, with traces of brick				BH1A/0.5	V=0 O=1 PID=10	Hydrocarbon odour
1.6	FILL: Gravelly SAND (SW) fine to medium grained, yellow brown, dense, wet						
	Refusal at 3.0m on Basalt			3.0	BH1A/3.0	V=0 O=0 PID=5.6	









Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254796 mE 5825784 mN	Date Drilled: 11th September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	Reinforced concrete		0.0			
0.14	FILL: Silty CLAY (CH) high plasticity, grey blue, stiff, slightly moist with frequent gravel and cobbles Becoming wet from 0.5m		1.0	BH1D/0.5	V=0 O=0 PID=0	
1.4	FILL: Silty CLAY (CH) high plasticity, dark grey brown, stiff, moist, wet with traces of gravel		2.0	BH1D/2.0	V=0 O=0 PID=8.5	0-1.5m backfilled with sand
2.3	Silty CLAY (CH) high plasticity, dark grey brown, stiff, wet with frequent basalt Refusal at 2.4m on Basalt		3.0	BH1D/2.3	V=0 O=0 PID=2.1	

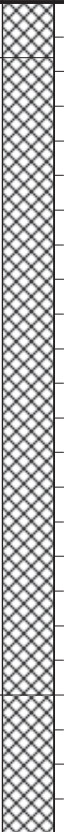
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254794 mE 5825789 mN	Date Drilled: 11th September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	Reinforced concrete		0.0			
0.16	FILL: Sandy GRAVEL (GW) medium to coarse grained, grey, medium dense, wet with traces of brick and glass			BH1C/0.5	V=0 O=0 PID=0	
			1.0			
			2.0	BH1C/2.3	V=0 O=0 PID=2.1	
2.0	FILL: Silty CLAY (CH) high plasticity, dark grey brown, stiff, wet with traces of gravel and sand					
			2.5	BH1C/2.5	V=0 O=0 PID=0	
2.5	Silty CLAY (CH) high plasticity, dark grey brown, stiff and wet Refusal at 2.6m on Basalt					
			3.0			

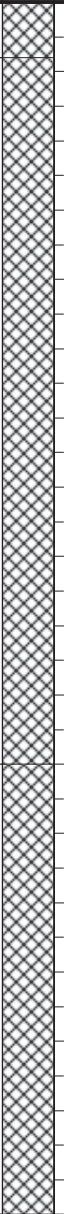
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 1.3m
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Project: Targeted Soil Assessment	Position: 254796 mE 5825794 mN	Date Drilled: 11th September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks	
0.0	Reinforced concrete		0.0				
0.16	FILL: Sandy GRAVEL (GW) medium to coarse grained, grey, medium dense, wet with traces of brick				BH1B/0.5	V=0 O=0 PID=2.3	
2.0	FILL: Silty CLAY (CH) high plasticity, dark grey brown, stiff, wet with traces of sand, roots and gravel			1.0			0-1.5m backfilled with sand
	Borehole terminated at 2.4m due to collapse			2.0	BH1B/2.3	V=0 O=0 PID=0.3	
			3.0				

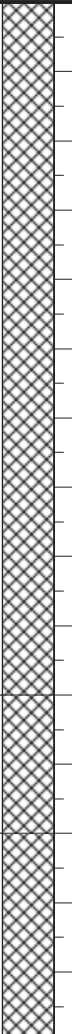
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254790 mE 5825871 mN	Date Drilled: 22nd September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	Reinforced concrete		0.0			
0.16	FILL: Clayey SILT (MH) high plasticity, black, firm with traces of gravel					
			2.0	BH5/2.0	V=2 O=2 PID=20	Strong hydrocarbon odour
2.2	FILL: Silty CLAY(CH) high plasticity, mottled yellow brown, stiff, wet with traces gravel					
		3.0	BH5/3.0	V=0 O=0 PID=12.6		
	Refusal at 3.5m on Basalt					




Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254790 mE 5825872 mN	Date Drilled: 22nd September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	FILL: Clayey SILT (ML) low plasticity, brown, stiff, wet with root matter and frequent gravel		0.0			
2.0	FILL: SILT (ML) low plasticity, black, firm, wet with frequent gravel		2.0	BH6/2.0	V=0 O=2 PID=104	Strong hydrocarbon odour
2.4	FILL: Silty CLAY (CH) high plasticity, black, stiff, wet with traces gravel		2.4	BH6/2.5	V=0 O=2 PID=105	Strong hydrocarbon odour
	Refusal at 3.0m on Basalt		3.0	BH6/3.0	V=0 O=2 PID=10	Strong hydrocarbon odour

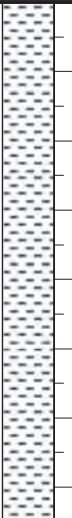
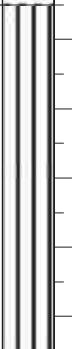
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254788 mE 5825880 mN	Date Drilled: 22nd September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	FILL: Clayey SILT (ML) low plasticity, brown, stiff, wet		0.0			
1.5	Silty CLAY (CH) high plasticity, yellow brown, stiff, wet		2.0	BH7/2.0	V=0 O=0 PID=0	
	Refusal at 2.6m on Basalt		3.0	BH7/2.5	V=0 O=0 PID=0	

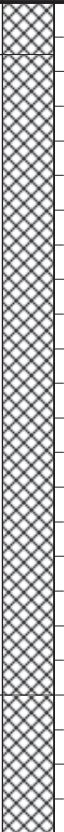
Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes:	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254784 mE 5825881 mN	Date Drilled: 22nd September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	Clayey SILT (ML) low plasticity, brown, firm, wet		0.0	BH8/0.5	V=0 O=0 PID=0	
1.5	Silty CLAY (CH) high plasticity, yellow brown, stiff, wet		1.5	BH8/1.5	V=0 O=0 PID=0	
			2.0	BH8/2.0	V=0 O=0 PID=0	
			2.5	BH8/2.5	V=0 O=0 PID=0	
	Refusal at 2.5m on Basalt		3.0			






Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: QC22/22092012 is a duplicate of BH8/0.5 QC21/22092012 is a triplicate of BH8/0.5	Groundwater Observations: Perched water at 0.5m
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Project: Targeted Soil Assessment	Position: 254797 mE 5825790 mN	Date Drilled: 22nd September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	Reinforced concrete		0.0			
0.15	FILL: Sandy GRAVEL (GW) medium to coarse grained, black, medium dense, wet with traces of brick		1.0	BH9/1.7	V=0 O=0 PID=3	
2.0	FILL: Silty CLAY (CH) high plasticity, dark grey, stiff, wet with traces of sand		2.0	BH9/2.4	V=0 O=0 PID=0	
	Refusal at 2.4m on Basalt		3.0			

Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 0.6m
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Project: Targeted Soil Assessment	Position: 254796 mE 5825794 mN	Date Drilled: 22nd September 2012
Location: Fiskville Training College Geelong-Ballan Rd, Fiskville	Surface Level: Top of Casing: NA	Drill Rig: Drill mounted Landcruiser
Job No.: 212163.1	Inclination: Vertical	Drilling Method: Air Knife Direct Push
		Logged/Checked: MCD/JCE

Depth (m bgl)	Description of Strata	Graphic Log	Depth (m bgl)	Samples	PID (ppm) / Contam Ranking	Remarks
0.0	Reinforced concrete		0.0			
0.14	FILL: Silty CLAY (CH) high plasticity, black brown, stiff, wet with gravel and traces of sand		1.0	BH10/1.6	V=0 O=0 PID=6	
			2.0	BH10/2.8	V=0 O=0 PID=2	
2.4	Silty CLAY (CH) high plasticity, dark grey brown, stiff, wet with basalt fragments at 2.5m					
	Refusal at 3.0m on Basalt		3.0			

Key: For explanation of abbreviations and symbols, refer to Cardno Lane Piper UCS or Rock Notes	Notes: Location Concrete Cored	Groundwater Observations: Perched water at 0.5m
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PARTICLE SIZES

TERM	SIZE (mm)
BOULDER	>200
COBBLE	60 to 200
GRAVEL	
Coarse	20 to 60
Medium	6 to 20
Fine	2 to 6
SAND	
Coarse	0.6 to 2
Medium	0.2 to 0.6
Fine	0.06 to 0.2
SILT	0.002 to 0.06
CLAY	< 0.002

COHESIVE SOILS

TERM	UNDRAINED SHEAR STRENGTH (kPa)
Very Soft	0 to 12.5
Soft	12.5 to 25
Firm	25 to 50
Stiff	50 to 100
Very Stiff	100 to 200
Hard	≥ 200

COHESIONLESS SOILS

TERM	'N' (SPT) VALUE (blows / 300mm)	RELATIVE DENSITY (%)	ANGLE SHEAR RESISTANCE (degrees)
Very Loose	0 to 4	< 15	25 to 30
Loose	4 to 10	15 to 35	27 to 32
Medium Dense	10 to 30	35 to 65	30 to 35
Dense	30 to 50	65 to 85	35 to 40
Very Dense	> 50	≥ 85	38 to 43

STRUCTURE

TERM	SIZE OF BLOCKS (mm)
Blocky	> 60
Cloddy	20 to 60
Nutty	6 to 20
Granular	0.6 to 6
Prismatic	Stated
Shattered	< 10

SAMPLES

- BS = Bulk sample
- D = Disturbed sample
- U_(n) = Undisturbed tube sample ('n' denotes internal dia in mm)
- BH3/1.0 = Environmental Soil Sample (Borehole No./Depth)
- = Undisturbed tube recovery
- ▨ = Undisturbed tube non-recovery
- H = Headspace vial

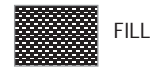
CONTAMINATION RANKING

- V = Visual evidence of contamination
 - O = Olfactory evidence of contamination
- 0 = No odour or visual evidence of contamination
 1 = Slight odour or visual evidence of contamination
 2 = Odour or visual evidence of contamination
 3 = Obvious visual evidence/strong odour of contamination

FIELD EQUIPMENT

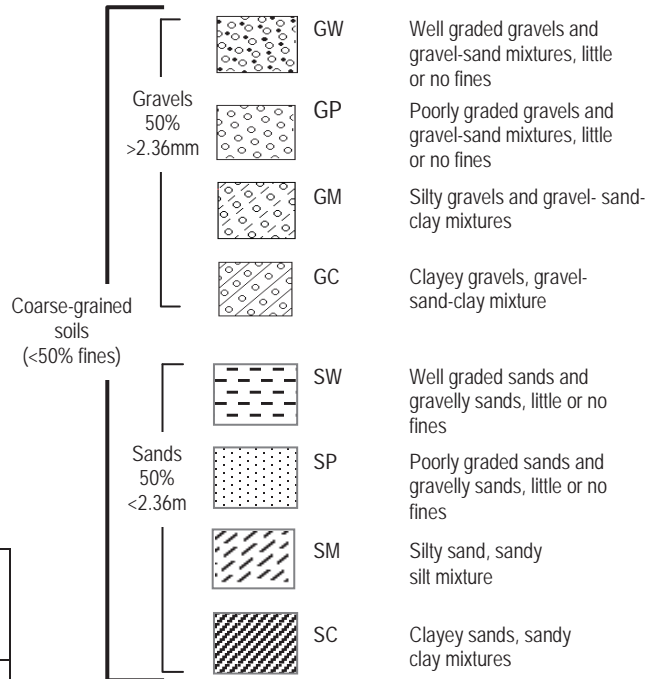
- PID = Photo ionization detector
- CGD = Combustible gas detector

IDENTIFICATION OF SOILS

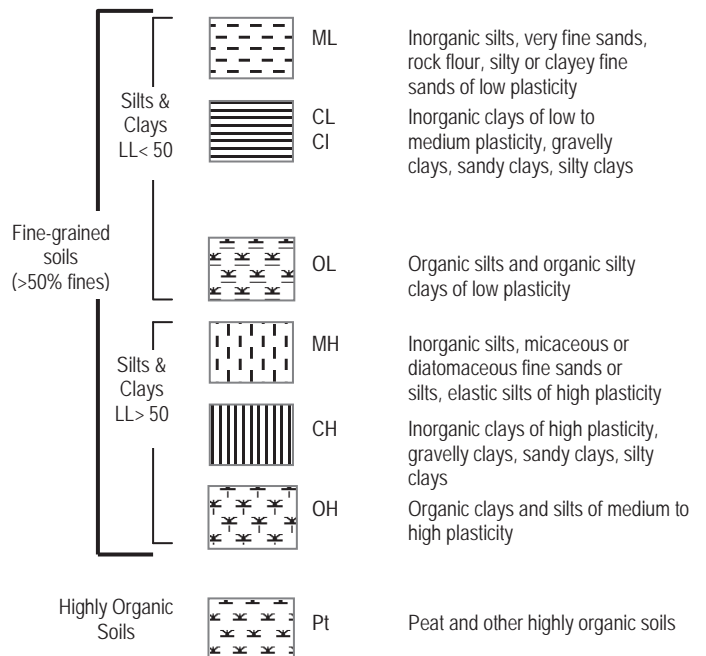


FILL

COARSE GRAINED SOILS



FINE GRAINED SOILS



GROUNDWATER

- GW = Groundwater depth (m) or level (RL)
- bgl = Below ground level
- swl = Standing water level

Appendix D

11 Pages

Plates/Photographs

Plate 1: Props Storage Area (Feature 17) looking west at sample location SB03

Plate 2: Underground Storage Tank Area 2 (Feature 8b) looking north

Plate 3: Car Storage (Feature 51) looking west

Plate 4: Aboveground Storage Tank Area 2 (Feature 23b) looking east

Plate 5: Flammable Liquid PAD (Feature 27) looking south-east

Plate 6: Dam 1 and VUT building (Feature 31) looking south-east

Plate 7: Aboveground Water Storage Tanks 1 (Feature 57a) looking north-east

Plate 8: Soil Composting Area (Feature 44) looking south

Plate 9: Soil Composting Area (Feature 44) looking south at direct push drill rig

Plate 10: Fire Attack Building (Feature 24) looking north-west

Plate 11: Structural Fire Attack Building (Feature 33b) looking south-west

**Targeted Soil Assessment
Plates/Photographs
Fiskville Training College, 4549 Geelong-Ballan Rd, Fiskville, Vic**



PLATE 1 Props Storage Area (Feature 17) looking west at sample location SB03



PLATE 2 Underground Storage Tank Area 2 (Feature 8b) looking north



PLATE 3 Car Storage (Feature 51) looking west



PLATE 4 Aboveground Storage Tank Area 2 (Feature 23b) looking east



PLATE 5 Flammable Liquid PAD (Feature 27) looking south-east



PLATE 6 Dam 1 and VUT building (Feature 31) looking south-east



PLATE 7 Above ground Water Storage Tanks 1 (Feature 57a) looking north-east



PLATE 8 Soil Composting Area (Feature 44) looking south



PLATE 9 Soil Composting Area (Feature 44) looking south at direct push rig



PLATE 10 Fire Attack Building (Feature 24) looking north-west



PLATE 11 Structural Fire Attack Building (Feature 33b) looking south-west

Appendix E

331 Pages

Laboratory Reports & Chain of Custody Records

Chain of Custody Records

ALS Reports

EM1209305

EM1209440

EM1210620

EM1211193

MGT-LabMark Reports

348839

349008

Data Quality Review



STRONG OCCUR IN SOME SAMPLES

Chain of Custody

ZIP LOCK BAG IN ESKY #4
9861 - 5833 IN ESKY #1

Sheet 1 of 4

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au		Project Number: 212163.1		Site: Fiskville		Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03) 8549 9600		
Sample ID	Laboratory ID	Container	Sampling		Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	HOLD
			Date	Time										
SB 01 / 0.05 - 0.1	1	2 x Soil Jar, zip lock back	14/04/2012	9:00	X					X				
SB 01 / 0.6 - 0.7	2	2 x Soil Jar, zip lock back	"	"	X					X				
SB 01 / 1.0 - 1.1	3	2 x Soil Jar, zip lock back	"	"	X					X				
SB 01 / 2.0 - 2.1	4	2 x Soil Jar, zip lock back	"	"	X					X				
SB 07 / 0.0 - 0.1	5	2 x Soil Jar, zip lock back	9:20	"	X					X				
SB 07 / 0.5 - 0.6	6	2 x Soil Jar, zip lock back	"	"	X					X				
SB 07 / 1.0 - 1.1	7	2 x Soil Jar, zip lock back	"	"	X					X				
SB 07 / 2.0 - 2.1	8	2 x Soil Jar, zip lock back	"	"	X					X				
SB 03 / 0.06 - 0.1	9	2 x Soil Jar, zip lock back	9:46	"	X					X				
SB 03 / 0.6 - 0.7	10	2 x Soil Jar, zip lock back	"	"	X					X				
SB 03 / 1.0 - 1.1	11	2 x Soil Jar, zip lock back	"	"	X					X				
SB 03 / 2.0 - 2.1	12	2 x Soil Jar, zip lock back	"	"	X					X				
SB 04 / 0.0 - 0.1	13	2 x Soil Jar, zip lock back	9:55	"	X					X				
SB 04 / 0.5 - 0.6	14	2 x Soil Jar, zip lock back	"	"	X					X				
SB 04 / 1.0 - 1.1	15	2 x Soil Jar, zip lock back	"	"	X					X				
SB 04 / 2.0 - 2.1	16	2 x Soil Jar, zip lock back	"	"	X					X				

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Relinquished by (Sampler): (print and signature) **MARIA DELOS REYES** Date: 15/08/2012 Time: 10:00

Received by (Custodian/Lab): (print and signature) **MARIA DELOS REYES** Date: 14/08/12 Time: 10:55

Relinquished by: (print and signature) **M. DELOS REYES** Date: 15/08/2012 Time: 10:00

Received by: (print and signature) **Reynold** Date: 15/8/12 Time: 10:55

Relinquished by: (print and signature) _____ Date: _____ Time: _____

Received by: (print and signature) _____ Date: _____ Time: _____

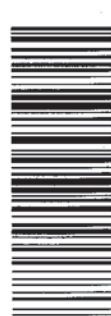
Analysis

Forwarded to
Secondary Lab

Initials **AB** Date **20/8/12**

Environmental Division
Melbourne
Work Order
EM1209305

Telephone: +61-3-8549 9600



Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/5 days)

Please circle

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piper Pty Ltd and Service or Equipment Providers



Chain of Custody

4 S304 - S308 IN EXCY #2

Sheet 2 of 4

Name: Maria Delos Reyes			Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125			Email: maria.delosreyes@cardno.com.au		
Project Number: 212163.1			Site: Fiskville		
Laboratory (name, phone, fax no & contact person)			Sarah Hodgson (03) 8549 9600		
Sample ID	Laboratory ID	Container	Sampling		Analysis
			Date	Time	
SB 05 / 0-0-1	17	2 x Soil Jar, zip lock back	14/8/17	10:30	
SB 05 / 0.5-0.6	18	2 x Soil Jar, zip lock back	"	"	
SB 05 / 1.0-1.1	19	2 x Soil Jar, zip lock back	"	"	
SB 05 / 2.0-2.1	20	2 x Soil Jar, zip lock back	"	"	
SB 06 / 0-0-1	21	2 x Soil Jar, zip lock back	10:55	"	
SB 06 / 0.5-0.6	22	2 x Soil Jar, zip lock back	"	"	
SB 06 / 1.0-1.1	23	2 x Soil Jar, zip lock back	"	"	
SB 06 / 2.0-2.1	24	2 x Soil Jar, zip lock back	"	"	
SB 07 / 0-0-1	25	2 x Soil Jar, zip lock back	10:10	"	
SB 07 / 0.5-0.6	26	2 x Soil Jar, zip lock back	"	"	
SB 07 / 1.0-1.1	27	2 x Soil Jar, zip lock back	"	"	
SB 07 / 2.0-2.1	28	2 x Soil Jar, zip lock back	"	"	
SB 08 / 0-0-1	29	2 x Soil Jar, zip lock back	10:20	"	
SB 08 / 0.5-0.6	30	2 x Soil Jar, zip lock back	"	"	
SB 08 / 1.0-1.1	31	2 x Soil Jar, zip lock back	"	"	
SB 08 / 2.0-2.1	32	2 x Soil Jar, zip lock back	"	"	
Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.					
Relinquished by (Sampler): (print and signature)			Date	Time	
M. DELOS REYES			15/08/2017	10:00	
Relinquished by: (print and signature)			Date	Time	
MARIA DELOS REYES			15/08/17	10:55	
Relinquished by: (print and signature)			Date	Time	
Received by (Courier/Lab): (print and signature)			Date	Time	
RAYMOND			15/08/17	10:55	
Received by: (print and signature)			Date	Time	
Received by: (print and signature)			Date	Time	

Please supply results electronically in spreadsheet and ESDAT files. Turn around time: (24 hour/48 hour/5 days)

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piper Pty Ltd and Service or Equipment Providers



SB09 -SB11 IN SKY NOT 3

Sheet 3 of 4

Chain of Custody

Name: Maria Delos Reyes Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd. Burwood, Vic. 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person): Sarah Hodgson (03) 8549 9600		Sample Matrix Water <input type="checkbox"/> Soil <input type="checkbox"/> Sludge <input type="checkbox"/> Other (Specify) <input type="checkbox"/> Composite <input type="checkbox"/> Sample preservation Ice bricks <input type="checkbox"/> HNO ₃ /HCl <input type="checkbox"/> Unpreserved <input type="checkbox"/> Other (Specify) <input type="checkbox"/> HOLD <input type="checkbox"/>		Analysis [Blank columns for analysis results]					
Sample ID	Laboratory ID	Container	Sampling		Date	Time	Sampler name: (print and signature)	Date	Time
			Date	Time					
SB 09 / 0-0-1	33	2 x Soil Jar, zip lock back	14/08/2012	6:00	14/08/2012	10:55	MARIA DELOS REYES	14/08/2012	10:55
SB 09 / 0.5-0.6	34	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 09 / 1.0-1.1	35	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 09 / 2.0-2.1	36	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 10 / 0-0-1	37	2 x Soil Jar, zip lock back	14/08/2012	6:30	14/08/2012	10:55	MARIA DELOS REYES	14/08/2012	10:55
SB 10 / 0.5-0.6	38	2 x Soil Jar, zip lock back	14/08/2012	"	"	"	"	"	"
SB 10 / 1.0-1.1	39	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 10 / 2.0-2.1	40	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 11 / 0-0-1	41	2 x Soil Jar, zip lock back	14/08/2012	6:00	14/08/2012	10:55	MARIA DELOS REYES	14/08/2012	10:55
SB 11 / 0.5-0.6	42	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 11 / 1.0-1.1	43	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB 11 / 2.0-2.1	44	2 x Soil Jar, zip lock back	"	"	"	"	"	"	"
SB		2 x Soil Jar, zip lock back							
SB		2 x Soil Jar, zip lock back							
SB		2 x Soil Jar, zip lock back							

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Relinquished by (Sampler): (print and signature) *MARIA DELOS REYES* Date: 14/08/2012 Time: 10:55

Relinquished by: (print and signature) *MARIA DELOS REYES* Date: 15/08/2012 Time: 10:55

Relinquished by: (print and signature) *Raymond* Date: [] Time: []

Relinquished by: (print and signature) [] Date: [] Time: []

Please supply results electronically in spreadsheet and ESDAT files.
Turn around time: (24 hour/48 hour/5 days)

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piping Pty Ltd and Service or Equipment Providers

Please circle



Chain of Custody

Sheet 4 of 4

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au		
Project Number: 212163.1 Site: FISKVILLE		Laboratory (name, phone, fax no & contact person) SARAH.H (03) 8549 9600		
Sample ID	Laboratory ID	Container	Sampling	
			Date	Time
QC01/14082012	45	X2 SACS ZIP SACS	14/08/2012	1:00
QC02/14082012	46	" "	14/08/2012	1:00
QC03/14082012	47	NIAL		2:45
QC04/14082012	48	↑		" "
QC05/14082012	49	↑		" "
QC09/14082012	50	↑		3:00
QC07/14082012	51	metals + vinyl + ambe		3:00
QC08/14082012	52	↑		3:00
QC06/14082012	53	↑		

Sample Matrix		Sample preservation			Analysis															
Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)												
X	X				X				HGLD											
X	X				X															
X	X				X															
X	X				X															

Sampler name: (print and signature) **MARKA DELOS REYES** Date: **14/08/2012**

Received by (Courier/Lab): (print and signature) **MARKA DELOS REYES** Date: **15/8/12**

Received by: (print and signature) **Ramoni** Date: **15/8/12** Time: **10:55**

Relinquished by (Sampler): (print and signature) **M. DELOS REYES** Date: **15/08/2012** Time: **10:00**

Relinquished by: (print and signature) _____ Date: _____ Time: _____

Relinquished by: (print and signature) _____ Date: _____ Time: _____

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

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Turn around time: (24 hour/48 hour/5 days) Please circle



Chain of Custody

COC Received 17/8/12 17:10

Sheet 1 of 9

Name: Maria Delos Reyes

Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497

Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125

Email: maria.delosreyes@cardno.com.au

Project Number: 212163.1

Site: Fiskville

Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 8600

Sample ID	Laboratory ID	Container	Sampling		Sample Matrix				Sample preservation				Analysis							
			Date	Time	Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	S6 - TPH, BTEX, Lead EP00/0/1 TPH, SZ3 - SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 -pH	EP231 - PFOA & PFOS, EP216 Perchlorates	HOLD	TPH/BTEX	S3 - Metals (13)	TPH C6-C9	
																				Date	Time
SB01/0.05-0.1	1	X2 Soil jars and ziplock bag	14/08/2052		X															
SB01/0.6-0.7	2	X2 Soil jars and ziplock bag	14/08/2052		X															
SB01/1.0-1.1	3	X2 Soil jars and ziplock bag	14/08/2052		X															
SB01/2.0-2.1	4	X2 Soil jars and ziplock bag	14/08/2052		X															
SB02/0-0.1	5	X2 Soil jars and ziplock bag	14/08/2052		X															
SB02/0.5-0.6	6	X2 Soil jars and ziplock bag	14/08/2052		X															
SB02/1.0-1.1	7	X2 Soil jars and ziplock bag	14/08/2052		X															
SB02/2.0-2.1	8	X2 Soil jars and ziplock bag	14/08/2052		X															
SB03/0.06-0.1	9	X2 Soil jars and ziplock bag	14/08/2052		X															
SB03/0.6-0.7	10	X2 Soil jars and ziplock bag	14/08/2052		X															
SB03/1.0-1.1	11	X2 Soil jars and ziplock bag	14/08/2052		X															
SB03/2.0-2.1	12	X2 Soil jars and ziplock bag	14/08/2052		X															
SB04/0-0.1	13	X2 Soil jars and ziplock bag	14/08/2052		X															
SB04/0.5-0.6	14	X2 Soil jars and ziplock bag	14/08/2052		X															
SB04/1.0-1.1	15	X2 Soil jars and ziplock bag	14/08/2052		X															
SB04/2.0-2.1	16	X2 Soil jars and ziplock bag	14/08/2052		X															
Sampler: 1 attest that the proper field sampling procedures were used during the collection of these samples.					Sampler name: (print and signature) Maria Delos Reyes				Date: 17/08/2012											
Relinquished by (Sampler): (print and signature) M. Delos Reyes					Date: 17/08/2012 4:30				Received by (Counter/Lab): (print and signature) [Signature]				Date: [] Time: []							
Relinquished by: (print and signature) [Signature]					Date: [] Time: []				Received by: (print and signature)				Date: [] Time: []							
Relinquished by: (print and signature)					Date: [] Time: []				Received by: (print and signature)				Date: [] Time: []							

Please supply results electronically in spreadsheet and ESDAT files. Turn around time: (24 hour/48 hours/5 days)

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Chain of Custody

COC Received 17/8/12 17:10 R.7

Sheet 2 of 9

<p>Name: Maria Delos Reyes Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 9600</p>		<p>Sample Matrix</p> <p>Water</p> <p>Soil</p> <p>Sludge</p> <p>Other (Specify)</p> <p>Composite</p> <p>Ice blocks</p> <p>HNO₃/HCl</p> <p>Unpreserved</p> <p>Other (Specify)</p>		<p>Sample preservation</p> <p>S6 - TPH, BTEX, Lead</p> <p>SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 - PH</p> <p>EP231 - PFOA & PFOS, EP216 Perchlorates</p> <p>HOLD</p> <p>TPH/BTEX</p> <p>S3 - Metals (13)</p> <p>TPH C6-C9</p>		<p>Analysis</p>	
Sample ID	Laboratory ID	Container	Sampling Date	Time	Date	Time	Date
SB05/0.0-0.1	17	X2 Soil jars and ziplock bag	14/08/2052				
SB05/0.5-0.6	18	X2 Soil jars and ziplock bag	14/08/2052				
SB05/1.0-1.1	19	X2 Soil jars and ziplock bag	14/08/2052				
SB05/2.0-2.1	20	X2 Soil jars and ziplock bag	14/08/2052				
SB06/0-0.1	21	X2 Soil jars and ziplock bag	14/08/2052				
SB06/0.5-0.6	22	X2 Soil jars and ziplock bag	14/08/2052				
SB06/1.0-1.1	23	X2 Soil jars and ziplock bag	14/08/2052				
SB06/2.0-2.1	24	X2 Soil jars and ziplock bag	14/08/2052				
SB07/0-0.1	25	X2 Soil jars and ziplock bag	14/08/2052				
SB07/0.5-0.6	26	X2 Soil jars and ziplock bag	14/08/2052				
SB07/1.0-1.1	27	X2 Soil jars and ziplock bag	14/08/2052				
SB07/2.0-2.1	28	X2 Soil jars and ziplock bag	14/08/2052				
SB08/0-0.1	29	X2 Soil jars and ziplock bag	14/08/2052				
SB08/0.5-0.6	30	X2 Soil jars and ziplock bag	14/08/2052				
SB08/1.0-1.1	31	X2 Soil jars and ziplock bag	14/08/2052				
SB08/2.0-2.1	32	X2 Soil jars and ziplock bag	14/08/2052				
<p>Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.</p>							
<p>Requested by (Sampler): (print and signature) Maria Delos Reyes</p>				<p>Date: 17/8/12</p>			
<p>Requested by (print and signature) M. Delos Reyes</p>				<p>Received by (Customer): (print and signature) Date: 17/8/12</p>			
<p>Requested by (print and signature)</p>				<p>Received by (print and signature) Date: Time</p>			
<p>Requested by (print and signature)</p>				<p>Received by (print and signature) Date: Time</p>			

Please supply results electronically in spreadsheet and ES&AT files.
Turn around time: (24 hour/48 hours/5 days)

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LanaPiper

Chain of Custody

Coc Received 17/8/12 17:10 RT

Sheet 3 of 9

Name: Maria Delos Reyes		Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497		
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au		
Project Number: 212163.1		Site: Fiskville		
Laboratory (name, phone, fax no & contact person)		Sarah Hodgson (03)8549 8600		
Sample ID	Laboratory ID	Container	Sampling Date	Time
SB09/0.0-1	33	X2 Soil jars and ziplock bag	14/08/2052	
SB09/0.5-0.6	34	X2 Soil jars and ziplock bag	14/08/2052	
SB09/1.0-1.1	35	X2 Soil jars and ziplock bag	14/08/2052	
SB09/2.0-2.1	36	X2 Soil jars and ziplock bag	14/08/2052	
SB10/0-0.1	37	X2 Soil jars and ziplock bag	14/08/2052	
SB10/0.5-0.6	38	X2 Soil jars and ziplock bag	14/08/2052	
SB10/1.0-1.1	39	X2 Soil jars and ziplock bag	14/08/2052	
SB10/2.0-2.1	40	X2 Soil jars and ziplock bag	14/08/2052	
SB11/0-0.1	41	X2 Soil jars and ziplock bag	14/08/2052	
SB11/0.5-0.6	42	X2 Soil jars and ziplock bag	14/08/2052	
SB11/1.0-1.1	43	X2 Soil jars and ziplock bag	14/08/2052	
SB11/2.0-2.1	44	X2 Soil jars and ziplock bag	14/08/2052	
QC01/14082012	45	X2 Soil jars and ziplock bag	14/08/2052	
QC02/14082012	46	X2 Soil jars and ziplock bag	14/08/2052	
QC03/14082012	47	Vial	14/08/2052	
QC04/14082012	48	Vial	14/08/2052	

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Relinquished by (Sampler): (print and signature)	Date	Received by (Coc): (print and signature)	Date
<i>M. Delos Reyes</i>	17/8/12	<i>Maria Delos Reyes</i>	17/08/12

Please supply results electronically in spreadsheet and ESDAT files
Turn around time: (24 hour/48 hour/5 days)

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piper Pty Ltd and Service or Equipment Providers



Chain of Custody

COC Received 17/8/12 17:10 R.T

Sheet 4 of 9

Name: Maria Delos Reyes

Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497

Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125

Email: maria.delosreyes@cardno.com.au

Project Number: 212163.1

Site: Fiskville

Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 9600

Sample ID	Laboratory ID	Container	Sampling	
			Date	Time
QC05/14082012	49	Vent 16L	14/08/2052	
QC05/14082012	50	metals+vial+amber	14/08/2052	
QC07/14082012	51	metals+vial+amber	14/08/2052	
QC08/14082012	52	metals+vial+amber	14/08/2052	
QC09/14082012	53	Vent 16L	14/08/2052	

Sample Matrix			Sample preservation			Analysis									
Water	Soil	Sedg	Other (Specify)	Composite	Ice bricks	HNO3/HCl	Unpreserved	Other (Specify)	S6 - TPH, BTEX, Lead	EP080/071 TPH, S23 - SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 - pH	EP231 - PFOA & PFOS, EP216 Perchlorates	HOLD	TPH/BTEX	S3 - Metals (13)	TPH C6-C9
x					x	x									
x					x	x									
x					x	x									
x					x	x									
x					x	x									

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: (print and signature) *Maria Delos Reyes* Date: 17/8/12

Relinquished by (Sampler): (print and signature) *M. delosreyes* Date: 17/8/12

Relinquished by: (print and signature) *M. delosreyes* Date: 17/8/12

Received by (Courier/Lab): (print and signature) *Maria Delos Reyes* Date: 17/8/12

Received by: (print and signature) _____ Date: _____

Received by: (print and signature) _____ Date: _____

Please supply results electronically in spreadsheet and ESPIAT files.

Turn around time: (24 hour/48 hour/5 days)

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piper Pty Ltd and Service or Equipment Providers

Please circle



Chain of Custody

Sheet 6 of 6

Name: Maria Delos Reyes
Phone: 03 9888 0100 **Fax:** 03 9808 3511 **Mobile:** 0424278497
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125
Email: maria.delosreyes@cardno.com.au
Project Number: 212163.1 **Site:** Fiskville
Laboratory (name, phone, fax no & contact person): Sarah Hodgson (03) 8549 9600

Sample ID	Laboratory ID	Container	Sampling		Sample Matrix					Sample preservation				Analysis															
			Date	Time	Water	Soil	Sediment	Other (Specify)	Composites	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	HOLD															
SB 12 / 0-0-1	1	2 x Soil Jar, zip lock back	14/08/2017	9:00	X				X																				
SB 12 / 0-0-2	2	2 x Soil Jar, zip lock back		9:15	X				X																				
SB 12 / 0-0-3	3	2 x Soil Jar, zip lock back		9:30	X				X																				
SB 12 / 0-0-4	4	2 x Soil Jar, zip lock back		9:45	X				X																				
SB 12 / 2-2-2.3	5	2 x Soil Jar, zip lock back		10:00	X				X																				
SB 13 / 0-0-1	6	2 x Soil Jar, zip lock back		10:15	X				X																				
SB 13 / 0-0-2	7	2 x Soil Jar, zip lock back		10:30	X				X																				
SB 13 / 2-2-2.3	8	2 x Soil Jar, zip lock back		10:45	X				X																				
SB 14 / 0-0-1	9	2 x Soil Jar, zip lock back		11:00	X				X																				
SB 14 / 0-0-2	10	2 x Soil Jar, zip lock back		11:05	X				X																				
SB 14 / 1-0-1.1	11	2 x Soil Jar, zip lock back		11:10	X				X																				
SB 14 / 2-2-2.3	12	2 x Soil Jar, zip lock back		11:15	X				X																				
SB 15 / 0-0-1	13	2 x Soil Jar, zip lock back		11:20	X				X																				
SB 15 / 0-0-2	14	2 x Soil Jar, zip lock back		11:30	X				X																				
SB 15 / 1-0-1.1	15	2 x Soil Jar, zip lock back		11:40	X				X																				
SB 15 / 2-2-2.3	16	2 x Soil Jar, zip lock back		11:45	X				X																				

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.
 Date: _____
 Signature: _____

Environmental Division
 Melbourne
 Work Order
EM1209440



Telephone : + 61-3-8549 9600

Sampler name: (print and signature)	Date	Time
MARIA DELOS REYES	17/08/2017	11:55
Received by (Courier/Lab): (print and signature)		
ALEX HEADWARDS		17/08/17
Received by: (print and signature)		
Received by: (print and signature)		

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 Please supply results electronically in spreadsheet and ESDAT files.
Turn around time: (24 hour/48 hour/5 days)



Chain of Custody

Sheet 2 of 6

Name: Maria Delos Reyes Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person): Sarah Hodgson (03) 8549 9600		Sample Matrix Water <input type="checkbox"/> Silt <input type="checkbox"/> Sludge <input type="checkbox"/> Other (Specify) <input type="checkbox"/> Composite <input type="checkbox"/> Ice bricks <input type="checkbox"/> HNO ₃ /HCl <input type="checkbox"/> Unpreserved <input type="checkbox"/> Other (Specify) <input type="checkbox"/> HOLD <input type="checkbox"/>		Sample preservation Date: _____ Time: _____ Received by (Courier/Lab): (print and signature) _____ Date: _____ Time: _____ Received by: (print and signature) _____ Date: _____ Time: _____		Analysis Date: _____ Time: _____ Received by: (print and signature) _____ Date: _____ Time: _____ Received by: (print and signature) _____ Date: _____ Time: _____								
Sample ID	Laboratory ID	Container	Sampling Date	Sampling Time	Water	Silt	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	HOLD
SB 16/0-0.1	17	2 x Soil Jar, zip lock back	16/08/12	11:55	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 16/0.5-0.6	18	2 x Soil Jar, zip lock back	16/08/12	12:00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 16/1.0-1.1	19	2 x Soil Jar, zip lock back	16/08/12	12:05	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 16/1.5-1.9	20	2 x Soil Jar, zip lock back	16/08/12	12:10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 17/0-0.1	21	2 x Soil Jar, zip lock back	16/08/12	12:10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 17/0.5-0.6	22	2 x Soil Jar, zip lock back	16/08/12	12:15	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 17/1.0-1.1	23	2 x Soil Jar, zip lock back	16/08/12	12:20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 18/0-0.1	24	2 x Soil Jar, zip lock back	16/08/12	12:25	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 18/0.5-0.6	25	2 x Soil Jar, zip lock back	16/08/12	12:25	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 18/1.0-1.1	26	2 x Soil Jar, zip lock back	16/08/12	12:30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 18/2.2-2.3	27	2 x Soil Jar, zip lock back	16/08/12	12:35	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 19/0-0.1	28	2 x Soil Jar, zip lock back	16/08/12	1:00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 19/0.5-0.6	29	2 x Soil Jar, zip lock back	16/08/12	1:00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 19/1.0-1.1	30	2 x Soil Jar, zip lock back	16/08/12	1:10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 19/2.2-2.3	31	2 x Soil Jar, zip lock back	16/08/12	1:10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SB 17/2.2-2.3	32	2 x Soil Jar, zip lock back	16/08/12	12:20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Relinquished by (Sampler): (print and signature) **M. DE LOS REYES** Date: **16/08/2012** Time: _____

Relinquished by: (print and signature) _____ Date: _____ Time: _____

Relinquished by: (print and signature) _____ Date: _____ Time: _____

Relinquished by: (print and signature) _____ Date: _____ Time: _____

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Chain of Custody

Sheet 3 of 6

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		Analysis										
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au												
Project Number: 212163.1		Site: Fiskville												
Laboratory (name, phone, fax no & contact person)		Sarah Hodgson (03) 8549 9600												
Sample ID	Laboratory ID	Container	Sampling		Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	HOLD
			Date	Time										
SB 20 / 0-0.1	33	2 x Soil Jar, zip lock back	16/08/12	1:10	X									
SB 20 / 0.5-0.6	34	2 x Soil Jar, zip lock back		1:15	X									
SB 20 / 1.0-1.1	35	2 x Soil Jar, zip lock back		1:15	X									
SB 20 / 2.2-2.3	36	2 x Soil Jar, zip lock back		1:15	X									
SB 21 / 0-0.1	37	2 x Soil Jar, zip lock back		1:25	X									
SB 21 / 0.5-0.6	38	2 x Soil Jar, zip lock back		1:25	X									
SB 21 / 1.0-1.1	39	2 x Soil Jar, zip lock back		1:30	X									
SB 21 / 2.2-2.3	40	2 x Soil Jar, zip lock back		1:30	X									
SB 22 / 0-0.1	41	2 x Soil Jar, zip lock back		1:40	X									
SB 22 / 0.5-0.6	42	2 x Soil Jar, zip lock back		1:40	X									
SB 22 / 1.0-1.1	43	2 x Soil Jar, zip lock back		1:45	X									
SB 22 / 2.2-2.3	44	2 x Soil Jar, zip lock back		1:45	X									
SB 23 / 0-0.1	45	2 x Soil Jar, zip lock back		1:55	X									
SB 23 / 0.5-0.6	46	2 x Soil Jar, zip lock back		1:55	X									
SB 23 / 1.0-1.1	47	2 x Soil Jar, zip lock back		2:00	X									
SB 23 / 2.2-2.3	48	2 x Soil Jar, zip lock back		2:00	X									
Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.														
Relinquished by (Sampler): (print and signature)			Date		Time		Date		Time		Date		Time	
M. Delos Reyes			17/08/2012		1:35		16/08/2012		16/08/2012					
Relinquished by: (print and signature)			Date		Time		Date		Time		Date		Time	
M. Delos Reyes			17/08/2012		1:35		ALEX HODGSON		ALEX HODGSON					
Relinquished by: (print and signature)			Date		Time		Date		Time		Date		Time	
M. Delos Reyes			17/08/2012		1:35		ALEX HODGSON		ALEX HODGSON					

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Revision 2 Approved 3 May 2011

QF3.01 Chain of Custody1

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Chain of Custody

Sheet 4 of 6

Name: Maria Delos Reyes
 Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497
 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125
 Email: maria.delosreyes@cardno.com.au
 Project Number: 212163.1 Site: Fiskville
 Laboratory (name, phone, fax no & contact person) Sarah Hodgson, (03) 8549 9600

Sample ID	Laboratory ID	Container	Sampling		Sample Matrix				Sample preservation				Analysis					
			Date	Time	Water	Soil	Sediment	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	HOLD				
SB 24 / 0-0.1	49	2 x Soil Jar, zip lock back	16/08/12	2:10	X													
SB 24 / 0.5-0.6	50	2 x Soil Jar, zip lock back		2:10	X													
SB 24 / 1.0-1.1	51	2 x Soil Jar, zip lock back		2:15	X													
SB 24 / 2.2-2.5	52	2 x Soil Jar, zip lock back		2:15	X													
SB 25 / 0-0.1	53	2 x Soil Jar, zip lock back		2:30	X													
SB 25 / 0.5-0.6	54	2 x Soil Jar, zip lock back		2:30	X													
SB 25 / 1.0-1.1	55	2 x Soil Jar, zip lock back		2:35	X													
SB 25 / 2.2-2.5	56	2 x Soil Jar, zip lock back		2:35	X													
SB 24 / 0-0.1	57	2 x Soil Jar, zip lock back		2:45	X													
SB 24 / 0.5-0.6	58	2 x Soil Jar, zip lock back		2:45	X													
SB 24 / 1.0-1.1	59	2 x Soil Jar, zip lock back		2:50	X													
SB 26 / 2.2-2.3	60	2 x Soil Jar, zip lock back		2:50	X													
SB 27 / 0-0.1	61	2 x Soil Jar, zip lock back		3:40	X													
SB 27 / 0.5-0.6	62	2 x Soil Jar, zip lock back		3:45	X													
SB 27 / 1.0-1.1	63	2 x Soil Jar, zip lock back		3:55	X													
SB 27 / 2.2-2.3	64	2 x Soil Jar, zip lock back		4:00	X													

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: (print and signature) MARIA DELOS REYES Date: 16/08/12

Received by (Counterparty): (print and signature) ALEX MECHANES Date: 17/08/12

Received by: (print and signature) _____ Date: _____

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Turn around time: (24 hour/48 hour/5 days)

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Chain of Custody

Sheet 5 of 6

Name: Maria Delos Reyes Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person): Sarah Hodgson (03) 8549 9600		Analysis																	
Sample ID	Laboratory ID	Container	Sampling		Sample Matrix			Sample preservation			Analysis								
			Date	Time	Water	Soil	Sudge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	HOLD					
SB 28 / 0-0.1	65	2 x Soil Jar, zip lock back	16/08/12	4:30	X				X										
SB 28 / 0.5-0.6	66	2 x Soil Jar, zip lock back		4:46	X				X										
SB 28 / 1.0-1.1	67	2 x Soil Jar, zip lock back		4:50	X				X										
SB 28 / 2.2-2.3	68	2 x Soil Jar, zip lock back		4:55	X				X										
SB 29 / 0-0.1	69	2 x Soil Jar, zip lock back		5:15	X				X										
SB 29 / 0.5-0.6	70	2 x Soil Jar, zip lock back		5:20	X				X										
SB 29 / 0-0.1	71	2 x Soil Jar, zip lock back		5:35	X				X										
SB 29 / 0.5-0.6	72	2 x Soil Jar, zip lock back		5:40	X				X										
SB 29 / 0.5-0.6	73	2 x Soil Jar, zip lock back		1:10	X				X										
SB 29 / 0.5-0.6	74	2 x Soil Jar, zip lock back		1:10	X				X										
SB 29 / 0.5-0.6	75	2 x Soil Jar, zip lock back		5:45	X				X										
SB 29 / 0.5-0.6	76	2 x Soil Jar, zip lock back		2:30	X				X										
SB 29 / 0.5-0.6	77	2 x Soil Jar, zip lock back		2:30	X				X										
SB 29 / 0.5-0.6	VIAL 77	2 x Soil Jar, zip lock back		5:45	X				X										
SB 29 / 0.5-0.6	VIAL 78	2 x Soil Jar, zip lock back		5:45	X				X										
SB 29 / 0.5-0.6	VIAL 79	2 x Soil Jar, zip lock back		5:45	X				X										
Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.											Date: 16/08/2012 Sampler name: (print and signature) MARIA DELOS REYES								
Relinquished by (Sampler): (print and signature) M. DELOS REYES			Date: 17/08/12 11:35			Received by (CounterLab): (print and signature) ALEX DELLOS REYES			Date: 16/08/2012										
Relinquished by: (print and signature)			Date:			Received by: (print and signature)			Date:										
Relinquished by: (print and signature)			Date:			Received by: (print and signature)			Date:										

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Revision 2
Approved 3 May 2011

Page 1 of 1
Printed 10/08/2012



Chain of Custody

Sheet 6 of 6

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au		
Project Number: 212163.1		Site: Fiskville		
Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03) 8549 9600				
Sample ID	Laboratory ID	Container	Sampling	
			Date	Time
9891 QC18/16082012	SOIL METALS	2 x Soil Jar, zip lock back	16/8/12	5:30
9892 QC19/16082012	AMBER X	2 x Soil Jar, zip lock back	16/8/12	4:30
9893 AC90/16082012	AMBER X	2 x Soil Jar, zip lock back		
9894		2 x Soil Jar, zip lock back		
9895		2 x Soil Jar, zip lock back		
9896		2 x Soil Jar, zip lock back		
9897		2 x Soil Jar, zip lock back		
9898		2 x Soil Jar, zip lock back		
9899		2 x Soil Jar, zip lock back		
9900		2 x Soil Jar, zip lock back		
9901		2 x Soil Jar, zip lock back		
9902		2 x Soil Jar, zip lock back		
9903		2 x Soil Jar, zip lock back		
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9909		2 x Soil Jar, zip lock back		
9910		2 x Soil Jar, zip lock back		
9911		2 x Soil Jar, zip lock back		
9912		2 x Soil Jar, zip lock back		
9913		2 x Soil Jar, zip lock back		
9914		2 x Soil Jar, zip lock back		
9915		2 x Soil Jar, zip lock back		
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9997		2 x Soil Jar, zip lock back		
9998		2 x Soil Jar, zip lock back		
9999		2 x Soil Jar, zip lock back		
10000		2 x Soil Jar, zip lock back		

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Relinquished by (Sampler): (print and signature) M. Delos Reyes Date: 17/08/12 Time: 11:35

Relinquished by: (print and signature) ALEX Hodgson Date: 16/08/2012 Time: 17:15

Relinquished by: (print and signature) _____ Date: _____ Time: _____

Relinquished by: (print and signature) _____ Date: _____ Time: _____

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Sheet 5 of 9

COC Received 17/8/12 17:10 RT

Name: Maria Delos Reyes Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 9600			Sample Matrix Water Soil Sludge Other (Specify) Composite Ice bricks HNO ₃ /HCl Unpreserved Other (Specify)				Sample preservation S6 - TPH, BTEX, Lead SVOG & VOC, S3 - Metals (13), EP066 - PCB, EA002 - pH EP231 - PFOA & PFOS, EP216 Perchlorates HOLD TPH/BTEX S3 - Metals (13) TPH C8-C9						Analysis					
Sample ID	Laboratory ID	Container	Sampling		Date	Time	Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	S6 - TPH, BTEX, Lead SVOG & VOC, S3 - Metals (13), EP066 - PCB, EA002 - pH EP231 - PFOA & PFOS, EP216 Perchlorates HOLD TPH/BTEX S3 - Metals (13) TPH C8-C9		
			Date	Time														
SB12/0-0.1	1	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB12/0.5-0.6	2	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB12/1.0-1.1	3	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB12/2.3 2.2	4	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB13/0-0.1	5	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB13/0.5-0.6	6	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB13/1.0-1.1	7	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB13/2.3 2.2	8	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB14/0-0.1	9	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB14/0.5-0.6	10	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB14/1.0-1.1	11	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB14/2.3 2.2	12	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB15/0-0.1	13	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB15/0.5-0.6	14	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB15/1.0-1.1	15	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
SB15/2.3 2.2 RT 2012	16	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X						
Sampler: at least that the proper field sampling procedures were used during the collection of these samples.																		
Requisitioned by (Sampler): (print and signature) <i>M delosreyes</i> Date: 17/8/12 Time: 5:00 Received by (Customer): (print and signature) <i>Maria Delos Reyes</i> Date: 17/8/12 Time: 17:10 Requisitioned by (print and signature) _____ Date: _____ Time: _____ Received by (print and signature) _____ Date: _____ Time: _____																		

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Chain of Custody

COC Received 17/8/12 17:10 R.T

Sheet 6 of 9

Name: **Mana Delos Reyes**
 Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424279497
 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125
 Email: mana.delosreyes@cardno.com.au
 Project Number: 212163.1 Site: Fiskville
 Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 9600

Sample ID	Laboratory ID	Container	Sampling		Sample Matrix			Sample preservation				Analysis									
			Date	Time	Water	Soil	Sudge	Other (Specify)	Composite	Ice Dricks	HNO ₃ HCl	Unpreserved	Other (Specify)	S6 - TPH, BTEX, Lead	EP08/07/1 TPH, S23 - SVOC & VOC, S3 - Metals (13), EP06 - PCB, EA002 - pH	EP231 - PFOA & PFOS, EP216 Perchlorates	HOLD	TPH/BTEX	S3 - Metals (13)	TPH C6-C9	
SB16/0-0.1	17	X2 Soil jars and ziplock bag	16/08/2012		X																
SB16/0.5-0.6	18	X2 Soil jars and ziplock bag	16/08/2012		X																
SB16/1.0-1.1	19	X2 Soil jars and ziplock bag	16/08/2012		X																
SB16/1.8-1.9	20	X2 Soil jars and ziplock bag	16/08/2012		X																
SB17/0-0.1	21	X2 Soil jars and ziplock bag	16/08/2012		X																
SB17/0.5-0.6	22	X2 Soil jars and ziplock bag	16/08/2012		X																
SB17/1.0-1.1	23	X2 Soil jars and ziplock bag	16/08/2012		X																
SB17/2.3-2.3	24	X2 Soil jars and ziplock bag	16/08/2012		X																
SB18/0-0.1	25	X2 Soil jars and ziplock bag	16/08/2012		X																
SB18/0.5-0.6	26	X2 Soil jars and ziplock bag	16/08/2012		X																
SB18/1.0-1.1	27	X2 Soil jars and ziplock bag	16/08/2012		X																
SB18/2.3-2.3	28	X2 Soil jars and ziplock bag	16/08/2012		X																
SB19/0-0.1	29	X2 Soil jars and ziplock bag	16/08/2012		X																
SB19/0.5-0.6	30	X2 Soil jars and ziplock bag	16/08/2012		X																
SB19/1.0-1.1	31	X2 Soil jars and ziplock bag	16/08/2012		X																
SB19/2.2-2.3	32	X2 Soil jars and ziplock bag	16/08/2012		X																

Sampler name: (print and signature) **mana delosreyes** Date: **17/8/12**
 Relinquished by: (Sampler) (print and signature) **M. Delos Reyes** Date: **17/8/12 5:00**
 Relinquished by: (print and signature) _____ Date: _____
 Relinquished by: (print and signature) _____ Date: _____

Please supply results electronically in spreadsheet and ESPAT files. Turn around time: (24 hour/48 hour/5 days)

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piper Pty Ltd and Service or Equipment Providers

Please circle



Chain of Custody

Chain of Custody

COC Received 17/8/12 17:10
R-7

Sheet 7 of 9

Name: Maria Delos Reyes

Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497

Address: Building 2, 154 Highbun Rd, Burwood, Vic, 3125

Email: maria.delosreyes@cardno.com.au

Project Number: 212163.1

Site: Fiskville

Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 9600

Sample ID	Laboratory ID	Container	Sampling		Sample Matrix			Sample preservation			Analysis														
			Date	Time	Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	S6 - TPH, BTEX, Lead	EP08/071 TPH, SZ3 - SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 - pH	EP231 - PFOA & PFOS, EP216 Perchlorates	HOLD	TPH/BTEX	S3 - Metals (13)	TPH C6-C9					
SB20/0-0.1	33	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB20/0.5-0.6	34	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB20/1.0-1.1	35	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB20/2.2-2.3	36	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB21/0-0.1	37	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB21/0.5-0.6	38	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB21/1.0-1.1	39	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB21/2.2-2.3	40	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB22/0-0.1	41	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB22/0.5-0.6	42	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB22/1.0-1.1	43	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB22/2.2-2.3	44	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB23/0-0.1	45	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB23/0.5-0.6	46	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB23/1.0-1.1	47	X2 Soil jars and ziplock bag	16/08/2012		X	X																			
SB23/2.2-2.3	48	X2 Soil jars and ziplock bag	16/08/2012		X	X																			

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler name: (print and signature)

Date:

Relinquished by: (Sampler): (print and signature)

Date

Received by: (Counter/Lab): (print and signature)

Date

Maria Delos Reyes

17/8/12 5:00

Maria Delos Reyes

17/8/12

Relinquished by: (print and signature)

Date

Received by: (print and signature)

Date

Please supply results electronically in spreadsheet and ESD:1 files.

Turn around time: (24 hour/48 hour/5 days)

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Chain of Custody

COC Received 17/8/12 17:10
R27

Sheet 8 of 9

Name: Maria Delos Reyes		Sample Matrix		Sample preservation		Analysis	
Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424276497		Water		Unpreserved		TPH/C6-C9	
Address: Building 2, 154 Highbury Rd, Burwood, Vic. 3125		Soil		HNO ₃ /HCl		S3 - Metals (13)	
Email: maria.delosreyes@cardno.com.au		Sludge		Ice bricks		TPH/BTEX	
Project Number: 212163.1		Other (Specify)		Composite		HOLD	
Site: Fiskville		Other (Specify)		Other (Specify)		EP231 - PFOA & PFOS	
Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)9549 9600		Sampling Date		Date		EP066 - PCB, EA002 - pH	
SB24/0-0.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012	EP080/071 TPH, S23 - SVOC & VOC, S3 - Metals (13)		S6 - TPH, BTEX, Lead	
SB24/0.5-0.6	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012	EP216 Perchlorates			
SB24/1.0-1.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB24/2.2-2.3	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB25/0-0.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB25/0.5-0.6	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB25/1.0-1.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB25/2.2-2.3	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB26/0-0.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB26/0.5-0.6	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB26/1.0-1.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB26/2.2-2.3	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB27/0-0.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB27/0.5-0.6	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB27/1.0-1.1	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
SB27/2.2-2.3	X2 Soil jars and ziplock bag	16/08/2012	16/08/2012				
Sampler: 1 attest that the proper field sampling procedures were used during the collection of these samples.							
Relinquished by (Sampler): (print and signature)		Date		Sampler name: (print and signature)		Date	
M. delos Reyes		17/8/12		Maria delos Reyes		17/8/12	
Relinquished by: (print and signature)		Date		Received by: (print and signature)		Date	
M. delos Reyes		17/8/12		M. delos Reyes		17/8/12	
Relinquished by: (print and signature)		Date		Received by: (print and signature)		Date	

Please supply results electronically in spreadsheet and ES&AT file.
Turn around time: (24 hour/48 hour/5 days)

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Chain of Custody

COC Received 17/8/12 17:10 RT

Sheet 9 of 9

Name: Maria Delos Reyes		Project Number: 212163.1		Site: Fiskville	
Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497		Laboratory (name, phone, fax no & contact person) Sarah Hodgson (03)8549 9600			
Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au			
Sample ID	Laboratory ID	Container	Sampling		Analysis
			Date	Time	
SB28/0-0.1	65	X2 Soil jars and ziplock bag	16/08/2012		S6 - TPH, BTEX, Lead SVC & VOC, S3 - Metals (13), EP066 - PCB, EA002 EP080/071 TPH, S23 - PH
SB28/0.5-0.6	66	X2 Soil jars and ziplock bag	16/08/2012		EP231 - PFOA & PFOS, EP HOLD
SB28/1.0-1.1	67	X2 Soil jars and ziplock bag	16/08/2012		S3 - Metals (13) TPH/BTEX TPH C8-C9
SB28/2.2-2.3	68	X2 Soil jars and ziplock bag	16/08/2012		
SB29/0-0.1	69	X2 Soil jars and ziplock bag	16/08/2012		
SB29/0.5-0.6	70	X2 Soil jars and ziplock bag	16/08/2012		
SB30/0-0.1	71	X2 Soil jars and ziplock bag	16/08/2012		
SB30/0.5-0.6	72	X2 Soil jars and ziplock bag	16/08/2012		
SB22/0.5-0.6	73	X2 Soil jars and ziplock bag	16/08/2012		
QC10/16082012	74	X2 Soil jars and ziplock bag	16/08/2012		
QC11/16082012	75	X2 Soil jars and ziplock bag	16/08/2012		
QC12/16082012	76	X2 Soil jars and ziplock bag	16/08/2012		
QC13/16082012	77	X2 Soil jars and ziplock bag	16/08/2012		
QC14/16082012	78	VIAL	16/08/2012		
QC15/16082012	79	VIAL	16/08/2012		
QC16/16082012	80	VIAL	16/08/2012		
QC17/16082012	81	VIAL	16/08/2012		
QC18/16082012	82	2 VIAL, METALS AND AMBER	16/08/2012		
QC19/16082012	83	2 VIAL, METALS AND AMBER	16/08/2012		
QC20/16082012	84	VIAL	16/08/2012		
Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.					
Requisitioned by (Sampler): (print and signature)			Date	Time	
M. delos Reyes			17/8/12	17:10	
Requisitioned by (print and signature)			Date	Time	
M. delos Reyes			17/8/12	17:10	
Requisitioned by (print and signature)			Date	Time	
M. delos Reyes			17/8/12	17:10	

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Turn around time: (24 hour/48 hour/5 days)

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Analytical Charges

Soil Samples

Parameter	ALS Method/ Package Code	Technique/ Method Reference	Limit of Reporting (mg/kg) (or as indicated)	No.	Price per Sample excl. GST (\$)	Total excl. GST (\$)
Moisture	EA055	In-house	1%	-		
TRH(C6-C36 or 40)/BTEXN/Pb	S-6	GC/FID, P&T-GC/MS	TPH: 10-100 BTEX: 0.2-0.5 Pb:5	9		
Perchlorate	EP216	LC/MS	0.01	20		
PFOS/PFOA (includes 6:2 FTS)	EP231	LC/MS-MS	0.0005-0.005			
PCB - Standard level	EP066	USEPA 3510/8270 GC/ECD/ECD/ MS	0.1	75		
TRH (C6-C40)	EP080/071	USEPA 5030/8260 USEPA 3510/8015 P&T- GC/MS/FID	10-100			
13 Metals (NEPM Suite) (As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, V, Zn, Hg)	S-3	USEPA 200.2 /ICP-AES, CV/FIMS /ICPMS	1-5, Hg (0.1), Ba(10)			
pH (1:5 soil:water leach)	EA002	APHA 4500 H+ - B	0.01 (pH unit)			
VOC Scan	S-23	USEPA 5030/8260 P&T/GC/MS	0.2 - 5			
SVOC Scan		USEPA 3510/8270 GC/MS				
TOTAL PROJECT COST FOR SOIL SAMPLES (EXCLUDING GST):						

Administration Charges

An administration fee of \$30.00 (excl. GST) is applicable to each batch of samples submitted regardless of the size of the batch.

Sample Container Requirements

ALS provides pre-treated and labelled sample containers, for all analytical work to be conducted at the laboratory. Most samples for analysis should be chilled whilst en route to the laboratory. **Please contact the laboratory for further information and to organise bottle delivery.**

Soil Samples

Test Parameter	Label Colour	Container Type (Preservation)
All analysis excluding below	Orange *	2 x 150ml wide mouth glass jar
PFOS/PFOA	White	1 x 250g resealable plastic bag

Note: All bottles for organics analysis (where appropriate) are provided with Teflon lined lids. These are marked in the above tables with the following symbol *.

Ranil Weerakkody

From: Sarah Hodgson
Sent: Friday, 17 August 2012 5:33 PM
To: Samples Melbourne; Peter Ravlic; Bronwyn Sheen; Herman Lin; Steven McGrath
Subject: FW: 212163.1 Fiskvill soil assessment: COC with analysis
Attachments: ME-441-12 - Cardno Lane Piper - 212163 - CFA Fiskville Soil Samples.pdf

Hi All,

Please find attached the COC with sample analysis requested for the two sets of samples received from Cardno Lane Piper this week.

I'm not sure if you want to split them into two work orders or not. At the moment the samples are on hold in EM1209305 (attached COC pages 1-4) and EM1209440 (attached COC pages 5-9).

There are approximately 88 samples for analysis. The rest are on hold for now.

They have asked for a few samples to be sent to MGT - QC02/14082012, QC11/16082012 and QC13/16082012.

Please let me know if there are any issues with these samples.

Thank you,

Regards,

How was your customer experience? Please send us your feedback

Sarah Hodgson

PROJECT MANAGER

ALS | Environmental

Address

4 Westall Road

Springvale VIC 3171

www.alsglobal.com

PHONE +61 3 8549 9600

FAX +61 3 8549 9601

Winner of the inaugural CARE Award 2011 - Sustainable Technology & Innovation:

Reduction in Sample Volumes - Improving quality, safety, efficiency and sustainability in environmental practices



www.alsglobal.com

From: Maria De los Reyes [mailto:Maria.DelosReyes@cardno.com.au]
Sent: Friday, 17 August 2012 5:10 PM
To: Sarah Hodgson
Subject: 212163.1 Fiskvill soil assessment: COC with analysis

Hi Sarah,

Here are the COC with the analysis.

Can you please forward. QC02/14082012, QC11/16082012 and QC13/16082012 to MGT.

Thanks

Regards

Maria De los Reyes
ENVIRONMENTAL SCIENTIST
CARDNO LANE PIPER



Phone +61 3 9888 0100 Fax +61 3 9808 3511 Direct +61 3 9831 6139
Address Bldg 2, 154 Highbury Road, Burwood, Victoria 3125 Australia
Email Maria.DelosReyes@cardno.com.au Web www.lanepiper.com.au

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ALS Group: Click [here](#) to report this email as spam.

Ranil Weerakkody

From: Sarah Hodgson
Sent: Monday, 20 August 2012 1:27 PM
To: Samples Melbourne
Subject: FW: Soil samples received last week - Fiskville

Regards,

How was your customer experience? Please send us your feedback

Sarah Hodgson

PROJECT MANAGER

ALS | Environmental

Address

4 Westall Road
Springvale VIC 3171

www.alsglobal.com

PHONE +61 3 8549 9600
FAX +61 3 8549 9601

Winner of the inaugural CARE Award 2011 - Sustainable Technology & Innovation:
Reduction in Sample Volumes - Improving quality, safety, efficiency and sustainability in environmental practices



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From: Maria De los Reyes [mailto:Maria.DelosReyes@cardno.com.au]
Sent: Monday, 20 August 2012 1:15 PM
To: Sarah Hodgson
Subject: RE: Soil samples received last week - Fiskville

Hi Sarah

The sample date should be 14/7 for SB02 1.0-1.1, SB03 0.06-0.1
Since we do not have a sample 1.5-1.6. The sample bag should belong to SB06/1.0-1.1.

And I am confident that the sample bag on the right belongs to SP17/ 1.0-1.1, whilst the other sample bag belongs to SB17/2.2-2.3.

And yes the depths are 2.2-2.3m

Thanks Sarah
Maria De los Reyes
ENVIRONMENTAL SCIENTIST

CARDNO LANE PIPER



Phone +61 3 9888 0100 Fax +61 3 9808 3511 Direct +61 3 9831 6139
Address Bldg 2, 154 Highbury Road, Burwood, Victoria 3125 Australia
Email Maria.DelosReyes@cardno.com.au Web www.lanepiper.com.au

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From: Sarah Hodgson [<mailto:Sarah.Hodgson@alsglobal.com>]
Sent: Monday, 20 August 2012 12:32 PM
To: Lauren Ryan; Maria De los Reyes
Subject: Soil samples received last week - Fiskville

Hi Lauren and Maria,

I just need to sort out a few sample ID discrepancies in relation to the soil samples we received last week from Fiskville. We have logged these two sets of samples under two work orders EM1209305 and EM1209440 according to the days they were received at the lab.

ALS work order EM129305

SB02 1.0-1.1 – sampling date on jar is 14/8, sampling date on bag is 13/8 – please confirm which is correct

SB03 0.06-0.1 – sampling date on COC is 14/8, sampling date on jars and bag is 13/8 – please confirm which is correct

SB06 1.0-1.1 – we are missing the soil bag

SB06 1.5-1.6 – soil bag received but not listed on the COC (see pic of bag labels). Please let me know if this could be the missing bag for SB06 1.0-1.1 listed above

ALS work order EM1209440

SB17 1.0-1.1 – 2 x soil bags received (see pic of bag labels). Please let me know if either of these bags belong to the sample below.

SB17 2.2-2.3 – we are missing the soil bag (See pics of sample IDs on the jars and lids).

Thank you,

Regards,

How was your customer experience? [Please send us your feedback](#)

Sarah Hodgson
PROJECT MANAGER

ALS | Environmental

Address

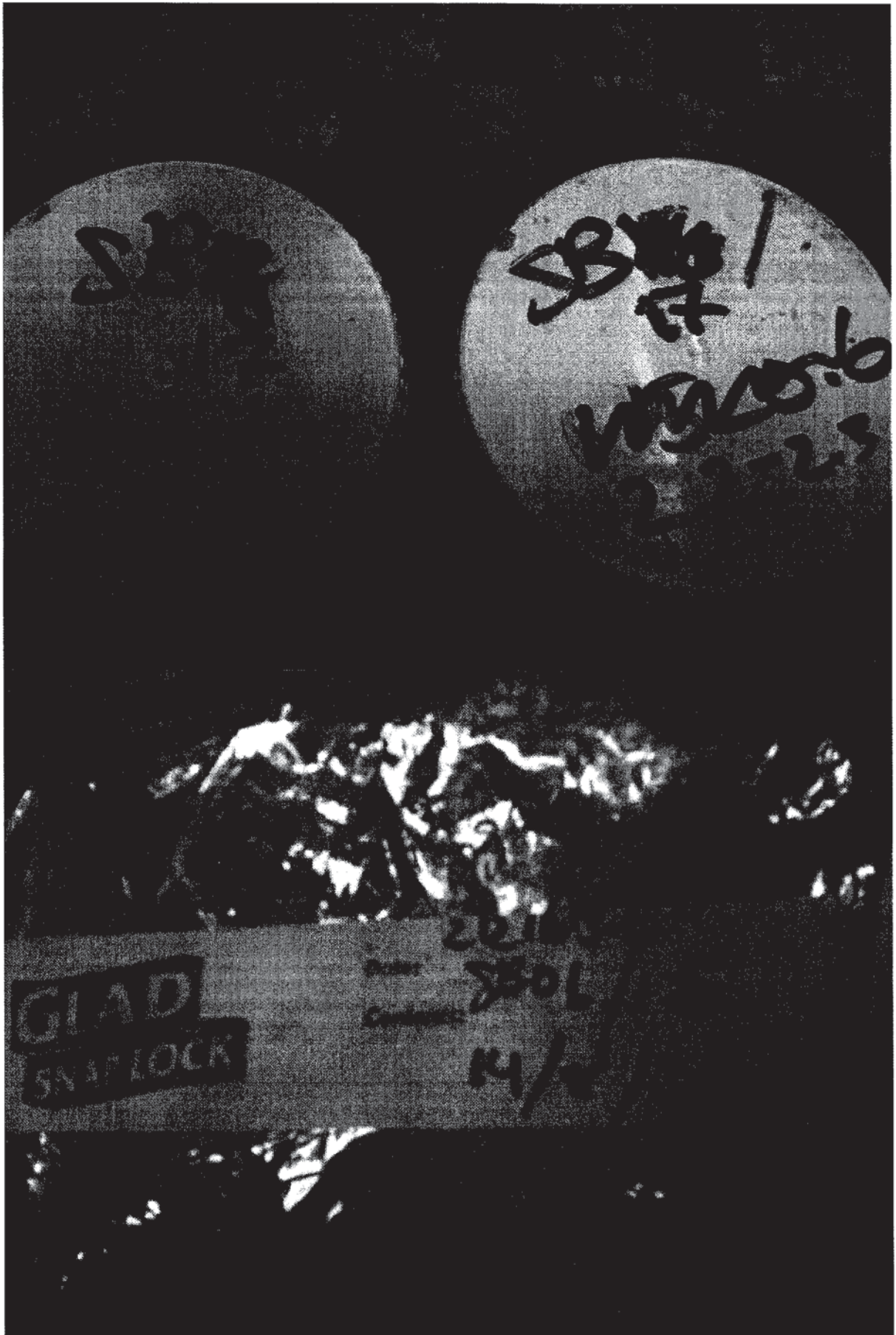
4 Westall Road

Springvale VIC 3171

www.alsglobal.com

PHONE +61 3 8549 9600

FAX +61 3 8549 9601

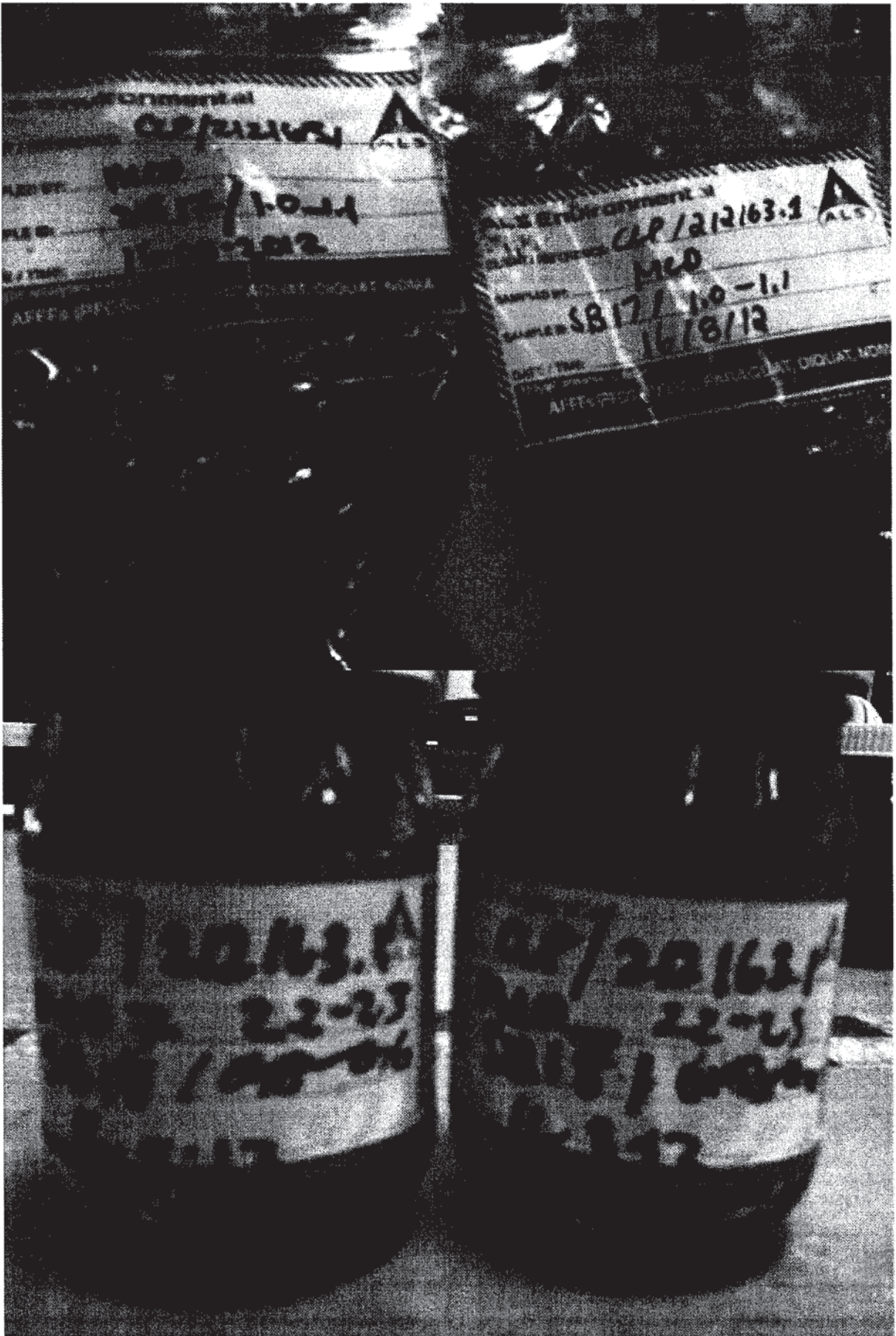


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ALC
DP/20163.1
MED
SB17/10-11
16/8/12

DP/20163.1
22-23
10-11

DP/20163.1
22-23
10-11

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au	
Project Number: 2121631		Site: FISKVILLE		Laboratory (name, phone, fax no & contact person): SRAH HOOGSON			
Sample ID	Laboratory ID	Container	Sampling		Analysis		
			Date	Time			
BH1C/2.3		SAL JARS	11/09/2012				
BH1C/2.6							
BH1A/3.0							
BH1B/2.3							
BH1D/2.0							
QC06/07092012							
QC07/07092012							
QC08/07092012							
Environmental Division Melbourne LB Work Order 12:10 EM1210620 Telephone : + 61-3-8549 9600							

Sample Matrix	Sample preservation	Analysis
Water		
Soil		
Sludge		
Other (Specify)		
Composite		
Ice bricks		
HNO ₃ /HCl		
Unpreserved		
Other (Specify)		

Sampler name: (print and signature) MARIA DELOS REYES	Date: 12/09/2012
Received by: (print and signature) W. Hoogson	Date: 12/09/2012
Received by: (print and signature) M. Delos Reyes	Date: 12/09/2012
Received by: (print and signature) M. Delos Reyes	Date: 12/09/2012

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.	
Reinquired by: (Sampler): (print and signature) MARIA DELOS REYES	Date: 12/09/2012
Reinquired by: (print and signature) M. Delos Reyes	Date: 12/09/2012
Reinquired by: (print and signature) M. Delos Reyes	Date: 12/09/2012

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Chain of Custody

11. STREACH AC OCCUR !!

Sheet 1 of 2

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au		Project Number: 212163.1 Site: Fskville		Laboratory (name, phone, fax no & contact person)				
Sample ID	Laboratory ID	Container	Sampling		Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	Analysis
			Date	Time										
1 BH5/2.0		SOL JH	24/9/12											
2 BH5/2.5														
3 BH5/3.0														
4 BH6/2.0														
5 BH6/2.5														
6 BH7/2.0														
7 BH7/2.5														
8 BH8/1.5														
9 BH8/2.0														
10 BH8/2.5														
11 BH9/1.7														
12 BH9/2.4														
13 BH10/2.4														
14 BH10/0.5														
15 OC06/27092012														

Sampler names: (print and signature)		Date:	
Time	Signature	Date	Time
12:00	MARIA DELOS REYES	24/9/12	13:00
13:30	KARET	24/9/12	13:30
Time	Signature	Date	Time
		24/9/12	2:00 pm

Relinquished by (Sampler): (print and signature)		Date
Signature	Time	Date
M. Delos Reyes	12:00	24/9/12
KARET	13:30	24/9/12
Signature	Time	Date
		24/9/12

Environmental Division
Melbourne
Work Order
EM1211193

Telephone : +61-3-8549 9600

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Please supply results electronically in spreadsheet and ESDAT files. Turn around time: (24 hour/48 hours/5 days)

R.L. 25/9/12



Chain of Custody

Sheet 2 of 2

Name: Maria Delos Reyes		Phone: 03 9888 0100 Fax: 03 9808 3511 Mobile: 0424278497		Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125		Email: maria.delosreyes@cardno.com.au		Project Number: 212163.1 Site: Fokville		Laboratory (name, phone, fax no & contact person)		Sample Matrix		Sample preservation		Analysis					
Sample ID	Laboratory ID	Container	Sampling		Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	Hand	X Bore / TPT / PB	Date					
			Date	Time												Sampler name: (print and signature)	Time				
0.C.07 / 22092012		SOIL JAR	22/9/12	02:20	X												24/9/12				
0.C.08 / 22092012		VIAL												XX			13:00				
0.C.09 / 22092012		VIAL Amber.												XX			13:38				
0.C.10 / 22092012		metals																			
BITC/3.0	24/9/12																				
20L BITC/3.5	24/9/12	Bulkms																			
		24/9/12																			
Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.																Date: 24/9/12					
Relinquished by (Sampler): (print and signature) m. delosreyes																Date: 24/9/12		Received by (foundry/lab) (print and signature) Maria Delos Reyes		Date: 24/9/12	
Relinquished by: (print and signature) M. Delos Reyes																Date: 24/9/12		Received by: (print and signature) Maria Delos Reyes		Date: 24/9/12	
Relinquished by: (print and signature) M. Delos Reyes																Date: 24/9/12		Received by: (print and signature) Maria Delos Reyes		Date: 24/9/12	

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/5 days)

In accordance with your acceptance of our standard or customised Terms of Agreement between Cardno Lane Piper Pty Ltd and Service or Equipment Providers

Please circle

From: [Sarah Hodgson](#)
To: [Maria De los Reyes \(Cardno LP\)](#)
Subject: RE: Your Reference : 212163 1. Deliverables for ALSE Workorder : EM1210620
Date: Friday, 5 October 2012 4:03:44 PM
Attachments: [212163 1.ESDAT EM1210620 1.Chemistry23.CSV](#)
[212163 1.ESDAT EM1210620 1.Sample23.CSV](#)
[EM1210620 1 COA.pdf](#)
[EM1210620 1 ENMRG.CSV](#)
[EM1210620 1 QC.pdf](#)
[EM1210620 1 QCI.pdf](#)

Hi Maria,

I was forwarded this email and amended the work order. Please find amended reports attached.

Regards,
How was your customer experience? Please send us your feedback

Sarah Hodgson

PROJECT MANAGER

ALS | Environmental
Address
4 Westall Road
Springvale VIC 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com
cid:615291706@05102011-231E

-----Original Message-----

From: Maria De los Reyes (Cardno LP) [<mailto:Maria.DelosReyes@cardno.com.au>]
Sent: Friday, 5 October 2012 3:54 PM
To: Sarah Hodgson
Subject: FW: Your Reference : 212163 1. Deliverables for ALSE Workorder : EM1210620

Hi Sarah,

I just realised that I emailed these to the wrong email.

Can this still be done?

And if so when can we have it by?

Regards

Maria

Maria De los Reyes
Environmental Scientist
Cardno Lane Piper

Phone +61 3 9831 6139 Fax +61 3 9808 3511 Address Bldg 2, 154 Highbury Road, Burwood, 3125
Victoria Australia

Email Maria.DelosReyes@cardno.com.au Web

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-----Original Message-----

From: Maria De los Reyes (Cardno LP)
Sent: Sunday, 30 September 2012 12:35 PM
To: crem@alsglobal.com
Subject: RE: Your Reference : 212163 1. Deliverables for ALSE Workorder : EM1210620

Hi Sarah,

Can we please change the sample ID of these samples to the following and be provided an updated lab report. I can change the sample ID in ESDAT manually if that saves you time.

Sorry for any inconvenience.

BH1C/2.3 =BH3/2.3
BH1C/2.6=BH3/2.6
BH1A/3.0=BH1/3.0
BHIB/2.3=BH4/2.3
BH1D/2.0=BH2/2.0

Regards

Maria

From: alse.melbourne.aus@als.com.au [alse.melbourne.aus@als.com.au]
Sent: Tuesday, 18 September 2012 5:40 PM
To: Maria De los Reyes (Cardno LP)
Subject: Your Reference : 212163 1. Deliverables for ALSE Workorder : EM1210620

This e-mail has been automatically generated.

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Peter Ravlic

From: Sarah Hodgson
Sent: Monday, 1 October 2012 5:33 PM
To: Peter Ravlic
Subject: FW: Your Reference : 212163 1. COC/SRN for ALSE Workorder : EM1211193

Hi Pete,

Please scan a copy of the email below to this COC.

Thank you,

Regards,
How was your customer experience? Please send us your feedback

Sarah Hodgson

-----Original Message-----

From: Maria De los Reyes (Cardno LP) [mailto:Maria.DelosReyes@cardno.com.au]
Sent: Sunday, 30 September 2012 2:47 PM
To: Client Replies EM
Subject: RE: Your Reference : 212163 1. COC/SRN for ALSE Workorder : EM1211193

Sarah,

Sorry again

Can I please change

QC06/22092012=QC21/22092012
QC07/22092012 =QC22/2209/2012
QC08/22092012=QC23/22092012
QC09/22092012=QC24/22092012

From: alse.melbourne.als@als.com.au [alse.melbourne.als@als.com.au]
Sent: Tuesday, 25 September 2012 5:35 PM
To: Maria De los Reyes (Cardno LP)
Subject: Your Reference : 212163 1. COC/SRN for ALSE Workorder : EM1211193

This e-mail has been automatically generated.
-- PLEASE DO NOT REPLY --

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Peter Ravlic

From: Sarah Hodgson
Sent: Thursday, 27 September 2012 12:16 PM
To: Peter Ravlic
Subject: FW: EM1211193 - sample questions

Hi Pete,

Please see email confirmation from client regarding sample ID issues.

Regards,
How was your customer experience? Please send us your feedback

Sarah Hodgson

PROJECT MANAGER

ALS | Environmental
Address
4 Westall Road
Springvale VIC 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com
cid:615291706@05102011-231E

-----Original Message-----

From: Maria De los Reyes (Cardno LP) [mailto:Maria.DelosReyes@cardno.com.au]
Sent: Thursday, 27 September 2012 11:10 AM
To: Sarah Hodgson
Subject: RE: EM1211193 - sample questions

Hi Sarah,

For BH7. The ID will be BH7/2.5

And for BH6/3.0 and BH5/3.5. Please place on Hold

Regards

Maria De los Reyes
Environmental Scientist
Cardno Lane Piper

Phone +61 3 9831 6139 Fax +61 3 9808 3511 Address Bldg 2, 154 Highbury Road, Burwood, 3125 Victoria Australia

Email Maria.DelosReyes@cardno.com.au Web

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-----Original Message-----

From: Marcus Boyd (Cardno LP)
Sent: Thursday, 27 September 2012 10:41 AM
To: Maria De los Reyes (Cardno LP)
Subject: FW: EM1211193 - sample questions

Maria,

See query below regarding from Sarah ALS. Please check if you have sorted this issue: apologies for passing it on so late.

Cheers,

Marcus Boyd
Environmental Engineer
Cardno Lane Piper

Phone +61 3 9831 6162 Fax +61 3 9808 3511 Mobile 0411 300 608 Address Bldg 2, 154 Highbury Road, Burwood, 3125 Victoria Australia

Email Marcus.Boyd@cardno.com.au Web

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-----Original Message-----

From: Sarah Hodgson [mailto:Sarah.Hodgson@alsglobal.com]
Sent: Tuesday, 25 September 2012 2:17 PM
To: Marcus Boyd (Cardno LP)
Subject: EM1211193 - sample questions

Hi Marcus,

In regards to the COC attached, there are a couple of issues I need to clarify.

Sample #7 was labelled as BH7/2.5, not as BH7/2.8 which was written on the COC. Please let me know which ID you would like us to use.

We received two extra samples that we've numbered #19 (BH6/3.0) and #20 (BH5/3.5). Please let me know if you need us to test these samples and for what analysis.

Thank you,

Regards,
How was your customer experience? Please send us your feedback

Sarah Hodgson

PROJECT MANAGER

ALS | Environmental

Address

4 Westall Road

Springvale VIC 3171

PHONE +61 3 8549 9600

FAX +61 3 8549 9601

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cid:615291706@05102011-231E

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COURIER



Chain of Custody

CC Received 17/8/12 17:10 RT

Sheet 3 of 9

Name: Maria Delos Reyes Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person): Sarah Hodgson (03)8549 9600		Sample Matrix Water Soil Sludge Other (Specify) Composite		Sample preservation Unpreserved HNO ₃ /HCl Ice bricks Other (Specify)		Analysis S6 - TPH, BTEX, Lead EF08/07/11 TPH, SZ3 - SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 - pH EP231 - PFOA & PFOS, EP216 Perchlorates HOLD TPH/BTEX S3 - Metals (13) TPH C6-C9					
Sample ID	Laboratory ID	Container	Sampling Date	Time	Sampler name: (print and signature)	Date	Time	Received by: (print and signature)	Date	Time	
SB09/0-0.1	33	X2 Soil jars and ziplock bag	14/08/2052		Maria Delos Reyes	17/08/12					
SB09/0.5-0.6	34	X2 Soil jars and ziplock bag	14/08/2052								
SB09/1.0-1.1	35	X2 Soil jars and ziplock bag	14/08/2052								
SB09/2.0-2.1	36	X2 Soil jars and ziplock bag	14/08/2052								
SB10/0-0.1	37	X2 Soil jars and ziplock bag	14/08/2052								
SB10/0.5-0.6	38	X2 Soil jars and ziplock bag	14/08/2052								
SB10/1.0-1.1	39	X2 Soil jars and ziplock bag	14/08/2052								
SB10/2.0-2.1	40	X2 Soil jars and ziplock bag	14/08/2052								
SB11/0-0.1	41	X2 Soil jars and ziplock bag	14/08/2052								
SB11/0.5-0.6	42	X2 Soil jars and ziplock bag	14/08/2052								
SB11/1.0-1.1	43	X2 Soil jars and ziplock bag	14/08/2052								
SB11/2.0-2.1	44	X2 Soil jars and ziplock bag	14/08/2052								
OC01/14082012	45	X2 Soil jars and ziplock bag	14/08/2052								
OC02/14082012	46	X2 Soil jars and ziplock bag	14/08/2052								
OC03/14082012	47	Vial	14/08/2052								
OC04/14082012	48	Vial	14/08/2052								

Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.

Relinquished by (Sampler): (print and signature) Maria Delos Reyes Date: 17/08/12 Time: 5:00

Received by: (print and signature) Tony Date: 20/08 Date: 20/08 Time: 2:08

Relinquished by: (print and signature) Maria Delos Reyes Date: 17/08/12 Time: 5:00

Received by: (print and signature) Tony Date: 20/08 Date: 20/08 Time: 2:08

Relinquished by: (print and signature) Maria Delos Reyes Date: 17/08/12 Time: 5:00

Received by: (print and signature) Tony Date: 20/08 Date: 20/08 Time: 2:08

Report: 348838

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COURIER

Sheet 9 of 9



Chain of Custody

COC Received 17/8/12 17:10
RT

Name: Maria Delos Reyes Phone: 03 9888 0500 Fax: 03 9808 3511 Mobile: 0424278497 Address: Building 2, 154 Highbury Rd, Burwood, Vic, 3125 Email: maria.delosreyes@cardno.com.au Project Number: 212163.1 Site: Fiskville Laboratory (name, phone, fax no & contact person): Sarah Hodgson (03)8549 9600		Sample Matrix Water Soil Sludge Other (Specify) Composite Ice bricks HNO ₃ /HCl Unpreserved Other (Specify)		Sample preservation S6 - TPH, BTEX, Lead EP080/071 TPH, S23 - SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 -pH EP231 - PFOA & PFOS, EP HOLD TPH/BTEX S3 - Metals (13) TPH C6-C9		Analysis																	
Sample ID	Laboratory ID	Container	Sampling		Date	Time	Water	Soil	Sludge	Other (Specify)	Composite	Ice bricks	HNO ₃ /HCl	Unpreserved	Other (Specify)	S6 - TPH, BTEX, Lead	EP080/071 TPH, S23 - SVOC & VOC, S3 - Metals (13), EP066 - PCB, EA002 -pH	EP231 - PFOA & PFOS, EP	HOLD	TPH/BTEX	S3 - Metals (13)	TPH C6-C9	
			Date	Time																			
SB28/0-0.1	65	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB28/0.5-0.6	66	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB28/1.0-1.1	67	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB28/2.2-2.3	68	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB29/0-0.1	69	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB29/0.5-0.6	70	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB30/0-0.1	71	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
SB22/0.5-0.6	72	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
QC10/16082012	73	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
QC11/16082012	74	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
QC12/16082012	75	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
QC13/16082012	76	X2 Soil jars and ziplock bag	16/08/2012		16/08/2012		X					X				✓	✓						
QC14/16082012	77	VIAL	16/08/2012		16/08/2012		X					X				✓	✓						
QC15/16082012	78	VIAL	16/08/2012		16/08/2012		X					X				✓	✓						
QC16/16082012	79	VIAL	16/08/2012		16/08/2012		X					X				✓	✓						
QC17/16082012	80	VIAL	16/08/2012		16/08/2012		X					X				✓	✓						
QC18/16082012	81	2 VIAL METALS AND AMBER	16/08/2012		16/08/2012		X					X				✓	✓						
QC19/16082012	82	2 VIAL METALS AND AMBER	16/08/2012		16/08/2012		X					X				✓	✓						
QC20/16082012	83	VIAL	16/08/2012		16/08/2012		X					X				✓	✓						
Sampler: I attest that the proper field sampling procedures were used during the collection of these samples.																							
Relinquished by (Sampler): Maria Delos Reyes Date: 17/8/12 Time: 5:00												Received by (Courier/Lab): Date: 2/8 Time: 3:28											
Relinquished by (print and signature): M. Delos Reyes												Received by (print and signature): Tony											
Relinquished by (print and signature): M. Delos Reyes												Received by (print and signature): Tony											

Page 4

Report: 349009

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Turn around time: (24 hour/48 hours/5 days)

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EM1209305	Page	: 1 of 38
Client	: CARDNO LANE PIPER PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: MS MARIA DE LOS REYES	Contact	: Sarah Hodgson
Address	: 154 HIGHBURY ROAD BURWOOD VIC, AUSTRALIA 3125	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: maria.delosreyes@lanepiper.com.au	E-mail	: sarah.hodgson@alsenviro.com
Telephone	: +61 03 98880100	Telephone	: 03 8549 9652
Facsimile	: +61 03 98083511	Facsimile	: 03 8549 9626
Project	: 212163 1	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 15-AUG-2012
C-O-C number	: ----	Issue Date	: 29-AUG-2012
Sampler	: MDR	No. of samples received	: 52
Site	: Fiskville	No. of samples analysed	: 30
Quote number	: ME/441/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



Page : 2 of 38
 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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

- EP076: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- EP231: PFOA & PFOS results are reported as an aggregate of linear and branched isomers.
- PFOS/PFOA & Perchlorate analysis conducted by ALS Sydney, NATA accreditation no. 825, site no 10911.
- This is a split batch from EM1209440 due to the large number of samples requiring analysis.



NATA Accredited Laboratory 825

Accredited for compliance with
 ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Inorganics
Phalak Inthaksone	Laboratory Manager - Organics	Sydney Organics
Varsha Ho Wing	Non-Metals Team Leader	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SB01/0.05 - 0.1 14-AUG-2012 15:00 EM1209305-001	SB01/1.0 - 1.1 14-AUG-2012 09:00 EM1209305-003	SB02/0 - 0.1 14-AUG-2012 09:20 EM1209305-005	SB02/2.0 - 2.1 14-AUG-2012 09:20 EM1209305-008	SB03/0.06 - 0.1 14-AUG-2012 09:40 EM1209305-009
EA002 : pH (Soils)									
pH Value	----	0.1			8.2	6.4	7.4	7.7	6.4
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0			25.2	24.4	27.7	26.7	23.8
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5			<5	<5	<5	<5	<5
Barium	7440-39-3	10			20	40	40	70	20
Beryllium	7440-41-7	1			<1	<1	<1	1	<1
Cadmium	7440-43-9	1			<1	<1	<1	<1	<1
Chromium	7440-47-3	2			60	40	32	58	32
Cobalt	7440-48-4	2			3	3	5	8	7
Copper	7440-50-8	5			<5	6	7	10	7
Lead	7439-92-1	5			13	13	13	11	11
Manganese	7439-96-5	5			35	53	21	32	18
Nickel	7440-02-0	2			22	8	7	15	10
Vanadium	7440-62-2	5			66	80	95	91	83
Zinc	7440-66-6	5			5	9	9	6	7
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1			<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.10			<0.10	<0.10	<0.10	<0.10	<0.10
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2			<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	98-82-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	103-65-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	108-67-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	95-63-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
EP074B: Oxygenated Compounds									



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			SB01/0.05 - 0.1 14-AUG-2012 15:00 EM1209305-001	SB01/1.0 - 1.1 14-AUG-2012 09:00 EM1209305-003	SB02/0 - 0.1 14-AUG-2012 09:20 EM1209305-005	SB02/2.0 - 2.1 14-AUG-2012 09:20 EM1209305-008	SB03/0.06 - 0.1 14-AUG-2012 09:40 EM1209305-009
EP074B: Oxygenated Compounds - Continued						
Vinyl Acetate	108-05-4	5	<5	<5	<5	<5
2-Butanone (MEK)	78-93-3	5	<5	<5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	<5	<5	<5	<5
2-Hexanone (MIBK)	591-78-6	5	<5	<5	<5	<5
EP074C: Sulfonated Compounds						
Carbon disulfide	75-15-0	0.5	<0.5	<0.5	<0.5	<0.5
EP074D: Fumigants						
2,2-Dichloropropane	594-20-7	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	78-87-5	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	10061-01-5	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	10061-02-6	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	106-93-4	0.5	<0.5	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds						
Dichlorodifluoromethane	75-71-8	5	<5	<5	<5	<5
Chloromethane	74-87-3	5	<5	<5	<5	<5
Vinyl chloride	75-01-4	5	<5	<5	<5	<5
Bromomethane	74-83-9	5	<5	<5	<5	<5
Chloroethane	75-00-3	5	<5	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	<5	<5	<5	<5
1,1-Dichloroethene	75-35-4	0.5	<0.5	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	75-34-3	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	156-59-2	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	71-55-6	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropylene	563-58-6	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	107-06-2	0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	79-00-5	0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	142-28-9	0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	630-20-6	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,4-Dichloro-2-butene	110-57-6	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,4-Dichloro-2-butene	1476-11-5	0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time	
Compound	CAS Number	LOR	Unit	SB01/0.05 - 0.1	SB01/1.0 - 1.1	SB02/0 - 0.1	SB02/2.0 - 2.1	SB03/0.06 - 0.1	SB03/0.06 - 0.1	SB03/0.06 - 0.1	SB03/0.06 - 0.1
				14-AUG-2012 15:00	14-AUG-2012 09:00	14-AUG-2012 09:20	14-AUG-2012 09:20	14-AUG-2012 09:40	14-AUG-2012 09:40	14-AUG-2012 09:40	14-AUG-2012 09:40
				EM1209305-001	EM1209305-003	EM1209305-005	EM1209305-008	EM1209305-009	EM1209305-009	EM1209305-009	EM1209305-009
EP074E: Halogenated Aliphatic Compounds - Continued											
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds											
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074G: Trihalomethanes											
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075A: Phenolic Compounds											
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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	<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	<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	<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	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1
EP075B: Polynuclear Aromatic Hydrocarbons											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL		Client sample ID			
Compound	CAS Number	LOR	Client sampling date / time	Unit	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued					
Anthracene	120-12-7	0.5	14-AUG-2012 09:00	mg/kg	<0.5
Fluoranthene	206-44-0	0.5	14-AUG-2012 09:20	mg/kg	<0.5
Pyrene	129-00-0	0.5	14-AUG-2012 09:20	mg/kg	<0.5
N-2-Fluorenyl Acetamide	53-96-3	0.5	EM1209305-003	mg/kg	<0.5
Benz(a)anthracene	56-55-3	0.5	EM1209305-005	mg/kg	<0.5
Chrysene	218-01-9	0.5	EM1209305-008	mg/kg	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1		mg/kg	<1
7-12-Dimethylbenz(a)anthracene	57-97-6	0.5		mg/kg	<0.5
Benzo(a)pyrene	50-32-8	0.5		mg/kg	<0.5
3-Methylcholanthrene	56-49-5	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 PAHs	----	0.5		mg/kg	<0.5
EP075C: Phthalate Esters					
Dimethyl phthalate	131-11-3	0.5		mg/kg	<0.5
Diethyl phthalate	84-66-2	0.5		mg/kg	<0.5
Di-n-butyl phthalate	84-74-2	0.5		mg/kg	<0.5
Butyl benzyl phthalate	85-68-7	0.5		mg/kg	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0		mg/kg	<5.0
Di-n-octylphthalate	117-84-0	0.5		mg/kg	<0.5
EP075D: Nitrosamines					
N-Nitrosomethylethylamine	10695-95-6	0.5		mg/kg	<0.5
N-Nitrosodiethylamine	55-18-5	0.5		mg/kg	<0.5
N-Nitrosopyrrolidine	930-55-2	1.0		mg/kg	<1.0
N-Nitrosomorpholine	59-89-2	0.5		mg/kg	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5		mg/kg	<0.5
N-Nitrosopiperidine	100-75-4	0.5		mg/kg	<0.5
N-Nitrosodibutylamine	924-16-3	0.5		mg/kg	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0		mg/kg	<1.0
Methapyriline	91-80-5	0.5		mg/kg	<0.5
EP075E: Nitroaromatics and Ketones					
2-Picoline	109-06-8	0.5		mg/kg	<0.5
Acetophenone	98-86-2	0.5		mg/kg	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB01/0.05 - 0.1 14-AUG-2012 15:00 EM1209305-001	SB01/1.0 - 1.1 14-AUG-2012 09:00 EM1209305-003	SB02/0 - 0.1 14-AUG-2012 09:20 EM1209305-005	SB02/2.0 - 2.1 14-AUG-2012 09:20 EM1209305-008	SB03/0.06 - 0.1 14-AUG-2012 09:40 EM1209305-009
			Client sample ID	Unit					
EP075E: Nitroaromatics and Ketones - Continued									
Nitrobenzene	98-95-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Isophorone	78-59-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dinitrotoluene	606-20-2	1.0			<1.0	<1.0	<1.0	<1.0	<1.0
2,4-Dinitrotoluene	121-14-2	1.0			<1.0	<1.0	<1.0	<1.0	<1.0
1-Naphthylamine	134-32-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
4-Nitroquinoline-N-oxide	56-57-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
5-Nitro-o-toluidine	99-55-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Azobenzene	103-33-3	1			<1	<1	<1	<1	<1
1,3,5-Trinitrobenzene	99-35-4	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Phenacetin	62-44-2	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
4-Aminobiphenyl	92-67-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloronitrobenzene	82-68-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Pronamide	23950-58-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Dimethylaminoazobenzene	60-11-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzilate	510-15-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	541-73-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Hexachloroethane	67-72-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Hexachloropropylene	1888-71-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene	77-47-4	2.5			<2.5	<2.5	<2.5	<2.5	<2.5
Pentachlorobenzene	608-93-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	1.0			<1.0	<1.0	<1.0	<1.0	<1.0
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloroaniline	106-47-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
2-Nitroaniline	88-74-4	1.0			<1.0	<1.0	<1.0	<1.0	<1.0
3-Nitroaniline	99-09-2	1.0			<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB01/0.05 - 0.1 14-AUG-2012 15:00 EM1209305-001	SB01/1.0 - 1.1 14-AUG-2012 09:00 EM1209305-003	SB02/0 - 0.1 14-AUG-2012 09:20 EM1209305-005	SB02/2.0 - 2.1 14-AUG-2012 09:20 EM1209305-008	SB03/0.06 - 0.1 14-AUG-2012 09:40 EM1209305-009
			Unit	Unit					
EP075H: Anilines and Benzidines - Continued									
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075J: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDT	50-29-3	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5698-13-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	Client sample ID				
			SB01/0.05 - 0.1	SB01/1.0 - 1.1		SB02/0 - 0.1	SB02/2.0 - 2.1	SB03/0.06 - 0.1		
EP080/071: Total Petroleum Hydrocarbons - Continued										
C29 - C36 Fraction	----	100	280	<100	<100	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	280	<50	<50	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft										
C6 - C10 Fraction	----	10	<10	<10	<10	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	<50	<50	<50	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	240	<100	<100	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	140	<100	<100	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	380	<50	<50	<50	<50	<50	<50	<50
EP216: Perchlorate by LC/MS										
Perchlorate	7601-90-3	10.0	----	----	----	----	----	----	----	<10.0
EP231: Perfluoroalkyl Acids and Sulfonates.										
PFOS	1763-23-1	0.0005	----	----	----	----	----	----	----	0.0789
PFOA	335-67-1	0.0005	----	----	----	----	----	----	----	0.0006
6:2 Fluorotelomer Sulfonate (6:2 Fts)	27619-97-2	0.005	----	----	----	----	----	----	----	<0.0005
EP066S: PCB Surrogate										
Decachlorobiphenyl	2051-24-3	0.1	67.6	66.5	75.3	75.8	75.8	75.8	75.8	84.4
EP074S: VOC Surrogates										
1,2-Dichloroethane-D4	17060-07-0	0.1	77.9	71.6	73.0	79.8	79.8	79.8	79.8	76.7
Toluene-D8	2037-26-5	0.1	92.8	84.4	78.0	89.3	89.3	89.3	89.3	83.5
4-Bromofluorobenzene	460-00-4	0.1	79.8	77.5	73.4	80.2	80.2	80.2	80.2	68.7
EP075S: Acid Extractable Surrogates										
2-Fluorophenol	367-12-4	0.1	101	85.8	89.4	117	117	117	117	117
Phenol-d6	13127-88-3	0.1	67.5	61.2	63.6	81.2	81.2	81.2	81.2	84.0
2-Chlorophenol-D4	93951-73-6	0.1	83.8	72.5	78.0	98.3	98.3	98.3	98.3	104
2,4,6-Tribromophenol	118-79-6	0.1	69.1	72.8	63.0	84.8	84.8	84.8	84.8	90.8
EP075T: Base/Neutral Extractable Surrogates										
Nitrobenzene-D5	4165-60-0	0.1	61.8	55.1	59.8	74.0	74.0	74.0	74.0	76.5
1,2-Dichlorobenzene-D4	2199-69-1	0.1	58.8	53.6	54.7	70.5	70.5	70.5	70.5	76.2
2-Fluorobiphenyl	321-60-8	0.1	69.0	62.4	69.1	88.4	88.4	88.4	88.4	90.1
Anthracene-d10	1719-06-8	0.1	88.0	75.4	84.5	108	108	108	108	108
4-Terphenyl-d14	1718-51-0	0.1	79.2	71.7	74.8	93.6	93.6	93.6	93.6	98.6
EP080S: TPH(V)/BTEX Surrogates										
1,2-Dichloroethane-D4	17060-07-0	0.1	80.2	73.7	75.4	82.0	82.0	82.0	82.0	79.0
Toluene-D8	2037-26-5	0.1	92.4	84.2	77.5	88.9	88.9	88.9	88.9	83.1
4-Bromofluorobenzene	460-00-4	0.1	92.4	84.0	81.3	89.4	89.4	89.4	89.4	79.3



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time		Client sample ID		
				SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1
EA002 : pH (Soils)		0.1	pH Unit	7.1				
EA055: Moisture Content		1.0	%	26.9	27.3	28.2	26.6	28.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	11				
Barium	7440-39-3	10	mg/kg	60				
Beryllium	7440-41-7	1	mg/kg	<1				
Cadmium	7440-43-9	1	mg/kg	<1				
Chromium	7440-47-3	2	mg/kg	68				
Cobalt	7440-48-4	2	mg/kg	4				
Copper	7440-50-8	5	mg/kg	7				
Lead	7439-92-1	5	mg/kg	18				
Manganese	7439-96-5	5	mg/kg	67				
Nickel	7440-02-0	2	mg/kg	10				
Vanadium	7440-62-2	5	mg/kg	143				
Zinc	7440-66-6	5	mg/kg	14				
Lead	7439-92-1	5	mg/kg		10	17	9	9
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1				
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls		0.10	mg/kg	<0.10				
EP074A: Monocyclic Aromatic Hydrocarbons								
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	0.5	mg/kg	<0.5				
Styrene	100-42-5	0.5	mg/kg	<0.5				
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5				
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5				
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5				
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5				
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5				
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5				
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5				
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5				
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5				



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time			
Compound	CAS Number	LOR	Unit	SB03/0.6 - 0.7 14-AUG-2012 09:40 EM1209305-010	SB04/0.5 - 0.6 14-AUG-2012 09:55 EM1209305-014	SB05/0.0 - 0.1 14-AUG-2012 10:30 EM1209305-017	SB05/1.0 - 1.1 14-AUG-2012 10:30 EM1209305-019
EP074B: Oxygenated Compounds							
Vinyl Acetate	108-05-4	5	mg/kg	<5			
2-Butanone (MEK)	78-93-3	5	mg/kg	<5			
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5			
2-Hexanone (MIBK)	591-78-6	5	mg/kg	<5			
EP074C: Sulfonated Compounds							
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5			
EP074D: Fumigants							
2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5			
1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5			
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5			
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5			
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5			
EP074E: Halogenated Aliphatic Compounds							
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5			
Chloromethane	74-87-3	5	mg/kg	<5			
Vinyl chloride	75-01-4	5	mg/kg	<5			
Bromomethane	74-83-9	5	mg/kg	<5			
Chloroethane	75-00-3	5	mg/kg	<5			
Trichlorofluoromethane	75-69-4	5	mg/kg	<5			
1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5			
Iodomethane	74-88-4	0.5	mg/kg	<0.5			
trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5			
1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5			
cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5			
1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5			
1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5			
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5			
1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5			
Trichloroethene	79-01-6	0.5	mg/kg	<0.5			
Dibromomethane	74-95-3	0.5	mg/kg	<0.5			
1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5			
1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5			
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5			
1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5			
trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5			
cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5			



Analytical Results

Sub-Matrix: SOIL		Client sample ID							
Compound	CAS Number	LOR	Client sampling date / time	Unit	SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1
					EM1209305-010	EM1209305-013	EM1209305-014	EM1209305-017	EM1209305-019
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1.2.2-Tetrachloroethane	79-34-5	0.5		mg/kg	<0.5				
1.2.3-Trichloropropane	96-18-4	0.5		mg/kg	<0.5				
Pentachloroethane	76-01-7	0.5		mg/kg	<0.5				
1.2-Dibromo-3-chloropropane	96-12-8	0.5		mg/kg	<0.5				
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5		mg/kg	<0.5				
Bromobenzene	108-86-1	0.5		mg/kg	<0.5				
2-Chlorotoluene	95-49-8	0.5		mg/kg	<0.5				
4-Chlorotoluene	106-43-4	0.5		mg/kg	<0.5				
1.2.3-Trichlorobenzene	87-61-6	0.5		mg/kg	<0.5				
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5		mg/kg	<0.5				
Bromodichloromethane	75-27-4	0.5		mg/kg	<0.5				
Dibromochloromethane	124-48-1	0.5		mg/kg	<0.5				
Bromoform	75-25-2	0.5		mg/kg	<0.5				
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5		mg/kg	<0.5				
2-Chlorophenol	95-57-8	0.5		mg/kg	<0.5				
2-Methylphenol	95-48-7	0.5		mg/kg	<0.5				
3- & 4-Methylphenol	1319-77-3	0.5		mg/kg	<1.0				
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	1		mg/kg	<1				
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5		mg/kg	<0.5				
2-Methylnaphthalene	91-57-6	0.5		mg/kg	<0.5				
2-Chloronaphthalene	91-58-7	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				



Analytical Results

Sub-Matrix: SOIL	Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time	
Compound	CAS Number	LOR	Unit	SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1		
EP075B: Polynuclear Aromatic Hydrocarbons - Continued										
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						
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5						
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5						
Chrysene	218-01-9	0.5	mg/kg	<0.5						
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1						
7-12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5						
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5						
3-Methylcholanthrene	56-49-5	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 PAHs		0.5	mg/kg	<0.5						
EP075C: Phthalate Esters										
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5						
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5						
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5						
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5						
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0						
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5						
EP075D: Nitrosamines										
N-Nitrosomethylethylamine	10695-95-6	0.5	mg/kg	<0.5						
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5						
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0						
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5						
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5						
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5						
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5						
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0						
Methapyrilene	91-80-5	0.5	mg/kg	<0.5						
EP075E: Nitroaromatics and Ketones										
2-Picoline	109-06-8	0.5	mg/kg	<0.5						
Acetophenone	98-86-2	0.5	mg/kg	<0.5						



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time			
Compound	CAS Number	LOR	Unit	SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1	EM1209305-010	EM1209305-013	EM1209305-014	EM1209305-017	EM1209305-019
EP075E: Nitroaromatics and Ketones - Continued													
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5									
Isophorone	78-59-1	0.5	mg/kg	<0.5									
2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0									
2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0									
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5									
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5									
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5									
Azobenzene	103-33-3	1	mg/kg	<1									
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5									
Phenacetin	62-44-2	0.5	mg/kg	<0.5									
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5									
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5									
Pronamide	23950-58-5	0.5	mg/kg	<0.5									
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5									
Chlorbenzilate	510-15-6	0.5	mg/kg	<0.5									
EP075F: Haloethers													
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5									
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5									
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5									
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5									
EP075G: Chlorinated Hydrocarbons													
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5									
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5									
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5									
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5									
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5									
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5									
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5									
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5									
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5									
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0									
EP075H: Anilines and Benzidines													
Aniline	62-53-3	0.5	mg/kg	<0.5									
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5									
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0									
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0									



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1
			Unit	EM1209305-010						EM1209305-013	EM1209305-014	EM1209305-017	EM1209305-019
EP075H: Anilines and Benzimidines - Continued									
Dibenzofuran	132-64-9	0.5	mg/kg		<0.5				
4-Nitroaniline	100-01-6	0.5	mg/kg		<0.5				
Carbazole	86-74-8	0.5	mg/kg		<0.5				
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg		<0.5				
EP075J: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg		<0.5				
beta-BHC	319-85-7	0.5	mg/kg		<0.5				
gamma-BHC	58-89-9	0.5	mg/kg		<0.5				
delta-BHC	319-86-8	0.5	mg/kg		<0.5				
Heptachlor	76-44-8	0.5	mg/kg		<0.5				
Aldrin	309-00-2	0.5	mg/kg		<0.5				
Heptachlor epoxide	1024-57-3	0.5	mg/kg		<0.5				
alpha-Endosulfan	959-98-8	0.5	mg/kg		<0.5				
4,4'-DDE	72-55-9	0.5	mg/kg		<0.5				
Dieldrin	60-57-1	0.5	mg/kg		<0.5				
Endrin	72-20-8	0.5	mg/kg		<0.5				
beta-Endosulfan	33213-65-9	0.5	mg/kg		<0.5				
4,4'-DDD	72-54-8	0.5	mg/kg		<0.5				
Endosulfan sulfate	1031-07-8	0.5	mg/kg		<0.5				
4,4'-DDT	50-29-3	1.0	mg/kg		<1.0				
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg		<0.5				
Dimethoate	60-51-5	0.5	mg/kg		<0.5				
Diazinon	333-41-5	0.5	mg/kg		<0.5				
Chlorpyrifos-methyl	5698-13-0	0.5	mg/kg		<0.5				
Malathion	121-75-5	0.5	mg/kg		<0.5				
Fenthion	55-38-9	0.5	mg/kg		<0.5				
Chlorpyrifos	2921-88-2	0.5	mg/kg		<0.5				
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		<0.5				
Chlorfenvinphos	470-90-6	0.5	mg/kg		<0.5				
Prothiofos	34643-46-4	0.5	mg/kg		<0.5				
Ethion	563-12-2	0.5	mg/kg		<0.5				
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10		<10		<10
C10 - C14 Fraction	----	50	mg/kg		<50		<50		<50
C15 - C28 Fraction	----	100	mg/kg		<100		<100		<100



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time			
Compound	CAS Number	LOR	Unit	SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1	EM1209305-010	EM1209305-013	EM1209305-014	EM1209305-017	EM1209305-019
EP080/071: Total Petroleum Hydrocarbons - Continued													
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 2010 Draft													
C6 - C10 Fraction		10	mg/kg	<10	<10	<10	<10	<10					
C6 - C10 Fraction minus BTEX (F1)		10	mg/kg	---	<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					
EP080: BTEX													
Benzene	71-43-2	0.2	mg/kg	---	<0.2	<0.2	<0.2	<0.2					
Toluene	108-88-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5					
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5					
meta- & para-Xylene	108-38-3	0.5	mg/kg	---	<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					
EP080: BTEXN													
Total Xylenes	1330-20-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5					
Sum of BTEX	---	0.2	mg/kg	---	<0.2	<0.2	<0.2	<0.2					
Naphthalene	91-20-3	1	mg/kg	---	<1	<1	<1	<1					
EP066S: PCB Surrogate													
Decachlorobiphenyl	2051-24-3	0.1	%	75.1	---	---	---	---					
EP074S: VOC Surrogates													
1,2-Dichloroethane-D4	17060-07-0	0.1	%	72.6	---	---	---	---					
Toluene-D8	2037-26-5	0.1	%	79.7	---	---	---	---					
4-Bromo fluorobenzene	460-00-4	0.1	%	71.1	---	---	---	---					
EP075S: Acid Extractable Surrogates													
2-Fluorophenol	367-12-4	0.1	%	118	---	---	---	---					
Phenol-d6	13127-88-3	0.1	%	84.9	---	---	---	---					
2-Chlorophenol-D4	93951-73-6	0.1	%	98.6	---	---	---	---					
2,4,6-Tribromophenol	118-79-6	0.1	%	88.4	---	---	---	---					
EP075T: Base/Neutral Extractable Surrogates													
Nitrobenzene-D5	4165-60-0	0.1	%	74.7	---	---	---	---					
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	69.9	---	---	---	---					
2-Fluorobiphenyl	321-60-8	0.1	%	83.0	---	---	---	---					
Anthracene-d10	1719-06-8	0.1	%	98.7	---	---	---	---					
4-Terphenyl-d14	1718-51-0	0.1	%	86.5	---	---	---	---					



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sample ID						
			Client sampling date / time	SB03/0.6 - 0.7	SB04/0 - 0.1	SB04/0.5 - 0.6	SB05/0 - 0.1	SB05/1.0 - 1.1	
			Unit	EM1209305-010	EM1209305-013	EM1209305-014	EM1209305-017	EM1209305-019	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	74.7	74.8	75.4	77.6	78.4	
Toluene-D8	2037-26-5	0.1	%	79.4	78.3	79.1	81.4	77.4	
4-Bromofluorobenzene	460-00-4	0.1	%	76.1	82.2	78.7	83.9	79.8	



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	SB06/0.5 - 0.6 14-AUG-2012 10:55 EM1209305-022	SB06/2.0 - 2.1 14-AUG-2012 10:55 EM1209305-024	SB07/0 - 0.1 14-AUG-2012 11:10 EM1209305-025	SB07/1.0 - 1.1 14-AUG-2012 11:10 EM1209305-027	SB08/0 - 0.1 14-AUG-2012 11:20 EM1209305-029
			Client sample ID	Client sampling date / time						
EA055: Moisture Content										
Moisture Content (dried @ 103°C)	----	1.0	%		25.2	27.1	7.8	19.5		8.8
EG005T: Total Metals by ICP-AES										
Lead	7439-92-1	5	mg/kg		10	11	5	12		<5
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	----	10	mg/kg		<10	<10	42	<10		13
C10 - C14 Fraction	----	50	mg/kg		270	<50	2480	<50		660
C15 - C28 Fraction	----	100	mg/kg		520	<100	7850	<100		4160
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100		<100
C10 - C36 Fraction (sum)	----	50	mg/kg		790	<50	10300	<50		4820
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft										
C6 - C10 Fraction	----	10	mg/kg		23	<10	87	<10		30
C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		23	<10	85	<10		30
>C10 - C16 Fraction	----	50	mg/kg		470	<50	4750	<50		1420
>C16 - C34 Fraction	----	100	mg/kg		340	<100	6090	<100		3680
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100		<100
>C10 - C40 Fraction (sum)	----	50	mg/kg		810	<50	10800	<50		5100
EP080: BTEX										
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	0.5	mg/kg		<0.5	<0.5	1.6	<0.5		<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5		<0.5
EP080: BTEXN										
Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	1.6	<0.5		<0.5
Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	2.1	<0.2		<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	3	<1		1
EP080S: TPH(V)/BTEX Surrogates										
1,2-Dichloroethane-D4	17060-07-0	0.1	%		80.4	86.2	78.8	70.1		78.0
Toluene-D8	2037-26-5	0.1	%		87.0	74.6	92.0	81.0		86.4
4-Bromofluorobenzene	460-00-4	0.1	%		88.0	91.4	79.6	81.2		92.4



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	Client sample ID		
			SB08/0.5 - 0.6	SB09/0 - 0.1		SB09/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1
Sub-Matrix: SOIL			14-AUG-2012 11:20	14-AUG-2012 13:00		14-AUG-2012 13:00	14-AUG-2012 13:30	14-AUG-2012 13:30
			EM1209305-030	EM1209305-033		EM1209305-035	EM1209305-038	EM1209305-039
EA002 : pH (Soils)								
pH Value		0.1		8.5	pH Unit	6.6	7.9	5.4
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	27.6	18.8	%	20.8	25.0	30.6
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5		<5	ng/kg	<5	5	<5
Barium	7440-39-3	10		50	ng/kg	30	40	20
Beryllium	7440-41-7	1		<1	ng/kg	<1	1	<1
Cadmium	7440-43-9	1		<1	ng/kg	<1	<1	<1
Chromium	7440-47-3	2		29	ng/kg	40	70	48
Cobalt	7440-48-4	2		14	ng/kg	3	8	4
Copper	7440-50-8	5		23	ng/kg	7	11	12
Lead	7439-92-1	5		20	ng/kg	15	23	12
Manganese	7439-96-5	5		280	ng/kg	64	94	16
Nickel	7440-02-0	2		47	ng/kg	8	20	10
Vanadium	7440-62-2	5		56	ng/kg	90	147	66
Zinc	7440-66-6	5		39	ng/kg	9	20	9
Lead	7439-92-1	5	11		ng/kg			
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1		<0.1	ng/kg	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls		0.10		<0.10	ng/kg	<0.10	<0.10	<0.10
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2		<0.2	ng/kg	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
Isopropylbenzene	98-82-8	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
n-Propylbenzene	103-65-1	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	108-67-8	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	95-63-6	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5		<0.5	ng/kg	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time	
Compound	CAS Number	LOR	Unit	SB08/0.5 - 0.6	SB09/0 - 0.1	SB09/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1	SB10/0.5 - 0.6
				14-AUG-2012 11:20	14-AUG-2012 13:00	14-AUG-2012 13:00	14-AUG-2012 13:30	14-AUG-2012 13:30	14-AUG-2012 13:30	14-AUG-2012 13:30	14-AUG-2012 13:30
				EM1209305-030	EM1209305-033	EM1209305-035	EM1209305-038	EM1209305-038	EM1209305-038	EM1209305-038	EM1209305-039
EP074B: Oxygenated Compounds											
Vinyl Acetate	108-05-4	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
2-Hexanone (MIBK)	591-78-6	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
EP074C: Sulfonated Compounds											
Carbon disulfide	75-15-0	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074D: Fumigants											
2,2-Dichloropropane	594-20-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	78-87-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds											
Dichlorodifluoromethane	75-71-8	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
Chloromethane	74-87-3	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	75-01-4	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
Chloroethane	75-00-3	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	---	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	75-35-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	75-34-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethane	156-59-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropylene	563-58-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	107-06-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	142-28-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time	
Compound	CAS Number	LOR	Unit	SB08/0.5 - 0.6	SB09/0 - 0.1	SB09/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1	SB10/0.5 - 0.6
				EM1209305-030	EM1209305-033	EM1209305-035	EM1209305-038	EM1209305-039			
EP074E: Halogenated Aliphatic Compounds - Continued											
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds											
Chlorobenzene	108-90-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074G: Trihalomethanes											
Chloroform	67-66-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075A: Phenolic Compounds											
Phenol	108-95-2	0.5	mg/kg	---	<0.5	<0.5	<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	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg	---	<0.5	<0.5	<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	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	---	<0.5	<0.5	<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	<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	<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	<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	<0.5	<0.5
Pentachlorophenol	87-86-5	1	mg/kg	---	<1	<1	<1	<1	<1	<1	<1
EP075B: Polynuclear Aromatic Hydrocarbons											
Naphthalene	91-20-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg	---	<0.5	<0.5	<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	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	---	<0.5	<0.5	<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	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time	
Compound	CAS Number	LOR	Unit	SB08/0.5 - 0.6	SB09/0 - 0.1	SB09/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1	SB10/0.5 - 0.6
				14-AUG-2012 11:20	14-AUG-2012 13:00	14-AUG-2012 13:00	14-AUG-2012 13:30	14-AUG-2012 13:30	EM1209305-030	EM1209305-033	EM1209305-038
EP075B: Polynuclear Aromatic Hydrocarbons - Continued											
Anthracene	120-12-7	0.5	mg/kg	---	<0.5	<0.5	<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	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	---	<1	<1	<1	<1	<1	<1	<1
7-12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	---	<0.5	<0.5	<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	<0.5	<0.5
3-Methylcholanthrene	56-49-5	0.5	mg/kg	---	<0.5	<0.5	<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	<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	<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	<0.5	<0.5
^ Sum of PAHs	---	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075C: Phthalate Esters											
Dimethyl phthalate	131-11-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diethyl phthalate	84-66-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Di-n-octylphthalate	117-84-0	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075D: Nitrosamines											
N-Nitrosomethylethylamine	10695-95-6	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methapyriline	91-80-5	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075E: Nitroaromatics and Ketones											
2-Picoline	109-06-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acetophenone	98-86-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB08/0.5 - 0.6 14-AUG-2012 11:20 EM1209305-030	SB09/0 - 0.1 14-AUG-2012 13:00 EM1209305-033	SB09/1.0 - 1.1 14-AUG-2012 13:00 EM1209305-035	SB10/0.5 - 0.6 14-AUG-2012 13:30 EM1209305-038	SB10/1.0 - 1.1 14-AUG-2012 13:30 EM1209305-039
			Unit	Unit					
EP075E: Nitroaromatics and Ketones - Continued									
Nitrobenzene	98-95-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Isophorone	78-59-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dinitrotoluene	606-20-2	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
2,4-Dinitrotoluene	121-14-2	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
1-Naphthylamine	134-32-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Azobenzene	103-33-3	1	mg/kg		<1	<1	<1	<1	<1
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenacetin	62-44-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pronamide	23950-58-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzilate	510-15-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachloroethane	67-72-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachloropropylene	1888-71-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		<2.5	<2.5	<2.5	<2.5	<2.5
Pentachlorobenzene	608-93-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloroaniline	106-47-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Nitroaniline	88-74-4	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
3-Nitroaniline	99-09-2	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB08/0.5 - 0.6 14-AUG-2012 11:20 EM1209305-030	SB09/0 - 0.1 14-AUG-2012 13:00 EM1209305-033	SB09/1.0 - 1.1 14-AUG-2012 13:00 EM1209305-035	SB10/0.5 - 0.6 14-AUG-2012 13:30 EM1209305-038	SB10/1.0 - 1.1 14-AUG-2012 13:30 EM1209305-039
			Unit	Unit					
EP075H: Anilines and Benzidines - Continued									
Dibenzofuran	132-64-9	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Carbazole	86-74-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
EP075J: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
4,4'-DDE	72-55-9	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
4,4'-DDD	72-54-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
4,4'-DDT	50-29-3	1.0	mg/kg			<1.0	<1.0	<1.0	<1.0
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Dimethoate	60-51-5	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5698-13-0	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Malathion	121-75-5	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Pirimphos-ethyl	23505-41-1	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg			<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		SB08/0.5 - 0.6		SB09/1.0 - 1.1		SB10/0.5 - 0.6		SB10/1.0 - 1.1	
Compound	CAS Number	LOR	Unit	EM1209305-030	EM1209305-033	EM1209305-035	EM1209305-038	EM1209305-035	EM1209305-038	EM1209305-038	EM1209305-038	EM1209305-039	EM1209305-039
EP080/071: Total Petroleum Hydrocarbons - Continued													
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft													
C29 - C36 Fraction		100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C10 - C36 Fraction (sum)		50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft													
C6 - C10 Fraction		10	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 Fraction minus BTEX (F1)		10	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10 - C16 Fraction		50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16 - C34 Fraction		100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34 - C40 Fraction		100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10 - C40 Fraction (sum)		50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
EP080: BTEX													
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<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	<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	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN													
Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
EP216: Perchlorate by LC/MS													
Perchlorate	7601-90-3	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
EP231: Perfluorooctyl Acids and Sulfonates.													
PFOS	1763-23-1	0.0005	mg/kg	0.968	0.968	0.968	0.968	0.968	0.968	0.968	0.968	0.968	0.968
PFOA	335-67-1	0.0005	mg/kg	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
6:2 Fluorotelomer Sulfonate (6:2 FIS)	27619-97-2	0.005	mg/kg	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.153
EP066S: PCB Surrogate													
Decachlorobiphenyl	2051-24-3	0.1	%	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2	89.2
EP074S: VOC Surrogates													
1,2-Dichloroethane-D4	17060-07-0	0.1	%	62.1	62.1	62.1	62.1	62.1	62.1	62.1	62.1	62.1	62.1
Toluene-D8	2037-26-5	0.1	%	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
4-Bromofluorobenzene	460-00-4	0.1	%	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9
EP075S: Acid Extractable Surrogates													
2-Fluorophenol	367-12-4	0.1	%	120	120	120	120	120	120	120	120	120	120
Phenol-d6	13127-88-3	0.1	%	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8
2-Chlorophenol-D4	93951-73-6	0.1	%	102	102	102	102	102	102	102	102	102	102



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	Unit	SB08/0.5 - 0.6	SB09/1.0 - 1.1	SB10/0.5 - 0.6	SB10/1.0 - 1.1
EP075S: Acid Extractable Surrogates - Continued								
2,4,6-Tribromophenol	118-79-6	0.1	%	---	92.6	92.5	86.9	88.6
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	0.1	%	---	77.8	74.8	75.0	75.7
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	---	71.4	71.7	66.6	71.2
2-Fluorobiphenyl	321-60-8	0.1	%	---	85.3	85.8	81.2	85.2
Anthracene-d10	1719-06-8	0.1	%	---	102	98.0	96.4	101
4-Terphenyl-d14	1718-51-0	0.1	%	---	97.2	92.3	91.3	92.8
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	78.5	60.9	67.3	69.5	90.7
Toluene-D8	2037-26-5	0.1	%	87.8	51.6	77.8	75.1	92.4
4-Bromofluorobenzene	460-00-4	0.1	%	88.6	67.3	79.3	80.2	96.6



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time		Client sample ID
				SB11/0 - 0.1	SB11/0.5 - 0.6	
Sub-Matrix: SOIL				14-AUG-2012 14:00	14-AUG-2012 14:00	QC01/14082012
				EM1209305-041	EM1209305-042	EM1209305-045
EA002 : pH (Solis)			pH Unit	8.3	8.2	8.3
		0.1				
EA055: Moisture Content			%	22.4	22.1	20.2
		1.0				
EG005T: Total Metals by ICP-AES						
Arsenic	7440-38-2	5	mg/kg	<5	<5	6
Barium	7440-39-3	10	mg/kg	50	60	40
Beryllium	7440-41-7	1	mg/kg	1	1	<1
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	55	55	58
Cobalt	7440-48-4	2	mg/kg	8	9	10
Copper	7440-50-8	5	mg/kg	15	11	13
Lead	7439-92-1	5	mg/kg	60	22	32
Manganese	7439-96-5	5	mg/kg	153	106	216
Nickel	7440-02-0	2	mg/kg	22	23	24
Vanadium	7440-62-2	5	mg/kg	92	123	132
Zinc	7440-66-6	5	mg/kg	46	21	29
EG035T: Total Recoverable Mercury by FIMS			mg/kg	<0.1	<0.1	<0.1
Mercury	7439-97-6	0.1				
EP066: Polychlorinated Biphenyls (PCB)			mg/kg	<0.10	<0.10	<0.10
Total Polychlorinated biphenyls		0.10				
EP074A: Monocyclic Aromatic Hydrocarbons						
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	<0.5
EP074B: Oxygenated Compounds						



Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		
Compound	CAS Number	LOR	Unit	SB11/0 - 0.1 14-AUG-2012 14:00 EM1209305-041	SB11/0.5 - 0.6 14-AUG-2012 14:00 EM1209305-042	QC01/14082012 14-AUG-2012 13:00 EM1209305-045
EP074B: Oxygenated Compounds - Continued						
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	<5
2-Hexanone (MIBK)	591-78-6	5	mg/kg	<5	<5	<5
EP074C: Sulfonated Compounds						
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5
EP074D: Fumigants						
2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5
1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds						
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5
1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5
1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5
1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5
1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5
1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5
trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5
cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB11/0.5 - 0.1	SB11/0.5 - 0.6	QC01/14082012	Client sample ID
			Client sampling date / time	Unit					SB11/0.5 - 0.1	SB11/0.5 - 0.6	QC01/14082012
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1.2.2-Tetrachloroethane	79-34-5	0.5			<0.5	<0.5		
1.2.3-Trichloropropane	96-18-4	0.5			<0.5	<0.5		
Pentachloroethane	76-01-7	0.5			<0.5	<0.5		
1.2-Dibromo-3-chloropropane	96-12-8	0.5			<0.5	<0.5		
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5			<0.5	<0.5		
Bromobenzene	108-86-1	0.5			<0.5	<0.5		
2-Chlorotoluene	95-49-8	0.5			<0.5	<0.5		
4-Chlorotoluene	106-43-4	0.5			<0.5	<0.5		
1.2.3-Trichlorobenzene	87-61-6	0.5			<0.5	<0.5		
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5			<0.5	<0.5		
Bromodichloromethane	75-27-4	0.5			<0.5	<0.5		
Dibromochloromethane	124-48-1	0.5			<0.5	<0.5		
Bromoform	75-25-2	0.5			<0.5	<0.5		
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5			<0.5	<0.5		
2-Chlorophenol	95-57-8	0.5			<0.5	<0.5		
2-Methylphenol	95-48-7	0.5			<0.5	<0.5		
3- & 4-Methylphenol	1319-77-3	0.5			<1.0	<1.0		
2-Nitrophenol	88-75-5	0.5			<0.5	<0.5		
2.4-Dimethylphenol	105-67-9	0.5			<0.5	<0.5		
2.4-Dichlorophenol	120-83-2	0.5			<0.5	<0.5		
2.6-Dichlorophenol	87-65-0	0.5			<0.5	<0.5		
4-Chloro-3-Methylphenol	59-50-7	0.5			<0.5	<0.5		
2.4.6-Trichlorophenol	88-06-2	0.5			<0.5	<0.5		
2.4.5-Trichlorophenol	95-95-4	0.5			<0.5	<0.5		
Pentachlorophenol	87-86-5	1			<1	<1		
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5			<0.5	<0.5		
2-Methylnaphthalene	91-57-6	0.5			<0.5	<0.5		
2-Chloronaphthalene	91-58-7	0.5			<0.5	<0.5		
Acenaphthylene	208-96-8	0.5			<0.5	<0.5		
Acenaphthene	83-32-9	0.5			<0.5	<0.5		
Fluorene	86-73-7	0.5			<0.5	<0.5		
Phenanthrene	85-01-8	0.5			<0.5	<0.5		



Analytical Results

Sub-Matrix: SOIL		Client sample ID			
Compound	CAS Number	LOR	Client sampling date / time	Unit	Client sample ID
EP075B: Polynuclear Aromatic Hydrocarbons - Continued					
Anthracene	120-12-7	0.5		mg/kg	
Fluoranthene	206-44-0	0.5		mg/kg	
Pyrene	129-00-0	0.5		mg/kg	
N-2-Fluorenyl Acetamide	53-96-3	0.5		mg/kg	
Benz(a)anthracene	56-55-3	0.5		mg/kg	
Chrysene	218-01-9	0.5		mg/kg	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1		mg/kg	
7-12-Dimethylbenz(a)anthracene	57-97-6	0.5		mg/kg	
Benzo(a)pyrene	50-32-8	0.5		mg/kg	
3-Methylcholanthrene	56-49-5	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 PAHs	----	0.5		mg/kg	
EP075C: Phthalate Esters					
Dimethyl phthalate	131-11-3	0.5		mg/kg	
Diethyl phthalate	84-66-2	0.5		mg/kg	
Di-n-butyl phthalate	84-74-2	0.5		mg/kg	
Butyl benzyl phthalate	85-68-7	0.5		mg/kg	
bis(2-ethylhexyl) phthalate	117-81-7	5.0		mg/kg	
Di-n-octylphthalate	117-84-0	0.5		mg/kg	
EP075D: Nitrosamines					
N-Nitrosomethylethylamine	10695-95-6	0.5		mg/kg	
N-Nitrosodiethylamine	55-18-5	0.5		mg/kg	
N-Nitrosopyrrolidine	930-55-2	1.0		mg/kg	
N-Nitrosomorpholine	59-89-2	0.5		mg/kg	
N-Nitrosodi-n-propylamine	621-64-7	0.5		mg/kg	
N-Nitrosopiperidine	100-75-4	0.5		mg/kg	
N-Nitrosodibutylamine	924-16-3	0.5		mg/kg	
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0		mg/kg	
Methapyrilene	91-80-5	0.5		mg/kg	
EP075E: Nitroaromatics and Ketones					
2-Picoline	109-06-8	0.5		mg/kg	
Acetophenone	98-86-2	0.5		mg/kg	



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB11/0 - 0.1 14-AUG-2012 14:00 EM1209305-041	SB11/0.5 - 0.6 14-AUG-2012 14:00 EM1209305-042	QC01/14082012 14-AUG-2012 13:00 EM1209305-045	Client sample ID
			Unit	Unit				
EP075E: Nitroaromatics and Ketones - Continued								
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	<1.0	<1.0	.....	.....
2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	<1.0	<1.0	.....	.....
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Azobenzene	103-33-3	1	mg/kg	<1	<1	<1	.....	.....
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
EP075G: Chlorinated Hydrocarbons								
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	<2.5	.....	.....
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	<1.0	<1.0	.....	.....
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	<0.5	.....	.....
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	<1.0	<1.0	.....	.....
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	<1.0	<1.0	.....	.....



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB11/0.5 - 0.6	SB11/0.5 - 0.6	QC01/14082012	EM1209305-045
			Client sample ID	Unit				
EP075H: Anilines and Benzidines - Continued								
Dibenzofuran	132-64-9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Nitroaniline	100-01-6	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbazole	86-74-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3,3'-Dichlorobenzidine	91-94-1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP075J: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDE	72-55-9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDD	72-54-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDT	50-29-3	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	60-51-5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5698-13-0	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	121-75-5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pirimphos-ethyl	23505-41-1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	<10	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	<100	<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Unit	Client sample ID		
				Client sampling date / time	SB11/0.5 - 0.1	SB11/0.5 - 0.6	QC01/14082012
Sub-Matrix: SOIL						
EP080/071: Total Petroleum Hydrocarbons - Continued						
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft						
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50
EP216: Perchlorate by LC/MS						
Perchlorate	7601-90-3	10.0	µg/kg	---	<10.0	<10.0
EP231: Perfluoroctyl Acids and Sulfonates.						
PFOS	1763-23-1	0.0005	mg/kg	---	5.73	0.910
PFOA	335-67-1	0.0005	mg/kg	---	0.0484	0.0040
6:2 Fluorotelomer Sulfonate (6:2 Fts)	27619-97-2	0.005	mg/kg	---	2.10	0.163
EP066S: PCB Surrogate						
Decachlorobiphenyl	2051-24-3	0.1	%	93.3	75.3	84.0
EP074S: VOC Surrogates						
1,2-Dichloroethane-D4	17060-07-0	0.1	%	76.4	84.2	58.0
Toluene-D8	2037-26-5	0.1	%	88.2	100	65.1
4-Bromofluorobenzene	460-00-4	0.1	%	76.0	85.9	66.4
EP075S: Acid Extractable Surrogates						
2-Fluorophenol	367-12-4	0.1	%	113	88.9	97.1
Phenol-d6	13127-88-3	0.1	%	87.3	64.0	69.4
2-Chlorophenol-D4	93951-73-6	0.1	%	100	75.2	80.6
2,4,6-Tribromophenol	118-79-6	0.1	%	87.2	72.9	87.7
EP075T: Base/Neutral Extractable Surrogates						
Nitrobenzene-D5	4165-60-0	0.1	%	76.0	55.7	60.5
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	69.0	54.8	57.4
2-Fluorobiphenyl	321-60-8	0.1	%	85.4	62.4	71.7
Anthracene-d10	1719-06-8	0.1	%	104	77.6	95.4
4-Terphenyl-d14	1718-51-0	0.1	%	93.6	71.8	89.1
EP080S: TPH(V)/BTEX Surrogates						
1,2-Dichloroethane-D4	17060-07-0	0.1	%	78.6	86.5	58.0
Toluene-D8	2037-26-5	0.1	%	87.5	99.7	64.4
4-Bromofluorobenzene	460-00-4	0.1	%	88.0	96.9	71.1



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	QC03/14082012 14-AUG-2012 13:00 EM1209305-047	QC04/14082012 14-AUG-2012 14:45 EM1209305-048	QC05/14082012 14-AUG-2012 14:45 EM1209305-049	QC06/14082012 14-AUG-2012 14:45 EM1209305-050	QC07/14082012 14-AUG-2012 15:00 EM1209305-051
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		***	***	***	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		***	***	***	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		***	***	***	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		***	***	***	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		***	***	***	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		***	***	***	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		***	***	***	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		***	***	***	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		***	***	***	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		***	***	***	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		***	***	***	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		***	***	***	<0.005	<0.005
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		***	***	***	<0.0001	<0.0001
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction		20	µg/L		<20	<20	<20	<20	<20
C10 - C14 Fraction		50	µg/L		***	***	***	<50	<50
C15 - C28 Fraction		100	µg/L		***	***	***	<100	<100
C29 - C36 Fraction		50	µg/L		***	***	***	<50	<50
^ C10 - C36 Fraction (sum)		50	µg/L		***	***	***	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction		20	µg/L		<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)		20	µg/L		***	***	***	<20	<20
>C10 - C16 Fraction		100	µg/L		***	***	***	<100	<100
>C16 - C34 Fraction		100	µg/L		***	***	***	<100	<100
>C34 - C40 Fraction		100	µg/L		***	***	***	<100	<100
^ >C10 - C40 Fraction (sum)		100	µg/L		***	***	***	<100	<100
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		***	***	***	<1	<1
Toluene	108-88-3	2	µg/L		***	***	***	<2	<2
Ethylbenzene	100-41-4	2	µg/L		***	***	***	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		***	***	***	<2	<2
ortho-Xylene	95-47-6	2	µg/L		***	***	***	<2	<2
^ Total Xylenes	1330-20-7	2	µg/L		***	***	***	<2	<2
^ Sum of BTEX		1	µg/L		***	***	***	<1	<1
Naphthalene	91-20-3	5	µg/L		***	***	***	<5	<5



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Client sample ID		Unit
			Client sampling date / time	Client sample ID	
EP080S: TPH(V)/BTEX Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	90.0	QC03/14082012 14-AUG-2012 13:00	QC07/14082012 14-AUG-2012 15:00
Toluene-D8	2037-26-5	0.1	98.1	EM1209305-047	EM1209305-050
4-Bromofluorobenzene	460-00-4	0.1	103	EM1209305-048	EM1209305-051
			82.7	QC04/14082012 14-AUG-2012 14:45	QC06/14082012 14-AUG-2012 14:45
			83.0	EM1209305-049	EM1209305-050
			97.0	QC05/14082012 14-AUG-2012 14:45	QC06/14082012 14-AUG-2012 14:45
			106	EM1209305-048	EM1209305-050
			109	QC05/14082012 14-AUG-2012 14:45	QC06/14082012 14-AUG-2012 14:45
			94.1	EM1209305-048	EM1209305-050
			91.2	QC05/14082012 14-AUG-2012 14:45	QC06/14082012 14-AUG-2012 14:45
			95.5	EM1209305-049	EM1209305-051



Analytical Results

Compound	CAS Number	Client sampling data / time		Unit	Client sample ID
		LOR	Unit			QC08/14082012 14-AUG-2012 15:00	QC09/14082012 14-AUG-2012 15:00
EG020T: Total Metals by ICP-MS					
Arsenic	7440-38-2	0.001		mg/L	<0.001
Beryllium	7440-41-7	0.001		mg/L	<0.001
Barium	7440-39-3	0.001		mg/L	<0.001
Cadmium	7440-43-9	0.0001		mg/L	<0.0001
Chromium	7440-47-3	0.001		mg/L	<0.001
Cobalt	7440-48-4	0.001		mg/L	<0.001
Copper	7440-50-8	0.001		mg/L	<0.001
Lead	7439-92-1	0.001		mg/L	<0.001
Manganese	7439-96-5	0.001		mg/L	<0.001
Nickel	7440-02-0	0.001		mg/L	<0.001
Vanadium	7440-62-2	0.01		mg/L	<0.01
Zinc	7440-66-6	0.005		mg/L	<0.005
EG035T: Total Recoverable Mercury by FIMS					
Mercury	7439-97-6	0.0001		mg/L	<0.0001
EP080/071: Total Petroleum Hydrocarbons					
C6 - C9 Fraction		20		µg/L	<20
C10 - C14 Fraction		50		µg/L	<50
C15 - C28 Fraction		100		µg/L	<100
C29 - C36 Fraction		50		µg/L	<50
^ C10 - C36 Fraction (sum)		50		µg/L	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft					
C6 - C10 Fraction		20		µg/L	<20
^ C6 - C10 Fraction minus BTEX (F1)		20		µg/L	<20
>C10 - C16 Fraction		100		µg/L	<100
>C16 - C34 Fraction		100		µg/L	<100
>C34 - C40 Fraction		100		µg/L	<100
^ >C10 - C40 Fraction (sum)		100		µg/L	<100
EP080: BTEXN					
Benzene	71-43-2	1		µg/L	<1
Toluene	108-88-3	2		µg/L	<2
Ethylbenzene	100-41-4	2		µg/L	<2
meta- & para-Xylene	108-38-3	2		µg/L	<2
ortho-Xylene	95-47-6	2		µg/L	<2
^ Total Xylenes	1330-20-7	2		µg/L	<2
^ Sum of BTEX		1		µg/L	<1
Naphthalene	91-20-3	5		µg/L	<5



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Client sample ID	
			Client sampling date / time	Unit
EP080S: TPH(V)/BTEX Surrogates				
1,2-Dichloroethane-D4	17060-07-0	0.1	QC08/14082012 14-AUG-2012 15:00	QC09/14082012 14-AUG-2012 15:00
Toluene-D8	2037-26-5	0.1	EM1209305-052	EM1209305-053
4-Bromofluorobenzene	460-00-4	0.1	91.5	83.6
			96.5	90.6
			101	95.5



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	33	133
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	14	126
Phenol-d6	13127-88-3	12.2	122
2-Chlorophenol-D4	93951-73-6	14.2	127
2,4,6-Tribromophenol	118-79-6	12.4	133
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	12.4	128
1,2-Dichlorobenzene-D4	2199-69-1	11.6	108
2-Fluorobiphenyl	321-60-8	18.7	127
Anthracene-d10	1719-06-8	28.5	142
4-Terphenyl-d14	1718-51-0	25.8	138
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	57	129
Toluene-D8	2037-26-5	58	120
4-Bromofluorobenzene	460-00-4	56	126
Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	131
Toluene-D8	2037-26-5	72	124
4-Bromofluorobenzene	460-00-4	70	126

Environmental Division

QUALITY CONTROL REPORT

Work Order : **EM1209305**
 Client : **CARDNO LANE PIPER PTY LTD**
 Contact : **MS MARIA DE LOS REYES**
 Address : **154 HIGHBURY ROAD
BURWOOD VIC, AUSTRALIA 3125**
 E-mail : **maria.delosreyes@lanepiper.com.au**
 Telephone : **+61 03 98880100**
 Facsimile : **+61 03 98083511**
 Project : **212163 1**
 Site : **Fiskville**
 C-O-C number : **----**
 Sampler : **MDR**
 Order number : **----**
 Quote number : **ME/441/12**

Page : 1 of 31
 Laboratory : Environmental Division Melbourne
 Contact : Sarah Hodgson
 Address : 4 Westall Rd Springvale VIC Australia 3171
 E-mail : sarah.hodgson@alsenviro.com
 Telephone : 03 8549 9652
 Facsimile : 03 8549 9626
 QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement
 Date Samples Received : 15-AUG-2012
 Issue Date : 29-AUG-2012
 No. of samples received : 52
 No. of samples analysed : 30

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

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



NATA Accredited Laboratory 825
 Accredited for compliance with
 ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Inorganics
Phalak Inthaksono	Laboratory Manager - Organics	Sydney Organics
Varsha Ho Wing	Non-Metals Team Leader	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



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Work Order : EM1209305
Client : CARDNO LANE PIPER PTY LTD
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General Comments

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

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

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

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

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



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EA002 : pH (Soils) (QC Lot: 2458324)											
EM1208467-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	9.2	9.2	0.0	0% - 20%		
EM1209305-038	SB10/0.5 - 0.6	EA002: pH Value	----	0.1	pH Unit	7.9	7.9	0.0	0% - 20%		
EA055: Moisture Content (QC Lot: 2458311)											
EM1209305-001	SB01/0.05 - 0.1	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	25.2	25.6	1.6	0% - 20%		
EM1209305-022	SB06/0.5 - 0.6	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	25.2	26.4	4.2	0% - 20%		
EA055: Moisture Content (QC Lot: 2458312)											
EM1209305-041	SB11/0 - 0.1	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	22.4	23.9	6.5	0% - 20%		
EM1209480-008	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	29.2	35.6	20.0	0% - 20%		
EG005T: Total Metals by ICP-AES (QC Lot: 2466948)											
EM1209305-001	SB01/0.05 - 0.1	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Barium	7440-39-3	10	mg/kg	20	30	0.0	No Limit		
		EG005T: Chromium	7440-47-3	2	mg/kg	60	66	10.9	0% - 20%		
		EG005T: Cobalt	7440-48-4	2	mg/kg	3	4	40.5	No Limit		
		EG005T: Nickel	7440-02-0	2	mg/kg	22	34	42.3	0% - 50%		
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	<5	6	24.4	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	13	18	35.4	No Limit		
		EG005T: Manganese	7439-96-5	5	mg/kg	35	52	40.5	0% - 50%		
		EG005T: Vanadium	7440-62-2	5	mg/kg	66	68	1.9	0% - 50%		
		EG005T: Zinc	7440-66-6	5	mg/kg	5	7	31.9	No Limit		
EM1209305-019	SB05/1.0 - 1.1	EG005T: Beryllium	7440-41-7	1	mg/kg	1	1	0.0	No Limit		
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Barium	7440-39-3	10	mg/kg	20	20	0.0	No Limit		
		EG005T: Chromium	7440-47-3	2	mg/kg	48	52	8.5	0% - 20%		
		EG005T: Cobalt	7440-48-4	2	mg/kg	6	6	0.0	No Limit		
		EG005T: Nickel	7440-02-0	2	mg/kg	14	14	0.0	No Limit		
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	10	10	0.0	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	9	14	35.5	No Limit		
		EG005T: Manganese	7439-96-5	5	mg/kg	19	17	13.1	No Limit		
		EG005T: Vanadium	7440-62-2	5	mg/kg	66	87	28.5	0% - 50%		
		EG005T: Zinc	7440-66-6	5	mg/kg	9	8	14.7	No Limit		
EG005T: Total Metals by ICP-AES (QC Lot: 2466950)											
EM1209305-041	SB11/0 - 0.1	EG005T: Beryllium	7440-41-7	1	mg/kg	1	1	0.0	No Limit		



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EG005T: Total Metals by ICP-AES (QC Lot: 2466950) - continued									
EM1209305-041	SB11/0 - 0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	50	70	27.8	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	55	45	18.8	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	8	9	14.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	22	26	18.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	18	18.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	60	69	15.0	0% - 50%
		EG005T: Manganese	7439-96-5	5	mg/kg	153	159	3.7	0% - 20%
		EG005T: Vanadium	7440-62-2	5	mg/kg	92	93	0.0	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	46	52	11.8	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2466949)									
EM1209305-001	SB01/0.05 - 0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM1209305-041	SB11/0 - 0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2458257)									
EM1209305-001	SB01/0.05 - 0.1	EP066: Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.10	<0.10	0.0	No Limit
EM1209305-041	SB11/0 - 0.1	EP066: Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.10	<0.10	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2458247)									
EM1209305-003	SB01/1.0 - 1.1	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2458861)									
EM1209305-001	SB01/0.05 - 0.1	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						



Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
						Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2458861) - continued									
EM1209305-001	SB01/0.05 - 0.1	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 2458247)									
EM1209305-003	SB01/1.0 - 1.1	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 2458861)									
EM1209305-001	SB01/0.05 - 0.1	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 2458247)									
EM1209305-003	SB01/1.0 - 1.1	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 2458861)									
EM1209305-001	SB01/0.05 - 0.1	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 2458247)									
EM1209305-003	SB01/1.0 - 1.1	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 2458861)									
EM1209305-001	SB01/0.05 - 0.1	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2458247)									
EM1209305-003	SB01/1.0 - 1.1	EP074: 1,1-Dichloroethane	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
						Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2458247) - continued									
EM1209305-003	SB01/1.0 - 1.1	EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2458861)									
EM1209305-001	SB01/0.05 - 0.1	EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2458861) - continued											
EM1209305-001	SB01/0.05 - 0.1	EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit		
EP074F: Halogenated Aromatic Compounds (QC Lot: 2458247)											
EM1209305-003	SB01/1.0 - 1.1	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP074F: Halogenated Aromatic Compounds (QC Lot: 2458861)											
EM1209305-001	SB01/0.05 - 0.1	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP074G: Trihalomethanes (QC Lot: 2458247)											
EM1209305-003	SB01/1.0 - 1.1	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP074G: Trihalomethanes (QC Lot: 2458861)											
EM1209305-001	SB01/0.05 - 0.1	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075A: Phenolic Compounds (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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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 (%)		
EP075A: Phenolic Compounds (QC Lot: 2458258) - continued											
EM1209305-001	SB01/0.05 - 0.1	EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit		
		EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit				
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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 (%)		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2458258) - continued											
EM1209305-001	SB01/0.05 - 0.1	EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit		
EM1209305-041	SB11/0 - 0.1	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit		
EP075C: Phthalate Esters (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	<5.0	0.0	No Limit		
EM1209305-041	SB11/0 - 0.1	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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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 (%)		
EP075C: Phthalate Esters (QC Lot: 2458258) - continued											
EM1209305-041	SB11/0 - 0.1	EP075: bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	<5.0	0.0	No Limit		
EP075D: Nitrosamines (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	122-39-4	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
EM1209305-041	SB11/0 - 0.1	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	122-39-4	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
EP075E: Nitroaromatics and Ketones (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 5-Nitro-o-tolidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit		
		EP075: 2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		



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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 (%)		
EP075E: Nitroaromatics and Ketones (QC Lot: 2458258) - continued											
EM1209305-001	SB01/0.05 - 0.1	EP075: 2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
EM1209305-041	SB11/0 - 0.1	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit		
		EP075: 2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
EP075F: Haloethers (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075G: Chlorinated Hydrocarbons (QC Lot: 2458258)											
EM1209305-001	SB01/0.05 - 0.1	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit		
EM1209305-041	SB11/0 - 0.1	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
Sub-Matrix: SOIL									
EP075G: Chlorinated Hydrocarbons (QC Lot: 2458258) - continued									
EM1209305-041	SB11/0 - 0.1	EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 2458258)									
EM1209305-001	SB01/0.05 - 0.1	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EM1209305-041	SB11/0 - 0.1								
EP075I: Organochlorine Pesticides (QC Lot: 2458258)									
EM1209305-001	SB01/0.05 - 0.1	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EP075I: Organochlorine Pesticides (QC Lot: 2458258) - continued									
EM1209305-001	SB01/0.05 - 0.1	EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4'-DDT	50-29-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EM1209305-041	SB11/0 - 0.1	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4'-DDT	50-29-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 2458258)									
EM1209305-001	SB01/0.05 - 0.1	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM1209305-041	SB11/0 - 0.1	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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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 (%)
EP075J: Organophosphorus Pesticides (QC Lot: 2458258) - continued									
EM1209305-041	SB11/0 - 0.1	EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2458246)									
EM1209305-003	SB01/1.0 - 1.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EM1209305-024	SB06/2.0 - 2.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2458281)									
EM1209305-003	SB01/1.0 - 1.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM1209305-024	SB06/2.0 - 2.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2458282)									
EM1209305-001	SB01/0.05 - 0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	280	190	39.1	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	280	190	38.3	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2458860)									
EM1209305-001	SB01/0.05 - 0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EM1209491-082	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2458246)									
EM1209305-003	SB01/1.0 - 1.1	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EM1209305-024	SB06/2.0 - 2.1	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2458281)									
EM1209305-003	SB01/1.0 - 1.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM1209305-024	SB06/2.0 - 2.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2458282)									
EM1209305-001	SB01/0.05 - 0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	240	150	48.7	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	140	<100	37.2	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	380	150	86.8	No Limit



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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 2010 Draft (QC Lot: 2458860)											
EM1209305-001	SB01/0.05 - 0.1	EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit		
EM1209491-082	Anonymous	EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit		
EP080: BTEXN (QC Lot: 2458246)											
EM1209305-003	SB01/1.0 - 1.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
			106-42-3								
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
			106-42-3								
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
EP216: Perchlorate by LC/MS (QC Lot: 2460841)											
EM1209305-009	SB03/0.06 - 0.1	EP216: Perchlorate	7601-90-3	10.0	µg/kg	<10.0	<10.0	0.0	No Limit		
EM1209440-017	Anonymous	EP216: Perchlorate	7601-90-3	10.0	µg/kg	<10.0	<10.0	0.0	No Limit		
EP231: Perfluorooctyl Acids and Sulfonates. (QC Lot: 2459464)											
ES1220055-001	Anonymous	EP231: PFOS	1763-23-1	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit		
		EP231: PFOA	335-67-1	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit		
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 Fts)	27619-97-2	0.005	mg/kg	<0.005	<0.005	0.0	No Limit		
Sub-Matrix: WATER											
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EG020T: Total Metals by ICP-MS (QC Lot: 2458414)											
EM1209305-050	QC06/14082012	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit		
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.002	72.1	No Limit		
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit		
		EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit		



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Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EG020T: Total Metals by ICP-MS (QC Lot: 2458414) - continued									
EM1209502-016	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.003	0.002	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2458414)									
EM1209305-050	QC0614082012	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EM1209495-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2458143)									
EM1209439-034	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM1209472-070	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2458432)									
EM1209494-001	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	110	120	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	120	110	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2459891)									
EM1209521-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM1209528-013	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2458143)									
EM1209439-034	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM1209472-070	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2458432)									
EM1209494-001	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	200	200	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2459891)									
EM1209521-001	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM1209528-013	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 2458143)									
EM1209439-034	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit



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Sub-Matrix: WATER		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: 2458143) - continued											
EM1209439-034	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit		
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit		
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit		
		EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit		
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit		
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit		
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit		
EM1209472-070	Anonymous										



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Method Blank (MB) and Laboratory Control Spike (LCS) Report

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

Sub-Matrix: SOIL

Method/Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2466948)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.6 mg/kg	107	75	131	
EG005T: Barium	7440-39-3	10	mg/kg	<10	139 mg/kg	100	77	127	
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	6.2 mg/kg	95.4	73	119	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.8 mg/kg	88.8	71	123	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.9 mg/kg	95.0	79	125	
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	25.4 mg/kg	93.9	71	121	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.1 mg/kg	100	79	123	
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.9 mg/kg	97.3	77	125	
EG005T: Manganese	7439-96-5	5	mg/kg	<5	137 mg/kg	94.1	76	126	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.1 mg/kg	95.2	78	128	
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	34.9 mg/kg	94.8	78	124	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	105 mg/kg	91.7	75	125	
EG005T: Total Metals by ICP-AES (QCLot: 2466950)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.6 mg/kg	105	75	131	
EG005T: Barium	7440-39-3	10	mg/kg	<10	139 mg/kg	102	77	127	
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	6.2 mg/kg	96.6	73	119	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.8 mg/kg	88.8	71	123	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.9 mg/kg	96.4	79	125	
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	25.4 mg/kg	94.7	71	121	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.1 mg/kg	103	79	123	
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.9 mg/kg	97.8	77	125	
EG005T: Manganese	7439-96-5	5	mg/kg	<5	137 mg/kg	95.2	76	126	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.1 mg/kg	96.6	78	128	
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	34.9 mg/kg	96.4	78	124	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	105 mg/kg	92.3	75	125	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2466949)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	1.47 mg/kg	91.5	81	123	
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2458257)									
EP066: Total Polychlorinated biphenyls									
	----	0.1	mg/kg	<0.10	1.1 mg/kg	122	55	135	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2458247)									
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.6	75	121	
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	100	76	124	
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	88.2	74	118	



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
Sub-Matrix: SOIL									
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2458247) - continued									
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	94.1	75	121	
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	87.7	64	120	
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	97.5	77	121	
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	84.2	74	120	
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	73.9	65	117	
EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	74.6	65	117	
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	82.3	67	117	
EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	72.6	66	117	
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	84.7	68	116	
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	75.3	64	117	
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	65.8	59	115	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2458861)									
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	86.1	75	121	
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	95.6	76	124	
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	91.0	74	118	
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	93.5	75	121	
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	86.8	64	120	
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	95.9	77	121	
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	83.2	74	120	
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	84.5	65	117	
EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	84.9	65	117	
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	83.9	67	117	
EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	84.0	66	117	
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	86.6	68	116	
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	85.5	64	117	
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	80.5	59	115	
EP074B: Oxygenated Compounds (QCLot: 2458247)									
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	63.5	40	138	
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	87.0	61	143	
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	70.5	63	137	
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	77.1	63	133	
EP074B: Oxygenated Compounds (QCLot: 2458861)									
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	65.1	40	138	
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	73.7	61	143	
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	75.0	63	137	
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	76.2	63	133	
EP074C: Sulfonated Compounds (QCLot: 2458247)									



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike	Spike Recovery (%)	Recovery Limits (%)
						LCS	Low	High
EP074C: Sulfonated Compounds (QCLot: 2458247) - continued								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	72.1	57	121
EP074C: Sulfonated Compounds (QCLot: 2458861)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	69.9	57	121
EP074D: Fumigants (QCLot: 2458247)								
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	73.8	51	130
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	88.0	73	121
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	# 55.2	59	109
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	# 51.6	52	110
EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	89.9	68	120
EP074D: Fumigants (QCLot: 2458861)								
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	65.5	51	130
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	86.1	73	121
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	# 56.2	59	109
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	52.5	52	110
EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	83.5	68	120
EP074E: Halogenated Aliphatic Compounds (QCLot: 2458247)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	69.0	34	122
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	95.9	52	133
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	91.6	47	133
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	89.3	39	116
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	97.0	43	137
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	92.5	61	126
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	88.6	62	124
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	72.7	47	116
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	89.1	69	119
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	93.4	70	120
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	94.2	72	120
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	79.2	64	112
EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	87.2	71	117
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	71.5	51	106
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	91.0	70	126
EP074: Trichloroethane	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	87.4	71	120
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	83.1	70	122
EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	93.8	73	125
EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	96.5	75	125
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	87.1	71	120
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	63.2	54	106
EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	63.4	46	112



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)
						LCS	Low		High
EP074E: Halogenated Aliphatic Compounds (QCLot: 2458247) - continued								
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	82.8	21.8	117
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	83.8	71	131
EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	85.9	70	134
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	49.0	40	94
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	54.0	41	113
EP074E: Halogenated Aliphatic Compounds (QCLot: 24588861)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	60.2	34	122
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	86.0	52	133
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	78.4	47	133
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	81.3	39	116
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	87.4	43	137
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	79.1	61	126
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	78.0	62	124
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	68.1	47	116
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	82.4	69	119
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	82.9	70	120
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	83.8	72	120
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	68.4	64	112
EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	78.8	71	117
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	61.0	51	106
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	80.4	70	126
EP074: Trichloroethane	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	83.8	71	120
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	76.2	70	122
EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	94.0	73	125
EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	92.9	75	125
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	91.5	71	120
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	64.1	54	106
EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	60.6	46	112
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	85.9	21.8	117
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	80.3	71	131
EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	81.1	70	134
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	54.3	40	94
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	51.3	41	113
EP074F: Halogenated Aromatic Compounds (QCLot: 2458247)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	91.5	78	120
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	83.1	68	116
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	76.9	67	117
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	80.1	67	115
EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	83.1	60	120



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 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 2458861)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	92.2	78	120
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	77.1	68	116
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	88.6	67	117
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	85.6	67	115
EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	94.9	60	120
EP074G: Trihalomethanes (QCLot: 2458247)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	91.4	71	121
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	66.2	60	108
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	62.8	48	104
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	56.2	40	106
EP074G: Trihalomethanes (QCLot: 2458861)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	81.3	71	121
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	62.0	60	108
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	58.8	48	104
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	52.5	40	106
EP075A: Phenolic Compounds (QCLot: 2458258)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	2.5 mg/kg	103	38	138
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	2.5 mg/kg	86.5	39	129
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	2.5 mg/kg	98.4	33	132
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	5 mg/kg	77.3	35	131
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	2.5 mg/kg	76.9	31	131
EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	2.5 mg/kg	71.2	10	135
EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	2.5 mg/kg	78.3	35	133
EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	2.5 mg/kg	96.3	36	132
EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	2.5 mg/kg	89.8	39	143
EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	2.5 mg/kg	88.3	34	138
EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	2.5 mg/kg	81.2	30.2	142
EP075: Pentachlorophenol	87-86-5	1.0	mg/kg	<1	2.5 mg/kg	76.9	14	136
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2458258)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2.5 mg/kg	90.6	39	128
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	2.5 mg/kg	93.1	40	136
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	2.5 mg/kg	75.2	29.5	137
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2.5 mg/kg	88.8	38	138
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2.5 mg/kg	94.8	45	133
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	2.5 mg/kg	99.4	47	137
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2.5 mg/kg	89.3	45	133
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	2.5 mg/kg	90.3	44	130
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2.5 mg/kg	88.9	46	138



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2458258) - continued								
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	2.5 mg/kg	91.5	43	145
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	2.5 mg/kg	83.6	43	143
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.5 mg/kg	82.7	43	139
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	2.5 mg/kg	85.8	42	140
EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	5 mg/kg	94.0	43	139
EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	2.5 mg/kg	112	40	154
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2.5 mg/kg	81.8	38	138
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	2.5 mg/kg	99.5	46	162
EP075: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2.5 mg/kg	90.3	49	159
EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2.5 mg/kg	89.8	49	157
EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2.5 mg/kg	92.4	48	158
EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
EP075C: Phthalate Esters (QCLot: 2458258)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	2.5 mg/kg	93.5	40	142
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	2.5 mg/kg	102	48	140
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	2.5 mg/kg	126	38	169
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	2.5 mg/kg	84.6	42	140
EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<5.0	2.5 mg/kg	152	47	155
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	2.5 mg/kg	96.7	47	137
EP075D: Nitrosamines (QCLot: 2458258)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	2.5 mg/kg	81.0	16.2	136
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	2.5 mg/kg	97.2	33	132
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	2.5 mg/kg	70.5	27.7	130
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	2.5 mg/kg	79.0	33	131
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	2.5 mg/kg	78.6	36	127
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	2.5 mg/kg	78.8	35	128
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	2.5 mg/kg	93.1	37	139
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	2.5 mg/kg	100	42	134
EP075: Methapyriline	91-80-5	0.5	mg/kg	<0.5	2.5 mg/kg	43.3	24.4	143
EP075E: Nitroaromatics and Ketones (QCLot: 2458258)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	2.5 mg/kg	55.7	10	138
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	2.5 mg/kg	78.3	35	128
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	2.5 mg/kg	81.1	36	127
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	2.5 mg/kg	80.4	40	136
EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	2.5 mg/kg	91.7	42	140
EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	2.5 mg/kg	101	46	140
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	2.5 mg/kg	53.4	10	84



Method: Compound		CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
					Result	Concentration	Spike Recovery (%)	LCS	Low	High
EP075E: Nitroaromatics and Ketones (QCLot: 2458258) - continued									
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	2.5 mg/kg	60.3	17.7	153	
EP075: 5-Nitro-o-tolidine	99-55-8	0.5	mg/kg	<0.5	2.5 mg/kg	93.2	37	125	
EP075: Azobenzene	103-33-3	1	mg/kg	<1	2.5 mg/kg	102	46	140	
EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	2.5 mg/kg	73.3	12.6	151	
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	2.5 mg/kg	98.4	48	142	
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	2.5 mg/kg	44.2	10	97	
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	2.5 mg/kg	98.0	47	139	
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	2.5 mg/kg	86.2	45	133	
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	2.5 mg/kg	88.8	42	136	
EP075: Chlorbenzilate	510-15-6	0.5	mg/kg	<0.5	2.5 mg/kg	87.1	41	141	
EP075F: Haloethers (QCLot: 2458258)									
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	2.5 mg/kg	106	36	146	
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	2.5 mg/kg	78.0	40	136	
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	2.5 mg/kg	99.1	46	136	
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	2.5 mg/kg	99.7	44	140	
EP075G: Chlorinated Hydrocarbons (QCLot: 2458258)									
EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	2.5 mg/kg	82.6	35	122	
EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	2.5 mg/kg	80.9	36	125	
EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	2.5 mg/kg	82.1	37	123	
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	2.5 mg/kg	82.2	33	123	
EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	2.5 mg/kg	71.4	36	132	
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	2.5 mg/kg	114	26.6	137	
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	2.5 mg/kg	91.6	40	130	
EP075: Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<2.5	2.5 mg/kg	127	17.3	141	
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	2.5 mg/kg	99.4	46	136	
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	5 mg/kg	97.7	40	142	
EP075H: Anilines and Benzidines (QCLot: 2458258)									
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	2.5 mg/kg	65.5	10	114	
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	2.5 mg/kg	55.7	10	103	
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	2.5 mg/kg	94.4	40	142	
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	2.5 mg/kg	75.3	23.3	125	
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	2.5 mg/kg	98.2	46	134	
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	2.5 mg/kg	97.4	38	132	
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	2.5 mg/kg	88.9	44	134	
EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	2.5 mg/kg	47.7	10	124	
EP075I: Organochlorine Pesticides (QCLot: 2458258)									
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	2.5 mg/kg	100	50	134	
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	2.5 mg/kg	97.1	47	135	



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Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)		Recovery Limits (%)
						LCS	Low		High
EP075I: Organochlorine Pesticides (QCLot: 2458258) - continued								
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	2.5 mg/kg	103	50	137
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	2.5 mg/kg	97.8	48	136
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	2.5 mg/kg	98.9	40	138
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	2.5 mg/kg	88.6	44	140
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	2.5 mg/kg	86.4	45	139
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	2.5 mg/kg	89.0	46	142
EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	2.5 mg/kg	87.7	70	130
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	2.5 mg/kg	94.8	47	139
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	2.5 mg/kg	87.4	42	142
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	2.5 mg/kg	96.6	47	141
EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	2.5 mg/kg	80.7	42	146
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	2.5 mg/kg	84.0	41	141
EP075: 4,4'-DDT	50-29-3	0.5	mg/kg	<1.0	2.5 mg/kg	136	19.6	148
EP075J: Organophosphorus Pesticides (QCLot: 2458258)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	2.5 mg/kg	88.2	21.9	131
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	2.5 mg/kg	88.2	38	142
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	2.5 mg/kg	93.2	36	133
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	2.5 mg/kg	91.9	35	143
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	2.5 mg/kg	92.7	35	143
EP075: Fenitrothion	55-38-9	0.5	mg/kg	<0.5	2.5 mg/kg	90.0	25.1	135
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	2.5 mg/kg	94.6	36	132
EP075: Pirimiphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	2.5 mg/kg	97.4	36	135
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	2.5 mg/kg	89.5	35	138
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	2.5 mg/kg	90.6	37	135
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	2.5 mg/kg	92.6	38	137
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458246)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	84.1	70	133
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458281)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	544 mg/kg	79.8	55	123
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	1981 mg/kg	87.4	72	134
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	818 mg/kg	78.7	71	143
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458282)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	544 mg/kg	81.5	55	123
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	1981 mg/kg	94.6	72	134
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	818 mg/kg	86.2	71	143
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458860)								



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Sub-Matrix: SOIL				Method Blank (MB) Report				Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High	Recovery Limits (%)	Low	High
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2458860) - continued												
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	87.0	70	70	133			
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458246)												
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	45 mg/kg	82.1	70	70	130			
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458281)												
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	870 mg/kg	86.4	69	69	123			
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	2495 mg/kg	77.3	71	71	134			
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	263 mg/kg	102	63	63	143			
EP071: >C10 - C40 Fraction (sum)	----	100	mg/kg	<100	----	----	----	----	----			
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458282)												
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	870 mg/kg	88.7	69	69	123			
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	2495 mg/kg	86.7	71	71	134			
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	263 mg/kg	87.0	63	63	143			
EP071: >C10 - C40 Fraction (sum)	----	100	mg/kg	<100	----	----	----	----	----			
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458860)												
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	45 mg/kg	84.6	70	70	130			
EP080: BTEXN (QCLot: 2458246)												
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	86.8	72	72	126			
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	87.9	73	73	129			
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	84.0	72	72	126			
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	87.9	70	70	138			
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	89.0	73	73	131			
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	87.7	70	70	130			
EP216: Perchlorate by LC/MS (QCLot: 2460841)												
EP216: Perchlorate	7601-90-3	10	µg/kg	<10.0	25 µg/kg	97.8	56	56	130			
EP231: Perfluoroalkyl Acids and Sulfonates. (QCLot: 2459464)												
EP231: PFOS	1763-23-1	0.0005	mg/kg	<0.0005	0.005 mg/kg	94.3	54	54	146			
EP231: PFOA	335-67-1	0.0005	mg/kg	<0.0005	0.005 mg/kg	126	54	54	134			
EP231: 6:2 Fluorotelomer Sulfonate (6:2 FIS)	27619-97-2	0.005	mg/kg	<0.005	.025 mg/kg	93.2	56	56	138			
Sub-Matrix: WATER												
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High	Recovery Limits (%)	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2458414)												
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.7	86	86	110			
EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	91.7	68	68	128			
EG020A-T: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	99.8	87	87	115			
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	93.0	87	87	111			



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Method: Compound		CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
					Result	Concentration	Spike	Spike Recovery (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QCLot: 2458414) - continued									
EG020A-T: Chromium		7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	102	87	115
EG020A-T: Cobalt		7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	96.7	88	114
EG020A-T: Copper		7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	97.3	88	110
EG020A-T: Lead		7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	102	90	114
EG020A-T: Manganese		7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	102	87	113
EG020A-T: Nickel		7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	102	89	113
EG020A-T: Vanadium		7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	102	86	114
EG020A-T: Zinc		7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.4	82	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2458411)									
EG035T: Mercury		7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	88.3	69	125
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2458143)									
EP080: C6 - C9 Fraction		----	20	µg/L	<20	360 µg/L	112	72	136
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2458432)									
EP071: C10 - C14 Fraction		----	50	µg/L	<50	2585 µg/L	76.5	64	124
EP071: C15 - C28 Fraction		----	100	µg/L	<100	9720 µg/L	93.5	70	130
EP071: C29 - C36 Fraction		----	50	µg/L	<50	3340 µg/L	95.3	68	128
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2459891)									
EP080: C6 - C9 Fraction		----	20	µg/L	<20	360 µg/L	114	72	136
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458143)									
EP080: C6 - C10 Fraction		----	20	µg/L	<20	450 µg/L	114	70	130
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458432)									
EP071: >C10 - C16 Fraction		----	100	µg/L	<100	4055 µg/L	85.8	70	130
EP071: >C16 - C34 Fraction		----	100	µg/L	<100	10355 µg/L	93.0	70	130
EP071: >C34 - C40 Fraction		----	100	µg/L	<100	890 µg/L	98.0	70	130
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2459891)									
EP080: C6 - C10 Fraction		----	20	µg/L	<20	450 µg/L	116	70	130
EP080: BTEXN (QCLot: 2458143)									
EP080: Benzene		71-43-2	1	µg/L	<1	20 µg/L	96.3	73	127
EP080: Toluene		108-88-3	2	µg/L	<2	20 µg/L	110	74	128
EP080: Ethylbenzene		100-41-4	2	µg/L	<2	20 µg/L	111	72	126
EP080: meta- & para-Xylene		108-38-3	2	µg/L	<2	40 µg/L	116	69	133
		106-42-3							
EP080: ortho-Xylene		95-47-6	2	µg/L	<2	20 µg/L	116	74	128
EP080: Naphthalene		91-20-3	5	µg/L	<5	5 µg/L	115	70	130



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 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
EG005T: Total Metals by ICP-AES (QCLot: 2466948)						
EM1209305-003	SB01/1.0 - 1.1	EG005T: Arsenic	7440-38-2	50 mg/kg	94.1	70 130
		EG005T: Barium	7440-39-3	50 mg/kg	103	70 130
		EG005T: Beryllium	7440-41-7	50 mg/kg	109	70 130
		EG005T: Cadmium	7440-43-9	50 mg/kg	97.4	70 130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.5	70 130
		EG005T: Copper	7440-50-8	50 mg/kg	106	70 130
		EG005T: Lead	7439-92-1	50 mg/kg	95.6	70 130
		EG005T: Manganese	7439-96-5	50 mg/kg	89.6	70 130
		EG005T: Nickel	7440-02-0	50 mg/kg	95.2	70 130
		EG005T: Vanadium	7440-62-2	50 mg/kg	108	70 130
		EG005T: Zinc	7440-66-6	50 mg/kg	95.3	70 130
EG005T: Total Metals by ICP-AES (QCLot: 2466950)						
EM1209305-042	SB11/0.5 - 0.6	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70 130
		EG005T: Barium	7440-39-3	50 mg/kg	105	70 130
		EG005T: Beryllium	7440-41-7	50 mg/kg	110	70 130
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.8	70 130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.8	70 130
		EG005T: Copper	7440-50-8	50 mg/kg	110	70 130
		EG005T: Lead	7439-92-1	50 mg/kg	94.3	70 130
		EG005T: Manganese	7439-96-5	50 mg/kg	94.1	70 130
		EG005T: Nickel	7440-02-0	50 mg/kg	88.8	70 130
		EG005T: Vanadium	7440-62-2	50 mg/kg	102	70 130
		EG005T: Zinc	7440-66-6	50 mg/kg	94.4	70 130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2466949)						
EM1209305-003	SB01/1.0 - 1.1	EG035T: Mercury	7439-97-6	5.0 mg/kg	102	70 120
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2458257)						
EM1209305-003	SB01/1.0 - 1.1	EP066: Total Polychlorinated biphenyls	----	1.1 mg/kg	73.1	55 132
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2458247)						
EM1209305-005	SB02/0 - 0.1	EP074: Benzene	71-43-2	2 mg/kg	98.4	64 126
		EP074: Toluene	108-88-3	2 mg/kg	87.6	65 131
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2458861)						
EM1209305-041	SB11/0 - 0.1	EP074: Benzene	71-43-2	2 mg/kg	84.2	64 126
		EP074: Toluene	108-88-3	2 mg/kg	91.3	65 131
EP074E: Halogenated Aliphatic Compounds (QCLot: 2458247)						



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Sub-Matrix: SOIL				Matrix Spike (MS) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
					MS	MS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 2458247) - continued								
EM1209305-005	SB02/0 - 0.1	EP074: 1,1-Dichloroethene	75-35-4	2 mg/kg	71.0	71.0	50	124
		EP074: Trichloroethene	79-01-6	2 mg/kg	72.8	72.8	60	122
EP074E: Halogenated Aliphatic Compounds (QCLot: 2458861)								
EM1209305-041	SB11/0 - 0.1	EP074: 1,1-Dichloroethene	75-35-4	2 mg/kg	80.1	80.1	50	124
		EP074: Trichloroethene	79-01-6	2 mg/kg	80.7	80.7	60	122
EP074F: Halogenated Aromatic Compounds (QCLot: 2458247)								
EM1209305-005	SB02/0 - 0.1	EP074: Chlorobenzene	108-90-7	2 mg/kg	84.6	84.6	69	129
EP074F: Halogenated Aromatic Compounds (QCLot: 2458861)								
EM1209305-041	SB11/0 - 0.1	EP074: Chlorobenzene	108-90-7	2 mg/kg	87.1	87.1	69	129
EP075A: Phenolic Compounds (QCLot: 2458258)								
EM1209305-005	SB02/0 - 0.1	EP075: Phenol	108-95-2	5 mg/kg	81.4	81.4	23.7	119
		EP075: 2-Chlorophenol	95-57-8	5 mg/kg	68.6	68.6	31.1	116
		EP075: 2-Nitrophenol	88-75-5	5 mg/kg	69.6	69.6	16.4	115
		EP075: 4-Chloro-3-Methylphenol	59-50-7	5 mg/kg	84.7	84.7	22.3	122
		EP075: Pentachlorophenol	87-86-5	5 mg/kg	83.2	83.2	17.6	142
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2458258)								
EM1209305-005	SB02/0 - 0.1	EP075: Acenaphthene	83-32-9	5 mg/kg	91.6	91.6	25.4	122
		EP075: Pyrene	129-00-0	5 mg/kg	89.4	89.4	14.6	127
EP075D: Nitrosamines (QCLot: 2458258)								
EM1209305-005	SB02/0 - 0.1	EP075: N-Nitrosodi-n-propylamine	621-64-7	5 mg/kg	63.8	63.8	17.8	110
EP075E: Nitroaromatics and Ketones (QCLot: 2458258)								
EM1209305-005	SB02/0 - 0.1	EP075: 2,4-Dinitrotoluene	121-14-2	5 mg/kg	94.0	94.0	28.3	112
EP075G: Chlorinated Hydrocarbons (QCLot: 2458258)								
EM1209305-005	SB02/0 - 0.1	EP075: 1,4-Dichlorobenzene	106-46-7	5 mg/kg	70.7	70.7	23	112
		EP075: 1,2,4-Trichlorobenzene	120-82-1	5 mg/kg	63.6	63.6	12.9	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458246)								
EM1209305-005	SB02/0 - 0.1	EP080: C6 - C9 Fraction	----	28 mg/kg	80.4	80.4	49	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458281)								
EM1209305-005	SB02/0 - 0.1	EP071: C10 - C14 Fraction	----	544 mg/kg	82.5	82.5	54	123
		EP071: C15 - C28 Fraction	----	1981 mg/kg	90.5	90.5	74	134
		EP071: C29 - C36 Fraction	----	818 mg/kg	87.3	87.3	63	143
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458282)								
EM1209305-041	SB11/0 - 0.1	EP071: C10 - C14 Fraction	----	544 mg/kg	78.3	78.3	54	123
		EP071: C15 - C28 Fraction	----	1981 mg/kg	85.8	85.8	74	134
		EP071: C29 - C36 Fraction	----	818 mg/kg	82.0	82.0	63	143
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458860)								



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Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458860) - continued							
EM1209305-041	SB11/0 - 0.1	EP080: C6 - C9 Fraction	----	28 mg/kg	78.8	49	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458246)							
EM1209305-005	SB02/0 - 0.1	EP080: C6 - C10 Fraction	----	33 mg/kg	76.3	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458281)							
EM1209305-005	SB02/0 - 0.1	EP071: >C10 - C16 Fraction	----	870 mg/kg	88.3	54	123
		EP071: >C16 - C34 Fraction	----	2495 mg/kg	81.3	74	134
		EP071: >C34 - C40 Fraction	----	263 mg/kg	128	63	143
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458282)							
EM1209305-041	SB11/0 - 0.1	EP071: >C10 - C16 Fraction	----	870 mg/kg	82.4	54	123
		EP071: >C16 - C34 Fraction	----	2495 mg/kg	82.4	74	134
		EP071: >C34 - C40 Fraction	----	263 mg/kg	76.7	63	143
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458860)							
EM1209305-041	SB11/0 - 0.1	EP080: C6 - C10 Fraction	----	33 mg/kg	76.5	70	130
EP080: BTEXN (QCLot: 2458246)							
EM1209305-005	SB02/0 - 0.1	EP080: Benzene	71-43-2	2 mg/kg	97.7	58	136
		EP080: Toluene	108-88-3	2 mg/kg	86.1	63	135
EP216: Perchlorate by LC/MS (QCLot: 2460841)							
EM1209305-009	SB03/0.06 - 0.1	EP216: Perchlorate	7601-90-3	25 µg/kg	94.8	70	130
EP231: Perfluoroalkyl Acids and Sulfonates. (QCLot: 2459464)							
ES1220055-001	Anonymous	EP231: PFOS	1763-23-1	0.005 mg/kg	114	54	146
		EP231: PFOA	335-67-1	0.005 mg/kg	124	54	134
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	.025 mg/kg	118	56	138
Sub-Matrix: WATER							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EG020T: Total Metals by ICP-MS (QCLot: 2458414)							
EM1209305-050	QC06/14082012	EG020A-T: Arsenic	7440-38-2	1 mg/L	131	72	146
		EG020A-T: Beryllium	7440-41-7	1 mg/L	105	61	139
		EG020A-T: Barium	7440-39-3	1 mg/L	109	78	126
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	104	73	131
		EG020A-T: Chromium	7440-47-3	1 mg/L	106	65	131
		EG020A-T: Cobalt	7440-48-4	1 mg/L	103	68	132
		EG020A-T: Copper	7440-50-8	1 mg/L	106	71	125
		EG020A-T: Lead	7439-92-1	1 mg/L	105	68	130
		EG020A-T: Manganese	7439-96-5	1 mg/L	108	63	129
		EG020A-T: Nickel	7440-02-0	1 mg/L	111	72	128



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Sub-Matrix: WATER				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)
					MS	Low		High
EG020T: Total Metals by ICP-MS (QCLot: 2458414) - continued							
EM1209305-050	QC06/14082012	EG020A-T: Vanadium	7440-62-2	1 mg/L	107	66	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	103	67	129
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2458411)							
EM1209305-051	QC07/14082012	EG035T: Mercury	7439-97-6	0.0100 mg/L	90.7	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458143)							
EM1209439-035	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	89.8	51	125
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2458432)							
EM1209494-001	Anonymous	EP071: C10 - C14 Fraction	----	2585 µg/L	81.1	64	124
		EP071: C15 - C28 Fraction	----	9720 µg/L	98.3	70	130
		EP071: C29 - C36 Fraction	----	3340 µg/L	99.4	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2459891)							
EM1209521-002	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	95.3	51	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458143)							
EM1209439-035	Anonymous	EP080: C6 - C10 Fraction	----	330 µg/L	94.6	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2458432)							
EM1209494-001	Anonymous	EP071: >C10 - C16 Fraction	----	4055 µg/L	90.2	70	130
		EP071: >C16 - C34 Fraction	----	10355 µg/L	97.5	70	130
		EP071: >C34 - C40 Fraction	----	890 µg/L	102	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2459891)							
EM1209521-002	Anonymous	EP080: C6 - C10 Fraction	----	330 µg/L	95.0	70	130
EP080: BTEXN (QCLot: 2458143)							
EM1209439-035	Anonymous	EP080: Benzene	71-43-2	20 µg/L	90.5	63	131
		EP080: Toluene	108-88-3	20 µg/L	101	65	133

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1209305	Page	: 1 of 14
Client	: CARDNO LANE PIPER PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: MS MARIA DE LOS REYES	Contact	: Sarah Hodgson
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Facsimile	: +61 03 98083511	Facsimile	: 03 8549 9626
Project	: 212163 1	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Fiskville	Date Samples Received	: 15-AUG-2012
C-O-C number	: ----	Issue Date	: 29-AUG-2012
Sampler	: MDR	No. of samples received	: 52
Order number	: ----	No. of samples analysed	: 30
Quote number	: ME/441/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days), Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL

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

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis	Evaluation	Evaluation
EA002 : pH (Soils)							
Soil Glass Jar - Unpreserved							
SB01/0.05 - 0.1,	SB01/1.0 - 1.1,	21-AUG-2012	21-AUG-2012	21-AUG-2012	21-AUG-2012	✓	✓
SB02/0 - 0.1,	SB02/2.0 - 2.1,						
SB03/0.06 - 0.1,	SB03/0.6 - 0.7,						
SB09/0 - 0.1,	SB09/1.0 - 1.1,						
SB10/0.5 - 0.6,	SB10/1.0 - 1.1,						
SB11/0 - 0.1,	SB11/0.5 - 0.6,						
QC01/14082012							
EA055: Moisture Content							
Soil Glass Jar - Unpreserved							
SB01/0.05 - 0.1,	SB01/1.0 - 1.1,	14-AUG-2012	14-AUG-2012	21-AUG-2012	21-AUG-2012	-----	28-AUG-2012
SB02/0 - 0.1,	SB02/2.0 - 2.1,						
SB03/0.06 - 0.1,	SB03/0.6 - 0.7,						
SB04/0 - 0.1,	SB04/0.5 - 0.6,						
SB05/0 - 0.1,	SB05/1.0 - 1.1,						
SB06/0.5 - 0.6,	SB06/2.0 - 2.1,						
SB07/0 - 0.1,	SB07/1.0 - 1.1,						
SB08/0 - 0.1,	SB08/0.5 - 0.6,						
SB09/0 - 0.1,	SB09/1.0 - 1.1,						
SB10/0.5 - 0.6,	SB10/1.0 - 1.1,						
SB11/0 - 0.1,	SB11/0.5 - 0.6,						
QC01/14082012							



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Matrix: SOIL
 Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	27-AUG-2012	10-FEB-2013	✓	28-AUG-2012	10-FEB-2013	✓	
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	27-AUG-2012	11-SEP-2012	✓	28-AUG-2012	11-SEP-2012	✓	
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓	
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓	



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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓



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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP075A: Phenolic Compounds							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓



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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075F: Haloethers							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved							
SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	14-AUG-2012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓



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Matrix: SOIL
 Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Due for analysis	Evaluation	Date analysed	Due for analysis	
EP075J: Organophosphorus Pesticides								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	23-AUG-2012	28-AUG-2012	✓	25-AUG-2012	02-OCT-2012	✓	
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓	
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6, SB09/1.0 - 1.1, SB10/0.5 - 0.6, SB11/0 - 0.1, QC01/14082012	24-AUG-2012	28-AUG-2012	✓	24-AUG-2012	03-OCT-2012	✓	



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Matrix: SOIL
 Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Recoverable Hydrocarbons - NIEPM 2010 Draft								
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
Soil Glass Jar - Unpreserved								
	SB01/1.0 - 1.1, SB02/2.0 - 2.1, SB03/0.6 - 0.7, SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6, SB09/1.0 - 1.1, SB10/1.0 - 1.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	24-AUG-2012	28-AUG-2012	✓	24-AUG-2012	03-OCT-2012	✓
EP080: BTEX								
Soil Glass Jar - Unpreserved								
	SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved								
	SB04/0.5 - 0.6, SB05/1.0 - 1.1, SB06/2.0 - 2.1, SB07/1.0 - 1.1, SB08/0.5 - 0.6	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	24-AUG-2012	28-AUG-2012	✓
EP216: Perchlorate by L C/MS								
Soil Glass Jar - Unpreserved								
	SB09/0 - 0.1, SB11/0.5 - 0.6, QC01/14082012	14-AUG-2012	25-AUG-2012	11-SEP-2012	✓	25-AUG-2012	22-SEP-2012	✓



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Matrix: **SOIL** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis	
			Date extracted	Due for extraction	Date analysed	Due for analysis
EP231: Perfluorooctyl Acids and Sulfonates.						
Soil Glass Jar - Unpreserved	SB09/0 - 0.1, SB03/0.06 - 0.1, SB10/0.5 - 0.6, QC01/14082012	14-AUG-2012	23-AUG-2012	10-FEB-2013	✓	02-OCT-2012 ✓
Matrix: WATER Evaluation: * = Holding time breach ; ✓ = Within holding time.						
Method	Container / Client Sample ID(s)	Sample Date	Date extracted	Due for extraction	Evaluation	Due for analysis
EG020T: Total Metals by ICP-MS						
Clear Plastic Bottle - Nitric Acid; Unfiltered	QC06/14082012, QC08/14082012	14-AUG-2012	21-AUG-2012	10-FEB-2013	✓	21-AUG-2012 10-FEB-2013 ✓
EG035T: Total Recoverable Mercury by FIMS						
Clear Plastic Bottle - Nitric Acid; Unfiltered	QC06/14082012, QC08/14082012	14-AUG-2012	----	----	----	21-AUG-2012 11-SEP-2012 ✓
EP080/071: Total Petroleum Hydrocarbons						
Amber Glass Bottle - Unpreserved	QC06/14082012, QC08/14082012	14-AUG-2012	21-AUG-2012	21-AUG-2012	✓	22-AUG-2012 30-SEP-2012 ✓
Amber VOC Vial - Sulfuric Acid	QC04/14082012, QC06/14082012, QC08/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	21-AUG-2012 28-AUG-2012 ✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft						
Amber Glass Bottle - Unpreserved	QC06/14082012, QC08/14082012	14-AUG-2012	21-AUG-2012	21-AUG-2012	✓	22-AUG-2012 30-SEP-2012 ✓
Amber VOC Vial - Sulfuric Acid	QC04/14082012, QC06/14082012, QC08/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	21-AUG-2012 28-AUG-2012 ✓
EP080: B TEXN						
Amber VOC Vial - Sulfuric Acid	QC06/14082012, QC08/14082012	14-AUG-2012	21-AUG-2012	28-AUG-2012	✓	21-AUG-2012 28-AUG-2012 ✓



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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 Analytical Methods	Method	Count			Rate (%)		Evaluation	Quality Control Specification
		QC	Regular	Actual	Expected			
Laboratory Duplicates (DUP)								
Moisture Content	EA055-103	4	40	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Perchlorate in Soils and Sediments by LC/MS	EP216	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	7	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
pH (1:5)	EA002	2	15	13.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Polychlorinated Biphenyls (PCB)	EP066	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	2	14	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	3	23	13.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH - Semivolatile Fraction	EP071	3	25	12.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH Volatiles/BTEX	EP080	4	37	10.8	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Volatile Organic Compounds	EP074	2	16	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Laboratory Control Samples (LCS)								
Perchlorate in Soils and Sediments by LC/MS	EP216	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	14	7.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	2	23	8.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH - Semivolatile Fraction	EP071	2	25	8.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH Volatiles/BTEX	EP080	2	37	5.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Volatile Organic Compounds	EP074	2	16	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Method Blanks (MB)								
Perchlorate in Soils and Sediments by LC/MS	EP216	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	14	7.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	2	23	8.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH - Semivolatile Fraction	EP071	2	25	8.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH Volatiles/BTEX	EP080	2	37	5.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Volatile Organic Compounds	EP074	2	16	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
Matrix Spikes (MS)								
Perchlorate in Soils and Sediments by LC/MS	EP216	1	20	5.0	5.0	✓	ALS QCS3 requirement	
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	7	14.3	5.0	✓	ALS QCS3 requirement	
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.7	5.0	✓	ALS QCS3 requirement	
Semivolatile Organic Compounds	EP075	1	14	7.1	5.0	✓	ALS QCS3 requirement	
Total Mercury by FIMS	EG035T	1	13	7.7	5.0	✓	ALS QCS3 requirement	
Total Metals by ICP-AES	EG005T	2	23	8.7	5.0	✓	ALS QCS3 requirement	
TPH - Semivolatile Fraction	EP071	2	25	8.0	5.0	✓	ALS QCS3 requirement	
TPH Volatiles/BTEX	EP080	2	37	5.4	5.0	✓	ALS QCS3 requirement	
Volatile Organic Compounds	EP074	2	16	12.5	5.0	✓	ALS QCS3 requirement	



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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	Actual	Evaluation
Matrix Spikes (MS) - Continued							
TPH Volatiles/BTEX	EP080	2	37	5.4	5.0	✓	ALS QCS3 requirement
Volatile Organic Compounds	EP074	2	16	12.5	5.0	✓	ALS QCS3 requirement
Matrix: WATER							
Quality Control Sample Type		Count		Rate (%)		Quality Control Specification	
Analytical Methods	Method	QC	Regular	Actual	Expected	Actual	Evaluation
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	10.0	✗	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	4	36	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	36	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	36	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	13	7.7	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.6	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	36	5.6	5.0	✓	ALS QCS3 requirement



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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	(APHA 21st ed., 4500H+) pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (1999) Schedule B(3) (Method 103)
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 504)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)
Volatile Organic Compounds	EP074	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Semivolatile Organic Compounds	EP075	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 502)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Perchlorate in Soils and Sediments by LC/MS	EP216	SOIL	US EPA Method 6850: 5 g of sample is extracted with 25 mL of water acidified with acetic acid, filtered with a 0.2 µm filter (to extend extract holding time) and analysed by LC/MS in ESI (negative) mode.
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	* EP231	SOIL	In-House. A portion of soil is soaked in sodium hydroxide followed by extraction with methanol. The extract is neutralised with HCl and an aliquot taken to dryness, made up in mobile phase. Analysis is by LC/MS/MS, ESI Negative Mode using MRM.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-ENE/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The 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 (1999) Schedule B(3) (Appdx. 2)



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Analytical Methods	Method	Matrix	Method Descriptions
TPH - Semivolatile Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Preparation Methods	Method	Matrix	Method Descriptions
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of distilled water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Sample Extraction for Perchlorate	EP216-PR	SOIL	US EPA 6850.
Sample Extraction for Perfluoroalkyl Compounds	EP231-PR	SOIL	In-House
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.



Page : 14 of 14
 Work Order : EM1209305
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP074D: Fumigants	2913023-005	----	cis-1,3-Dichloropropylene	10061-01-5	55.2 %	59-109%	Recovery less than lower control limit
EP074D: Fumigants	2913732-005	----	cis-1,3-Dichloropropylene	10061-01-5	56.2 %	59-109%	Recovery less than lower control limit
EP074D: Fumigants	2913023-005	----	trans-1,3-Dichloropropylene	10061-02-6	51.6 %	52-110%	Recovery less than lower control limit

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

Sub-Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP074S: VOC Surrogates	EM1209305-045	QC01/14082012	1,2-Dichloroethane-D4	17060-07-0	58.0 %	62-122 %	Recovery less than lower data quality objective
EP074S: VOC Surrogates	EM1209305-033	SB09/0 - 0.1	Toluene-D8	2037-26-5	52.3 %	64-120 %	Recovery less than lower data quality objective
EP080S: TPH(V)/BTEX Surrogates	EM1209305-033	SB09/0 - 0.1	Toluene-D8	2037-26-5	51.6 %	58-120 %	Recovery less than lower data quality objective

Outliers : Analysis Holding Time Compliance

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

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: WATER

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification	
	QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)	1	15	6.7	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	
TPH - Semivolatile Fraction						

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EM1209330	Page	: 1 of 65
Client	: 5 CARDO NCDE L REA LI T NI R	Laboratory	: Environmental Division Melbourne
Contact	: MS MARIA DE LOS REYES	Contact	: Sarah Hodgson
Address	: 154 HIGHBURY ROAD BURWOOD VIC, AUSTRALIA 3125	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: maria.delosreyes@lanepiper.com.au	E-mail	: sarah.hodgson@alsenviro.com
Telephone	: +61 03 98880100	Telephone	: 03 8549 9652
Facsimile	: +61 03 98083511	Facsimile	: 03 8549 9626
Project	: 212163 1	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 17-AUG-2012
C-O-C number	: ----	Issue Date	: 29-AUG-2012
Sampler	: MDR	No. of samples received	: 81
Site	: Fiskville	No. of samples analysed	: 47
Quote number	: ME/441/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Lana Nguyen	Senior LCMS Chemist	Sydney Organics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Organics
Phalak Inthaksonne	Laboratory Manager - Organics	Sydney Organics



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Work Order : EM1209440
Client : CARDNO LANE PIPER PTY LTD
Project : 212163 1

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

- **EL074: 'Sum of LCH' is the sum of the USELCC 1+ priority LCHs**
- **EL2- 1: LFOC & LFOS results are reported as an aggregate of linear and branched isomers Matrix/ spike recovery not determined due to high moisture, very low target analyte**
- **LFOC & LFOS and Leachates conducted by CNS Sydney/DCI C accreditation no 824qs site no 109111**



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB12(0801)	SB12(100611)	SB1-(0801)	SB1-(014801)+	SB13(0801)
					EM1209330801	EM1209330800-	EM1209330804	EM1209330800+	EM1209330809
EC002 : pH (Soil)	----	0.1	pH Unit		812	713	714	+18	813
EC044: Moisture content	----	1.0	%		2018	2714	2111	2919	2717
Moisture content (dried ° 10-5 V)									
EZ 0041 : Iota Y Meta Y by B L G E S									
Crsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		+0	30	40	30	40
Beryllium	7440-41-7	1	mg/kg		1	1	1	1	2
5 admium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
5 hromium	7440-47-3	2	mg/kg		-8	38	31	49	21
5 oba Y	7440-48-4	2	mg/kg		13	11	11	+	2-
5 opper	7440-50-8	5	mg/kg		17	11	13	12	20
Nead	7439-92-1	5	mg/kg		12	13	+4	22	4
Manganese	7439-96-5	5	mg/kg		287	-4	2-7	-4	380
Dickey	7440-02-0	2	mg/kg		-3	18	2+	1+	+1
@nadium	7440-62-2	5	mg/kg		71	+1	103	89	34
vinc	7440-66-6	5	mg/kg		19	10	-7	11	43
EZ 0-41 : Iota Y Aeco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EL0++: Lo Y ch Y rinatad Bipheny Y L-5 BV									
Iota Y Lo Y ch Y rinatad bipheny Y	----	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethy Y benzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta 6 & para 6 Y Yene	108-38-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho 6 Y Yene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Isopropy Y benzene	98-82-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
n B . r o p y Y benzene	103-65-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1-148 rimethy Y benzene	108-67-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
sec B u t y Y benzene	135-98-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
112138 rimethy Y benzene	95-63-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
tert B u t y Y benzene	98-06-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
p B s o p r o p y Y o Ylene	99-87-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
n B u t y Y benzene	104-51-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL073B: O / ygenated 5 ompounds									



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB12(10611) 16-AUG-2012 09:30 EM1209330600-	SB1-(0611) 16-AUG-2012 10:00 EM12093306004	SB1-(01461)+ 16-AUG-2012 10:15 EM1209330600+	SB13(0611) 16-AUG-2012 11:00 EM12093306009
			Unit	Unit				
EL073B: Oxygenated 5 compounds 65 omitted								
@nyYcacetate	108-05-4	5	mg/kg	<5	<5	<5	<5	<5
2BButanone)MEx V	78-93-3	5	mg/kg	<5	<5	<5	<5	<5
36Methylpentanone)MBx V	108-10-1	5	mg/kg	<5	<5	<5	<5	<5
26He/ anone)MBx V	591-78-6	5	mg/kg	<5	<5	<5	<5	<5
EL0735 : Sulfonated 5 compounds								
5arbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073R: Fumigants								
2126Rrich'bropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich'bropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis611- 6Rrich'bropropyl'ene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans611- 6Rrich'bropropyl'ene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rribromoethane)ERBV	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073E: Halogenated Cyclic 5 compounds								
Rich'brodif'loromethane	75-71-8	5	mg/kg	<5	<5	<5	<5	<5
5 h'bro methane	74-87-3	5	mg/kg	<5	<5	<5	<5	<5
@nyYch'bride	75-01-4	5	mg/kg	<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5	<5
5 h'broethane	75-00-3	5	mg/kg	<5	<5	<5	<5	<5
I rich'bro'loromethane	75-69-4	5	mg/kg	<5	<5	<5	<5	<5
1116Rrich'broethane	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
10domethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans6126Rrich'broethane	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1116Rrich'broethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis6126Rrich'broethane	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
11116 rich'broethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1116Rrich'bropropyl'ene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5arbon I etrach'bride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich'broethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
I rich'broethane	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
111126 rich'broethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
11- 6Rrich'bropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
I etrach'broethane	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1111126 etrach'broethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans61136Rrich'bro'26butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis61136Rrich'bro'26butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB12(10611)	SB1-(0611)	SB1-(01461)+	SB13(0611)
			Client sampling date / time	Unit				
EL073E: Halogenated Cyclic 5 ompounds 65 continued								
1112128 atrach'broethane	79-34-5	0.5	mg/kg	16-AUG-2012 09:00	EM1209330601	16-AUG-2012 09:30	EM1209330604	16-AUG-2012 10:15
1121-8 rich'bropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	EM1209330609
Lentach'broethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Ribromo6 & h'bropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073F: Halogenated Cromatic 5 ompounds								
5 h'brobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
265 h'broto'ylene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
365 h'broto'ylene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 rich'brobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073Z: I rih'bromethanes								
5 h'broform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodich'broromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromoch'broromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL074C: Lheno'yc 5 ompounds								
LhenoY	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
265 h'brophenoY	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
26Methy'phenoY	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
-6& 36Methy'phenoY	1319-77-3	0.5	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
26DitrophenoY	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2136Trimethy'phenoY	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2136Rich'brophenoY	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
21+6Rich'brophenoY	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
365 h'bro6 6Methy'phenoY	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2131+6 rich'brophenoY	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
213148 rich'brophenoY	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Lentach'brophenoY	87-86-5	1	mg/kg	<1	<1	<1	<1	<1
EL074B: LoYnuc'yar Cromatic Hydrocarbons								
Daphtha'ylene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
26Methy'Napitha'ylene	91-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
265 h'Bronapitha'ylene	91-58-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ccenaphthy'ylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ccenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
F'ylene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Lhenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	Client sampling date / time		SB12(0801)	SB12(10611)	SB1-(0801)	SB1-(0148)+	SB13(0801)
		LOR	Unit						EM1209330801	EM1209330800-	EM1209330804	EM120933080+	EM1209330809
EL074B: LoYnuc Ear Cromatic Hydrocarbons 65 continued								
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
Lyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzofluorenylacetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzanthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	<1	<1	<1
7,12-dimethylbenzanthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluorene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1-methylanthracene	56-49-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trimethylbenzene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluorene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Sum of LCHs	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL0745: L htha Yte Esters								
Dimethylterephthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylterephthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diisobutylterephthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylhexylterephthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-ethylhexyl)terephthalate	117-81-7	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Diethylterephthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL074R: Dltrosamines								
Diethylmethoxyamine	10695-95-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diisopropylamine	930-55-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Diethylamine	59-89-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylamine	100-75-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Diethylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Diethylamine	91-80-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL074E: Dltroaromatics and xetones								
Diethylamine	109-06-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Cetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB12(0801) 16-AUG-2012 09:00 EM1209330801	SB12(10611) 16-AUG-2012 09:30 EM1209330800-	SB1-(0801) 16-AUG-2012 10:00 EM1209330804	SB1-(0148)+ 16-AUG-2012 10:15 EM120933080+	SB13(0801) 16-AUG-2012 11:00 EM1209330809
			Unit	Unit					
EL074E: Nitroaromatics and x etones 65 continued									
Ditrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
21H6Rinitroto Ylene	606-20-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2136Rinitroto Ylene	121-14-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10aphthy Yamine	134-32-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
30DitroKuino Yne06/ ide	56-57-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
40Ditro60to Yidine	99-55-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Czobenzene	103-33-3	1	mg/kg	<1	<1	<1	<1	<1	<1
11-148 rinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lhenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36CminobiphenyY	92-67-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lentach Yronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethy Yaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 h YrobenziYte	510-15-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074F: HaYethers									
Bis)26th YroethyYether	111-44-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis)26th Yroetho/ yMethane	111-91-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 h YrophenyYphenyYether	7005-72-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36BromophenyYphenyYether	101-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074Z : 5 h Ybrinated Hydrocarbons									
11-6Rrich Yrobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1136Rrich Yrobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich Yrobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
112136 rich Yrobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach YropropyYene	1888-71-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yrobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach YrocycYpentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Lentach Yrobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yrobenzene JH5 BV	118-74-1	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EL074H: CniYnes and Benzidines									
CniYne	62-53-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 h YroamiYne	106-47-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20DitroamiYne	88-74-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
-0DitroamiYne	99-09-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB12(0801)	SB12(100611)	SB1-(0801)	SB1-(014801)+	SB13(0801)
			Unit	Unit					
EL074H: Cnilynes and Benzimidines 65 continued									
Ribenzofuran	132-64-9	0.5	mg/kg	16-AUG-2012 09:00	<0.5	<0.5	<0.5	<0.5	<0.5
36DitroaniYne	100-01-6	0.5	mg/kg	16-AUG-2012 09:00	<0.5	<0.5	<0.5	<0.5	<0.5
5 arbazob	86-74-8	0.5	mg/kg	16-AUG-2012 09:30	<0.5	<0.5	<0.5	<0.5	<0.5
-l'-RrichYrobenzidine	91-94-1	0.5	mg/kg	16-AUG-2012 09:30	<0.5	<0.5	<0.5	<0.5	<0.5
EL074P: OrganochYrine Lesticides									
aYhaaBH5	319-84-6	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
betaBH5	319-85-7	0.5	mg/kg	EM12093308004	<0.5	<0.5	<0.5	<0.5	<0.5
gammaaBH5	58-89-9	0.5	mg/kg	EM1209330800+	<0.5	<0.5	<0.5	<0.5	<0.5
deYaBH5	319-86-8	0.5	mg/kg	EM1209330800-	<0.5	<0.5	<0.5	<0.5	<0.5
HeptachYr	76-44-8	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
CYrin	309-00-2	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
HeptachYr epo/ide	1024-57-3	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
aYhaaEndosuYan	959-98-8	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRRE	72-55-9	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
RieYirin	60-57-1	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
betaEndosuYan	33213-65-9	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRR	72-54-8	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
EndosuYan suYate	1031-07-8	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRI	50-29-3	1.0	mg/kg	EM12093308001	<1.0	<1.0	<1.0	<1.0	<1.0
EL074J: Organophosphorus Lesticides									
RichYr, os	62-73-7	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethoate	60-51-5	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Riazinon	333-41-5	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrpyrifosmethyl	5698-13-0	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
MaYathion	121-75-5	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrpyrifos	2921-88-2	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Lirimphosethyl	23505-41-1	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrfen, inphos	470-90-6	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Lrothiofos	34643-46-4	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg	EM12093308001	<0.5	<0.5	<0.5	<0.5	<0.5
EL080(071): IotaYetroYum Hydrocarbons									
5 + 659 Fraction	----	10	mg/kg	EM12093308001	<10	<10	<10	<10	<10
510 6513 Fraction	----	50	mg/kg	EM12093308001	<50	<50	<50	<50	<50
514 6528 Fraction	----	100	mg/kg	EM12093308001	<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB12(0801)	SB12(110611)	SB1-(0801)	SB1-(01481+)	SB13(0801)
					EM1209330801	EM1209330800-	EM1209330804	EM1209330800+	EM1209330809
EL080(071) : Iota Ytetro Yum Hydrocarbons 65 continued									
5 29 65 - + Fraction	----	100	mg/kg	16-AUG-2012 09:00	<100	<100	<100	<100	<100
5 10 65 - + Fraction)sumV	----	50	mg/kg	16-AUG-2012 09:30	<50	<50	<50	<50	<50
EL080(071) : Iota Ytetro Yum Hydrocarbons 65 DELM 2010 Rraft									
5 + 65 10 Fraction	----	10	mg/kg	16-AUG-2012 10:00	<10	<10	<10	<10	<10
>5 10 65 1 + Fraction	----	50	mg/kg	16-AUG-2012 10:00	<50	<50	<50	<50	<50
>5 1 + 65 - 3 Fraction	----	100	mg/kg	16-AUG-2012 10:00	<100	<100	<100	<100	<100
>5 - 3 65 30 Fraction	----	100	mg/kg	16-AUG-2012 10:00	<100	<100	<100	<100	<100
5 10 65 30 Fraction)sumV	----	50	mg/kg	16-AUG-2012 10:00	<50	<50	<50	<50	<50
EL21+ : Lerch Ytrate by N5 (MS)									
Lerch Ytrate	7601-90-3	10.0	µg/kg	16-AUG-2012 10:00	----	----	----	<10.0	<10.0
EL2-1 : Ler Ytroocto YCids and Su Yfonates									
LFOS	1763-23-1	0.0005	mg/kg	16-AUG-2012 10:00	013-8	----	----	01+22	01497
LFOC	335-67-1	0.0005	mg/kg	16-AUG-2012 10:00	010048	----	----	0100-1	0100+3
+2 FYrote Ymer Su Yfonate)+2	27619-97-2	0.005	mg/kg	16-AUG-2012 10:00	01178	----	----	01043	01229
FtSV									
EL0+S : L5B Surrogate									
Recach Yrobiphen Y	2051-24-3	0.1	%	16-AUG-2012 10:00	7410	7818	8410	+910	7-13
EL073S : @D5 Surrogates									
12Rrich Yroethane R3	17060-07-0	0.1	%	16-AUG-2012 10:00	791-	801+	7319	9218	+918
I o Ytene R8	2037-26-5	0.1	%	16-AUG-2012 10:00	9812	9813	9111	103	8019
3Bromof Yrobenzene	460-00-4	0.1	%	16-AUG-2012 10:00	8113	8118	7112	8811	+81+
EL074S : Ccid E/ tractab Y Surrogates									
2FYrophenoy	367-12-4	0.1	%	16-AUG-2012 10:00	9814	104	10+	102	12+
Lheno Yd+	13127-88-3	0.1	%	16-AUG-2012 10:00	741+	7-18	8+19	+91+	831+
265 h Yrophenoy R3	93951-73-6	0.1	%	16-AUG-2012 10:00	8413	8812	9312	8214	9813
2131+ R ribomopheno Y	118-79-6	0.1	%	16-AUG-2012 10:00	7711	8419	991-	8911	8+17
EL0741 : Base(Deutra YE/ tractab Y Surrogates									
Ditrobenzene R4	4165-60-0	0.1	%	16-AUG-2012 10:00	7-10	+17	7112	+114	7113
112Rrich Yrobenzene R3	2199-69-1	0.1	%	16-AUG-2012 10:00	+413	+17	7210	4917	7118
2FYroobiphenoy	321-60-8	0.1	%	16-AUG-2012 10:00	7013	7311	781+	+819	811+
Canthracene R10	1719-06-8	0.1	%	16-AUG-2012 10:00	9-17	8213	9210	8-19	102
3B erphenoy R13	1718-51-0	0.1	%	16-AUG-2012 10:00	8110	801+	8810	7+1+	8814
EL080S : I LH)@BI EX Surrogates									
112Rrich Yroethane R3	17060-07-0	0.1	%	16-AUG-2012 10:00	8117	8219	7710	9414	7118
I o Ytene R8	2037-26-5	0.1	%	16-AUG-2012 10:00	971+	981-	9018	10-	801+
3Bromof Yrobenzene	460-00-4	0.1	%	16-AUG-2012 10:00	9410	9018	8213	102	7311



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB13(110611) 16-AUG-2012 11:10 EM1209330011	SB14(0011) 16-AUG-2012 11:20 EM1209330011	SB14(110611) 16-AUG-2012 11:40 EM1209330014	SB1+(0011) 16-AUG-2012 11:55 EM1209330017	SB1+(01401)+ 16-AUG-2012 12:00 EM1209330018
EC002 : pH (Soil)	----	0.1	pH Unit		713	818	+10	81-	+1-
EC044: Moisture content	----	1.0	%		2217	1-13	2017	231+	2712
EZ 0041 : Iota Y Meta Y by B L CES									
Crsenic	7440-38-2	5	mg/kg		<5	<5	7	<5	<5
Barium	7440-39-3	10	mg/kg		20	70	20	40	-0
Beryllium	7440-41-7	1	mg/kg		<1	1	1	<1	1
5 admium	7440-43-9	1	mg/kg		<1	<1	1	<1	<1
5 hromium	7440-47-3	2	mg/kg		49	9	72	-2	48
5 oba Y	7440-48-4	2	mg/kg		3	1+	10	4	+
5 opper	7440-50-8	5	mg/kg		9	1+	8	9	10
Nead	7439-92-1	5	mg/kg		17	<5	2-	33	18
Manganese	7439-96-5	5	mg/kg		27	-32	-4	103	-2
DicKEY	7440-02-0	2	mg/kg		10	83	17	11	1-
@nadium	7440-62-2	5	mg/kg		9+	14	18-	70	9-
vinc	7440-66-6	5	mg/kg		8	-9	+	2-	12
EZ 0-41 : Iota Y Aeco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EL0++: Lo Y ch Y rinat Bipheny Y L-5 BV									
Iota Y Lo Y ch Y rinat bipheny Y	----	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethy Y benzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta 6 & para 6 Y Ylene	108-38-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho 6 Y Ylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Isopropy Y benzene	98-82-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
n B, rOPY Y benzene	103-65-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1-14 B rimethy Y benzene	108-67-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
sec B Buty Y benzene	135-98-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
11213 B rimethy Y benzene	95-63-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
tert B Buty Y benzene	98-06-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
p B s opropy Y o Ylene	99-87-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
n B Buty Y benzene	104-51-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL073B: O/ ygenat 5 ompounds									



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			Unit	SB13(110611) 16-AUG-2012 11:10 EM1209330011	SB14(10611) 16-AUG-2012 11:20 EM1209330014	SB1+(0611) 16-AUG-2012 11:55 EM1209330017	SB1+(01401)+ 16-AUG-2012 12:00 EM1209330018
EL073B: Oxygenated 5 compounds 65 omitted						
@nyYcacetate	108-05-4	5	mg/kg	<5	<5	<5
2BButanone)MEx V	78-93-3	5	mg/kg	<5	<5	<5
36Methylpentanone)MBx V	108-10-1	5	mg/kg	<5	<5	<5
26He/ anone)MBx V	591-78-6	5	mg/kg	<5	<5	<5
EL0735: Sulfonated 5 compounds						
5arbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5
EL073R: Fumigants						
212Rrich'bropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5
112Rrich'bropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5
cis611- Rrich'bropropyl'ene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5
trans611- Rrich'bropropyl'ene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5
112Rribromoethane)ERBV	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5
EL073E: Halogenated Cyclic 5 compounds						
Rich'brodif'loromethane	75-71-8	5	mg/kg	<5	<5	<5
5 h'bro methane	74-87-3	5	mg/kg	<5	<5	<5
@nyYch'bride	75-01-4	5	mg/kg	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5
5 h'broethane	75-00-3	5	mg/kg	<5	<5	<5
I rich'brof'loromethane	75-69-4	5	mg/kg	<5	<5	<5
111Rrich'broethane	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5
10domethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5
trans612Rrich'broethane	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5
111Rrich'broethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5
cis612Rrich'broethane	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5
1111Rrich'broethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5
111Rrich'bropropyl'ene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5
5arbon I etrach'bride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5
112Rrich'broethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5
I rich'broethane	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5
Ribromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5
11112Rrich'broethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5
11- Rrich'bropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5
I etrach'broethane	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5
111112R etrach'broethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5
trans6113Rrich'bro26butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5
cis6113Rrich'bro26butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	Client sample ID							
			SB13(110611)	SB14(0011)		SB14(110611)	SB1+(0011)	SB1+(01401)+					
EL073E: Halogenated C₃yclic 5 ompounds 65 omitted													
1112128 ethachloroethane	79-34-5	0.5	<0.5	<0.5	mg/kg	16-AUG-2012 11:10	EM1209330011	16-AUG-2012 11:20	EM1209330014	16-AUG-2012 11:40	EM1209330017	16-AUG-2012 11:55	EM1209330018
1121-8 richloropropane	96-18-4	0.5	<0.5	<0.5	mg/kg								<0.5
Lentachloroethane	76-01-7	0.5	<0.5	<0.5	mg/kg								<0.5
112681bromo 6 h chloropropane	96-12-8	0.5	<0.5	<0.5	mg/kg								<0.5
EL073F: Halogenated Chromatic 5 ompounds													
5 h chlorobenzene	108-90-7	0.5	<0.5	<0.5	mg/kg								<0.5
Bromobenzene	108-86-1	0.5	<0.5	<0.5	mg/kg								<0.5
265 h chlorotoluene	95-49-8	0.5	<0.5	<0.5	mg/kg								<0.5
365 h chlorotoluene	106-43-4	0.5	<0.5	<0.5	mg/kg								<0.5
1121-8 richlorobenzene	87-61-6	0.5	<0.5	<0.5	mg/kg								<0.5
EL073Z: I rih chlormethanes													
5 h chloroform	67-66-3	0.5	<0.5	<0.5	mg/kg								<0.5
Bromodichloromethane	75-27-4	0.5	<0.5	<0.5	mg/kg								<0.5
Ribromochloromethane	124-48-1	0.5	<0.5	<0.5	mg/kg								<0.5
Bromoform	75-25-2	0.5	<0.5	<0.5	mg/kg								<0.5
EL074C: Leno chlor 5 ompounds													
Leno chlor	108-95-2	0.5	<0.5	<0.5	mg/kg								<0.5
265 h chloropheno chlor	95-57-8	0.5	<0.5	<0.5	mg/kg								<0.5
266 methy chloropheno chlor	95-48-7	0.5	<0.5	<0.5	mg/kg								<0.5
- 6 & 36 methy chloropheno chlor	1319-77-3	0.5	<1.0	<1.0	mg/kg								<1.0
267 chloropheno chlor	88-75-5	0.5	<0.5	<0.5	mg/kg								<0.5
213681methy chloropheno chlor	105-67-9	0.5	<0.5	<0.5	mg/kg								<0.5
213681chloropheno chlor	120-83-2	0.5	<0.5	<0.5	mg/kg								<0.5
214681chloropheno chlor	87-65-0	0.5	<0.5	<0.5	mg/kg								<0.5
365 h chloro 6 methy chloropheno chlor	59-50-7	0.5	<0.5	<0.5	mg/kg								<0.5
213148 rich chloropheno chlor	88-06-2	0.5	<0.5	<0.5	mg/kg								<0.5
213148 rich chloropheno chlor	95-95-4	0.5	<0.5	<0.5	mg/kg								<0.5
Lentachloropheno chlor	87-86-5	1	<1	<1	mg/kg								<1
EL074B: Leno chlor chlor Chromatic Hydrocarbons													
Daphthalene	91-20-3	0.5	<0.5	<0.5	mg/kg								<0.5
266 methy chlorophthalene	91-57-6	0.5	<0.5	<0.5	mg/kg								<0.5
265 h chlorophthalene	91-58-7	0.5	<0.5	<0.5	mg/kg								<0.5
Cenaphthylene	208-96-8	0.5	<0.5	<0.5	mg/kg								<0.5
Cenaphthene	83-32-9	0.5	<0.5	<0.5	mg/kg								<0.5
Fluorene	86-73-7	0.5	<0.5	<0.5	mg/kg								<0.5
Linenanthrene	85-01-8	0.5	<0.5	<0.5	mg/kg								<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			Unit	Result	Unit	Result
EL074B: Polynuclear Aromatic Hydrocarbons 65 continued						
Naphthalene	120-12-7	0.5	mg/kg	<0.5	SB13(10611)	SB14(10611)
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	EM1209330011	EM1209330014
Pyrene	129-00-0	0.5	mg/kg	<0.5	EM120933001-	EM1209330017
Dibenzofluorenylacetamide	53-96-3	0.5	mg/kg	<0.5		
Benz[a]anthracene	56-55-3	0.5	mg/kg	<0.5		
Fluorene	218-01-9	0.5	mg/kg	<0.5		
Benz[b]fluoranthene	205-99-2	1	mg/kg	<1		
Benzo[k]fluoranthene						
7,12-dimethylbenzo[a]anthracene	57-97-6	0.5	mg/kg	<0.5		
Benzo[a]pyrene	50-32-8	0.5	mg/kg	<0.5		
6-methylcholanthrene	56-49-5	0.5	mg/kg	<0.5		
Indeno[1,2,3-cd]perylene	193-39-5	0.5	mg/kg	<0.5		
Ribenz[a]anthracene	53-70-3	0.5	mg/kg	<0.5		
Benzo[ghi]perylene	191-24-2	0.5	mg/kg	<0.5		
Sum of LCHs	---	0.5	mg/kg	<0.5		
EL0745: L-hydroxy Esters						
Rimethyloxyphthalate	131-11-3	0.5	mg/kg	<0.5		
Riethyloxyphthalate	84-66-2	0.5	mg/kg	<0.5		
Ributoxyphthalate	84-74-2	0.5	mg/kg	<0.5		
Butylbenzoyloxyphthalate	85-68-7	0.5	mg/kg	<0.5		
bis(2-ethylhexyl)phthalate	117-81-7	5.0	mg/kg	<5.0		
Rioctoxyphthalate	117-84-0	0.5	mg/kg	<0.5		
EL074R: Nitrosamines						
Dinitrosomethylamine	10695-95-6	0.5	mg/kg	<0.5		
Dinitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5		
Dinitrosopropylamine	930-55-2	1.0	mg/kg	<1.0		
Dinitrosomorpholine	59-89-2	0.5	mg/kg	<0.5		
Dinitrosodimethylamine	621-64-7	0.5	mg/kg	<0.5		
Dinitrosopiperidine	100-75-4	0.5	mg/kg	<0.5		
Dinitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5		
Dinitrosodiphenylamine	86-30-6	1.0	mg/kg	<1.0		
Riphenylamine						
Methapyrrolone	91-80-5	0.5	mg/kg	<0.5		
EL074E: Nitroaromatics and ketones						
2,4-dinitrophenol	109-06-8	0.5	mg/kg	<0.5		
Cetophenone	98-86-2	0.5	mg/kg	<0.5		



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB13(110611) 16-AUG-2012 11:10 EM1209330011	SB14(0011) 16-AUG-2012 11:20 EM1209330011-	SB14(110611) 16-AUG-2012 11:40 EM1209330014	SB1+(0011) 16-AUG-2012 11:55 EM1209330017	SB1+(01401)+ 16-AUG-2012 12:00 EM1209330018
			Unit	Unit					
EL074E: Nitroaromatics and x etones 65 continued									
Ditrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
21H6Rinitroto Ylene	606-20-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2136Rinitroto Ylene	121-14-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10aphthy Yamine	134-32-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
30DitroKuino Yne06/ ide	56-57-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
40Ditro60to Yidine	99-55-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Czobenzene	103-33-3	1	mg/kg	<1	<1	<1	<1	<1	<1
11-148 rinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lhenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36CminobiphenyY	92-67-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lentach Yronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethy Yaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 h YrobenziYte	510-15-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074F: HaYethers									
Bis)26th YroethyYether	111-44-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis)26th Yroetho/ yMethane	111-91-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 h YrophenyYphenyYether	7005-72-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36BromophenyYphenyYether	101-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074Z : 5 h Ybrinated Hydrocarbons									
11-6Rrich Yrobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1136Rrich Yrobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich Yrobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
112136 rich Yrobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach YropropyYene	1888-71-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yrobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach YrocycYpentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Lentach Yrobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yrobenzene JH5 BV	118-74-1	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EL074H: CniYnes and Benzidines									
CniYne	62-53-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 h YroamiYne	106-47-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20DitroamiYne	88-74-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
-0DitroamiYne	99-09-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB13(110611) 16-AUG-2012 11:10 EM1209330011	SB14(0011) 16-AUG-2012 11:20 EM1209330011	SB14(110611) 16-AUG-2012 11:40 EM1209330014	SB1+(0011) 16-AUG-2012 11:55 EM1209330017	SB1+(01401)+ 16-AUG-2012 12:00 EM1209330018
			Unit	Unit					
EL074H: Cnilynes and Benzimidines 65 continued									
Ribenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3,4-Dinitroaniiline	100-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5-azabenzimidazole	86-74-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-methyl-2-benzimidazole	91-94-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074P: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
deltachloro-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cyfluthrin	309-00-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	72-55-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	60-57-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
gamma-Endosulfan	72-54-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin sulfate	50-29-3	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EL074J: Organophosphorus Pesticides									
Disulfoton	62-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton	333-41-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton dimethyl	5698-13-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	55-38-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton	2921-88-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton dimethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton dimethyl	470-90-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton	34643-46-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Disulfoton	563-12-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL080(071): Volatile Hydrocarbons									
5 + 6.5.9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10	<10
5.10.6.5.13 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	<50
5.14.6.5.28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB13(110611) EM1209330011	SB14(0011) EM120933001-	SB14(110611) EM1209330014	SB1+(0011) EM1209330017	SB1+(01401)+ EM1209330018
EL080(071) : Iota Yletroum Hydrocarbons 65 continued									
5 29 65 - + Fraction	---	100	mg/kg	16-AUG-2012 11:10	<100	<100	<100	210	<100
5 10 65 - + Fraction)sumV	---	50	mg/kg	16-AUG-2012 11:20	<50	<50	<50	210	<50
EL080(071) : Iota Yletroum Hydrocarbons 6DELIM 2010 Rraft									
5 + 65 10 Fraction	---	10	mg/kg	16-AUG-2012 11:40	<10	<10	<10	<10	<10
>5 10 65 1 + Fraction	---	50	mg/kg	16-AUG-2012 11:40	<50	<50	<50	<50	<50
>5 1 + 65 - 3 Fraction	---	100	mg/kg	16-AUG-2012 11:40	<100	<100	<100	220	<100
>5 - 3 65 30 Fraction)sumV	---	100	mg/kg	16-AUG-2012 11:40	<100	<100	<100	200	<100
5 10 65 30 Fraction)sumV	---	50	mg/kg	16-AUG-2012 11:40	<50	<50	<50	320	<50
EL21+ : Lerch Ytrate by N5 (MS									
Lerch Ytrate	7601-90-3	10.0	µg/kg	16-AUG-2012 11:40	<10.0	<10.0	<10.0	<10.0	<10.0
EL2- 1 : Ler Yuroocytocids and Su Yonates									
LFOS	1763-23-1	0.0005	mg/kg	16-AUG-2012 11:40	112+	112+	112+	4-12	---
LFOC	335-67-1	0.0005	mg/kg	16-AUG-2012 11:40	010- 07	010- 07	010- 07	012+-	---
+2 FYrote Ymer Su Yonate)+2	27619-97-2	0.005	mg/kg	16-AUG-2012 11:40	01082	01082	01082	3198	---
FtSV									
EL0++S : L5B Surrogate									
Recach YrobiphenY	2051-24-3	0.1	%	16-AUG-2012 11:40	+212	881	791+	7-10	741-
EL073S : @D5 Surrogates									
12Rrich YroethaneR3	17060-07-0	0.1	%	16-AUG-2012 11:40	801+	7918	8717	7913	7+-
I o YleneR8	2037-26-5	0.1	%	16-AUG-2012 11:40	9417	9118	9410	9010	8812
3BRomof Yrobenzene	460-00-4	0.1	%	16-AUG-2012 11:40	8-14	7311	7811	7-11	771+
EL074S : Ccid E/ tractab Y Surrogates									
2FYurophenoY	367-12-4	0.1	%	16-AUG-2012 11:40	8-10	118	9+14	8+10	107
Lheno Yd+	13127-88-3	0.1	%	16-AUG-2012 11:40	+ -1+	8-19	721+	+213	7113
265 h YrophenoyR3	93951-73-6	0.1	%	16-AUG-2012 11:40	7411	941-	7910	7813	821+
2131+R ribromophenoY	118-79-6	0.1	%	16-AUG-2012 11:40	+011	8712	781-	8719	8318
EL0741 : Base(Deutra YE/ tractab Y Surrogates									
DitrobenzeneR4	4165-60-0	0.1	%	16-AUG-2012 11:40	4+10	7812	+819	+212	+21+
112Rrich YrobenzeneR3	2199-69-1	0.1	%	16-AUG-2012 11:40	4419	7410	+318	4114	+112
2FYurobiphenY	321-60-8	0.1	%	16-AUG-2012 11:40	+018	8-1+	7413	+412	7313
CanthraceneR10	1719-06-8	0.1	%	16-AUG-2012 11:40	7417	10-	9110	771+	8711
3R erphenYR13	1718-51-0	0.1	%	16-AUG-2012 11:40	+710	9-17	8210	7013	7911
EL080S : I LH)@BI EX Surrogates									
112Rrich YroethaneR3	17060-07-0	0.1	%	16-AUG-2012 11:40	8-10	8210	9012	8117	7813
I o YleneR8	2037-26-5	0.1	%	16-AUG-2012 11:40	9412	9114	9318	9011	8719
3BRomof Yrobenzene	460-00-4	0.1	%	16-AUG-2012 11:40	8818	8+11	911+	811+	8+1+



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB17(0001)	SB17(01401+)	SB18(0001)	SB18(01401+)	SB19(0001)
EC002 : pH (Soil)	----	0.1	pH Unit	16-AUG-2012 12:10	81-	811	+17	+14	16-AUG-2012 13:00
EC044: Moisture content	----	1.0	%	16-AUG-2012 12:25	2712	2112	2+14	2910	16-AUG-2012 12:25
Moisture content (dried ° 10-5 V)									
EZ 0041 : Iota Meta by BGCES									
Arsenic	7440-38-2	5	mg/kg	16-AUG-2012 12:15	<5	<5	<5	<5	16-AUG-2012 12:25
Barium	7440-39-3	10	mg/kg	EM1209330021	30	80	90	270	EM1209330029
Beryllium	7440-41-7	1	mg/kg		1	<1	1	<1	
5 admium	7440-43-9	1	mg/kg		<1	<1	<1	<1	
5 hromium	7440-47-3	2	mg/kg		39	32	48	37	
5 obaY	7440-48-4	2	mg/kg		8	8	9	+	
5 opper	7440-50-8	5	mg/kg		9	1-	1-	10	
Nead	7439-92-1	5	mg/kg		13	-9	12	12	
Manganese	7439-96-5	5	mg/kg		37	118	42	--	
DicKEY	7440-02-0	2	mg/kg		18	28	2-	14	
@nadium	7440-62-2	5	mg/kg		87	87	+8	8-	
vinc	7440-66-6	5	mg/kg		11	27	13	10	
EZ 0-41 : Iota Aeco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	mg/kg	16-AUG-2012 12:15	<0.1	<0.1	<0.1	<0.1	16-AUG-2012 12:25
EL0++: LoYch Yrinated Bipheny Y L5 BV									
I ota Y oYch Yrinated bipheny Y	----	0.10	mg/kg	16-AUG-2012 12:15	<0.10	<0.10	<0.10	<0.10	16-AUG-2012 12:25
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg	EM1209330022	<0.2	<0.2	<0.2	<0.2	EM1209330024
I o Ylene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
Ethy Y benzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
meta6& para6 Y Yene	108-38-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
ortho6 Y Yene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
Ysopropy Y benzene	98-82-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
n6 Yropy Y benzene	103-65-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
1-146 rimethy Y benzene	108-67-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
sec6 Ybuty Y benzene	135-98-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
112136 rimethy Y benzene	95-63-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
tert6 Ybuty Y benzene	98-06-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
pe6 Ysopropy Y o Ylene	99-87-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
n6 Ybuty Y benzene	104-51-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	
EL073B: O/ Ygenated 5 ompounds									



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	SB17(0001)	SB17(0140)I+	SB18(0001)	SB18(0140)I+	SB19(0001)
EL073B: Oxygenated 5 compounds 65 omitted								
@nyYcacetate	108-05-4	5	mg/kg	<5	<5	<5	<5	<5
2BButanone)MEx V	78-93-3	5	mg/kg	<5	<5	<5	<5	<5
3MethyXpentinone)MBx V	108-10-1	5	mg/kg	<5	<5	<5	<5	<5
2He/ anone)MBx V	591-78-6	5	mg/kg	<5	<5	<5	<5	<5
EL0735 : SuYonated 5 compounds								
5arbon disuYide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073R: Fumigants								
2I2RrichYpropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I2RrichYpropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis6I1- RrichYpropyYne	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans6I1- RrichYpropyYne	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I2Rribromoethane)ERBV	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073E: HaYgenated Cyphatic 5 compounds								
RichYrodiYmoromethane	75-71-8	5	mg/kg	<5	<5	<5	<5	<5
5 hYromethane	74-87-3	5	mg/kg	<5	<5	<5	<5	<5
@nyYchYride	75-01-4	5	mg/kg	<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5	<5
5 hYroethane	75-00-3	5	mg/kg	<5	<5	<5	<5	<5
I richYrofYmoromethane	75-69-4	5	mg/kg	<5	<5	<5	<5	<5
1I1RrichYroethane	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ydomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans6I2RrichYroethane	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I1RrichYroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis6I2RrichYroethane	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I1I1RrichYroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I1RrichYpropyYne	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5arbon I etrachYride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I2RrichYroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
I richYroethane	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I1I2RrichYroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I- RrichYpropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
I etrachYroethane	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1I1I1I2R etrachYroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans6I13RrichYbroXbutene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis6I13RrichYbroXbutene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			Unit	EM12093300021	EM12093300022	EM12093300024	EM12093300025	EM12093300029
EL073E: Halogenated C₉phatic 5 ompounds 65 ontinued						
1112128 etrach ^o roethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5
1121-8 rich ^o bropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5
Lentach ^o roethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5
11268Ribromo6 & h ^o bropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5
EL073F: Halogenated Cromatic 5 ompounds						
5 h ^o brobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5
265 h ^o broto ^u ene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5
365 h ^o broto ^u ene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5
1121-8 rich ^o brobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5
EL073Z: I rih^omethanes						
5 h ^o broform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5
Bromodich ^o romethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5
Ribromoch ^o romethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5
EL074C: Lheno^uc 5 ompounds						
Lheno ^u	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5
265 h ^o bropheno ^u	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5
26Methy ^u pheno ^u	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5
-6& 36Methy ^u pheno ^u	1319-77-3	0.5	mg/kg	<1.0	<1.0	<1.0
26Ditropheno ^u	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5
21368Trimethy ^u pheno ^u	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5
21368Rich ^o bropheno ^u	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5
21+68Rich ^o bropheno ^u	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5
365 h ^o bro6 6Methy ^u pheno ^u	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5
2131+68 rich ^o bropheno ^u	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5
213148 rich ^o bropheno ^u	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5
Lentach ^o bropheno ^u	87-86-5	1	mg/kg	<1	<1	<1
EL074B: Lo^uynuc 6ar Cromatic Hydrocarbons						
Daphtha ^u ene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5
26Methy ^u napitha ^u ene	91-57-6	0.5	mg/kg	<0.5	<0.5	<0.5
265 h ^o bronaphitha ^u ene	91-58-7	0.5	mg/kg	<0.5	<0.5	<0.5
Ccenaphthy ^u ene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5
Ccenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5
F ^u orene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5
Lhenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB17(0001)	SB17(014001+)	SB18(0001)	SB18(014001+)	SB19(0001)
			Unit	EM12093300021						EM12093300022	EM12093300024	EM12093300025	EM12093300029
EL074B: Polynuclear Aromatic Hydrocarbons 65 continued									
Naphthalene	120-12-7	0.5	mg/kg	<0.5	<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	<0.5
Lyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzofuran	53-96-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[a]anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[b]fluoranthene	205-99-2	1	mg/kg	<1	<1	<1	<1	<1	<1
Benz[a]fluoranthene	57-97-6	0.5	mg/kg	<0.5	<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	<0.5
Benzo[b]fluoranthene	56-49-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno[1,2,3-cd]perylene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[a]anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluoranthene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sum of LCHs	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL0745: Lignin Esters									
Trimethylolpropane triacrylate	131-11-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Triethylolpropane triacrylate	84-66-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Triethylolpropane triacrylate	84-74-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Butyl acrylate	85-68-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-ethylhexyl) sebacate	117-81-7	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Diethyl sebacate	117-84-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074R: Nitrosamines									
Diethyl nitrosamine	10695-95-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diisopropyl nitrosamine	55-18-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diethyl nitrosamine	930-55-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Diisopropyl nitrosamine	59-89-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diethyl nitrosamine	621-64-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diisopropyl nitrosamine	100-75-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diethyl nitrosamine	924-16-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diisopropyl nitrosamine	86-30-6	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Riphenylamine	91-80-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methapyrrolone	109-06-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ccetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074E: Nitroaromatics and ketones									
2,4-Dinitrophenol	109-06-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ccetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			Unit	EM12093300021	EM12093300022	EM12093300024	EM12093300025
EL074E: Nitroaromatics and xetones 65 continued						
Ditrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	<0.5
Bophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	<0.5
21H6Rinitroto Ylene	606-20-2	1.0	mg/kg	<1.0	<1.0	<1.0
2136Rinitroto Ylene	121-14-2	1.0	mg/kg	<1.0	<1.0	<1.0
10Daphthy Yamine	134-32-7	0.5	mg/kg	<0.5	<0.5	<0.5
30DitroKuino Yne06/ ide	56-57-5	0.5	mg/kg	<0.5	<0.5	<0.5
40Ditro60to Yidine	99-55-8	0.5	mg/kg	<0.5	<0.5	<0.5
Czobenzene	103-33-3	1	mg/kg	<1	<1	<1
11-148 rinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	<0.5
Lhenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	<0.5
36CminobiphenyY	92-67-1	0.5	mg/kg	<0.5	<0.5	<0.5
Lentach Yronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	<0.5
Lronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	<0.5
Rimethy Yaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	<0.5
5 h Yrobenzi Yte	510-15-6	0.5	mg/kg	<0.5	<0.5	<0.5
EL074F: Halobethers						
Bis)26th Yroethy Yether	111-44-4	0.5	mg/kg	<0.5	<0.5	<0.5
Bis)26th Yroetho/ ylmethane	111-91-1	0.5	mg/kg	<0.5	<0.5	<0.5
365 h Yropheny Ypheny Yether	7005-72-3	0.5	mg/kg	<0.5	<0.5	<0.5
36Bromopheny Ypheny Yether	101-55-3	0.5	mg/kg	<0.5	<0.5	<0.5
EL074Z : 5 h Ybrinated Hydrocarbons						
11-6Rrich Yrobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5
1136Rrich Yrobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5
1126Rrich Yrobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5
He/ ach Yroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	<0.5
112136 rich Yrobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5
He/ ach Yropropy Yene	1888-71-7	0.5	mg/kg	<0.5	<0.5	<0.5
He/ ach Yrobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5
He/ ach Yrocyc Ypentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	<2.5
Lentach Yrobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	<0.5
He/ ach Yrobenzene JH5 BV	118-74-1	1.0	mg/kg	<1.0	<1.0	<1.0
EL074H: Cni Ynes and Benzidines						
Cni Yne	62-53-3	0.5	mg/kg	<0.5	<0.5	<0.5
365 h Yroami Yne	106-47-8	0.5	mg/kg	<0.5	<0.5	<0.5
20Ditroami Yne	88-74-4	1.0	mg/kg	<1.0	<1.0	<1.0
-0Ditroami Yne	99-09-2	1.0	mg/kg	<1.0	<1.0	<1.0



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID		
			Unit	Unit	SB17(0001)	SB18(0001)	SB17(014001+)	SB18(014001+)	SB17(0001)	SB18(0001)
EL074H: Cnilynes and Benzimidines 65 continued							
Ribenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	<0.5	
3,4-Dinitroaniiline	100-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	
5-azabenzimidazole	86-74-8	0.5	mg/kg	<0.5	<0.5	<0.5	
1-methyl-2-benzimidazole	91-94-1	0.5	mg/kg	<0.5	<0.5	<0.5	
EL074P: Organochlorine Pesticides							
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	<0.5	
beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	<0.5	
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	<0.5	
deltachlorocyclohexane	319-86-8	0.5	mg/kg	<0.5	<0.5	<0.5	
Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	<0.5	
Cyfluthrin	309-00-2	0.5	mg/kg	<0.5	<0.5	<0.5	
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	<0.5	
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	
beta-Endosulfan	72-55-9	0.5	mg/kg	<0.5	<0.5	<0.5	
Endosulfan S-oxide	60-57-1	0.5	mg/kg	<0.5	<0.5	<0.5	
Endosulfan	72-20-8	0.5	mg/kg	<0.5	<0.5	<0.5	
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	<0.5	
gamma-Endosulfan	72-54-8	0.5	mg/kg	<0.5	<0.5	<0.5	
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	<0.5	
Endosulfan	50-29-3	1.0	mg/kg	<1.0	<1.0	<1.0	
EL074J: Organophosphorus Pesticides							
Disulfoton	62-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	
Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	<0.5	
Riazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	<0.5	
5-norpryifosmethy	5698-13-0	0.5	mg/kg	<0.5	<0.5	<0.5	
Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	
Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	<0.5	
5-norpryifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	<0.5	
Lirimphosethy	23505-41-1	0.5	mg/kg	<0.5	<0.5	<0.5	
5-norfen, inphos	470-90-6	0.5	mg/kg	<0.5	<0.5	<0.5	
Lrothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	<0.5	
Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	<0.5	
EL080(071): Inorganic Hydrocarbons							
5 + 659 Fraction	----	10	mg/kg	<10	<10	<10	
510 6513 Fraction	----	50	mg/kg	<50	<50	<50	
514 6528 Fraction	----	100	mg/kg	<100	<100	<100	



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB17(0001)	SB17(014001+)	SB18(0001)	SB18(014001+)	SB19(0001)
					EM12093300021	EM12093300022	EM12093300024	EM12093300025	EM12093300029
EL080(071) : Iota Yletroum Hydrocarbons 65 continued									
5 29 65 - + Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
5 10 65 - + Fraction)sumV	----	50	mg/kg		<50	<50	<50	<50	<50
EL080(071) : Iota Yletroum Hydrocarbons 65 DELM 2010 Rraft									
5 + 65 10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>5 10 65 1 + Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>5 1 + 65 - 3 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>5 - 3 65 30 Fraction)sumV	----	100	mg/kg		<100	<100	<100	<100	<100
5 10 65 30 Fraction)sumV	----	50	mg/kg		<50	<50	<50	<50	<50
EL21+ : Lerch Ytrate by N5 (MS									
Lerch Ytrate	7601-90-3	10.0	µg/kg		<10.0	----	<10.0	----	<10.0
EL2- 1 : Ler Ytrooct YCids and Su Yfonates									
LFOS	1763-23-1	0.0005	mg/kg		+140	----	01+17	----	01- 02
LFOC	335-67-1	0.0005	mg/kg		01112	----	010048	----	010031
+2 FYrote Ymer Su Yfonate)+2	27619-97-2	0.005	mg/kg		2131	----	01102	----	01033
FtSV									
EL0++S : L5B Surrogate									
Recach Yrobiphen Y	2051-24-3	0.1	%		8+10	7914	9114	+917	7+1+
EL073S : @D5 Surrogates									
12Rrich YroethaneR3	17060-07-0	0.1	%		8810	8218	9118	9314	881+
l o YleneR8	2037-26-5	0.1	%		101	8912	102	9019	9411
3BRomof Yrobenzene	460-00-4	0.1	%		9010	8414	8+17	8417	7714
EL074S : Ccid E/ tractab Y Surrogates									
2FYrophenoy	367-12-4	0.1	%		117	114	1- 0	9+1-	108
Lheno Yd+	13127-88-3	0.1	%		71+1	771+	7910	+310	7110
265 h YrophenoyR3	93951-73-6	0.1	%		9313	8713	9918	7413	811-
2131+R ribomopheno Y	118-79-6	0.1	%		8318	7710	9413	7318	791-
EL0741 : Base(Deutra YE/ tractab Y Surrogates									
DitrobenzeneR4	4165-60-0	0.1	%		7218	+718	7717	+014	7914
112Rrich YrobenzeneR3	2199-69-1	0.1	%		701+	+41+	7110	4714	4713
2FYrorobiphenoy	321-60-8	0.1	%		8310	7+17	881+	+711	7213
CanthraceneR10	1719-06-8	0.1	%		10-	9412	10+	8014	8317
3R erphenoyR13	1718-51-0	0.1	%		9219	841-	9717	7112	7+12
EL080S : l LH)@BI EX Surrogates									
112Rrich YroethaneR3	17060-07-0	0.1	%		901+	841-	9314	971-	9111
l o YleneR8	2037-26-5	0.1	%		100	881+	102	9012	9318
3BRomof Yrobenzene	460-00-4	0.1	%		9813	9313	9+11	9113	9017



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB19(110611) 16-AUG-2012 13:10 EM120933000-1	SB20(0001) 16-AUG-2012 13:10 EM120933000--	SB20(014001)+ 16-AUG-2012 13:15 EM120933000-3	SB21(0001) 16-AUG-2012 13:25 EM120933000-7	SB21(110611) 16-AUG-2012 13:30 EM120933000-9
EC002 : pH (Soil)	----	0.1	pH Unit	+10	413	413	414	413	410
EC044: Moisture 5 ontent	----	1.0	%	2411	2011	2011	2218	2-17	2819
EZ 0041 : Iota Y Meta Y by B L CSES									
Crsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	20	20	20	20	-0	-0
Beryllium	7440-41-7	1	mg/kg	1	<1	<1	<1	<1	<1
5 admium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	<1
5 hromium	7440-47-3	2	mg/kg	- +	-9	-9	33	39	32
5 oba Y	7440-48-4	2	mg/kg	10	-	-	3	4	2
5 opper	7440-50-8	5	mg/kg	8	8	8	10	9	9
Nead	7439-92-1	5	mg/kg	1-	1-	1-	2+	9	9
Manganese	7439-96-5	5	mg/kg	1-	19	19	43	2-	8
DicKEY	7440-02-0	2	mg/kg	13	7	7	12	1-	8
@nadium	7440-62-2	5	mg/kg	+9	43	43	+8	44	40
vinc	7440-66-6	5	mg/kg	+	8	8	20	10	+
EZ 0-41 : Iota Y Acco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EL0++: Lo Y ch Y rinatd Bipheny Y L5 BV									
Iota Y Lo Y ch Y rinatd bipheny Y	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethy Y benzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
meta 6 & para 6 Y Ylene	108-38-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ortho 6 Y Ylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropy Y benzene	98-82-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n B, r o p y Y benzene	103-65-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1-14 6 rimethy Y benzene	108-67-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec 6 Buty Y benzene	135-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11213 6 rimethy Y benzene	95-63-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert 6 Buty Y benzene	98-06-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
pe 6 s o p r o p y Y o Ylene	99-87-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n 6 Buty Y benzene	104-51-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL073B: O/ ygenatd 5 ompounds									



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SB19(110611)	SB20(01461)+	SB21(0601)	SB21(110611)
		Unit			16-AUG-2012 13:10	16-AUG-2012 13:15	16-AUG-2012 13:25	16-AUG-2012 13:30
					EM120933060-1	EM120933060-3	EM120933060-7	EM120933060-9
EL073B: Oxygenated 5 compounds 65 omitted								
@nyYcacetate	108-05-4	5	mg/kg	<5	<5	<5	<5	<5
26Butanone)MEx V	78-93-3	5	mg/kg	<5	<5	<5	<5	<5
36Methylpentanone)MBx V	108-10-1	5	mg/kg	<5	<5	<5	<5	<5
26He/ anone)MBx V	591-78-6	5	mg/kg	<5	<5	<5	<5	<5
EL0735 : Sulfonated 5 compounds								
5arbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073R: Fumigants								
2126Rrich'bropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich'bropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis611- 6Rrich'bropropyl'ene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans611- 6Rrich'bropropyl'ene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rribromoethane)ERBV	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073E: Halogenated Cyclic 5 compounds								
Rich'brodif'loromethane	75-71-8	5	mg/kg	<5	<5	<5	<5	<5
5 h'bro methane	74-87-3	5	mg/kg	<5	<5	<5	<5	<5
@nyYch'bride	75-01-4	5	mg/kg	<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5	<5
5 h'broethane	75-00-3	5	mg/kg	<5	<5	<5	<5	<5
I rich'brof'loromethane	75-69-4	5	mg/kg	<5	<5	<5	<5	<5
1116Rrich'broethane	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
6domethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans6126Rrich'broethane	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1116Rrich'broethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis6126Rrich'broethane	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
11116 rich'broethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1116Rrich'bropropyl'ene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5arbon I etrach'bride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich'broethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
I rich'broethane	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
111126 rich'broethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
11- 6Rrich'bropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
I etrach'broethane	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1111126 etrach'broethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans61136Rrich'bro6butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis61136Rrich'bro6butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB19(110611) 16-AUG-2012 13:10 EM120933000-1	SB20(014001)+ 16-AUG-2012 13:15 EM120933000-3	SB21(0001) 16-AUG-2012 13:25 EM120933000-7	SB21(110611) 16-AUG-2012 13:30 EM120933000-9
			Unit	Unit				
EL073E: Halogenated Cyclic 5 ompounds 65 omitted								
1112128 ethachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 richbropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Lentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
11268Ribromo6-8hbropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073F: Halogenated Chromatic 5 ompounds								
5hbrobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
265hbrotoylene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
365hbrotoylene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 richbrobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL073Z: Iriha bromethanes								
5hbroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL074C: Lenoic 5 ompounds								
Lenoic	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
265hbrophenoic	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
26Methylophenoic	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
-6&3Methylophenoic	1319-77-3	0.5	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
26Ditrophenoic	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
21368Trimethylophenoic	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
21368Richbrophenoic	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
21+68Richbrophenoic	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
365hbro6-Methylophenoic	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2131+68 richbrophenoic	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
213148 richbrophenoic	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Lentachlorophenoic	87-86-5	1	mg/kg	<1	<1	<1	<1	<1
EL074B: Lenoic Chromatic Hydrocarbons								
Daphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
26Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
265hBronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ccenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ccenaphthene	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
Lhenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	Client sampling date / time		Unit	Client sample ID				
		LOR	SB20(014001)+		SB20(0001)	SB21(0001)	SB21(110611)		
EL074B: LoYnuc Bar Cromatic Hydrocarbons 65 continued									
Anthracene	120-12-7	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Fluoranthene	206-44-0	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Lyrene	129-00-0	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzofluorenylacetamide	53-96-3	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Benzanthracene	56-55-3	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Fluorene	218-01-9	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Benzo[a]fluorene	205-99-2	1	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Benzo[k]fluoranthene	205-99-2	1	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
7,12-dimethylbenz[a]anthracene	57-97-6	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Benzo[a]pyrene	50-32-8	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
6-methylcholeanthrene	56-49-5	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Indeno[1,2,3-cd]pyrene	193-39-5	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Ribenz[a]anthracene	53-70-3	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Benzo[ghi]perylene	191-24-2	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Sum of LCHs	---	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
EL0745: L htha Yte Esters									
Rimethylnaphthalene	131-11-3	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Rimethylnaphthalene	84-66-2	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Rimethylnaphthalene	84-74-2	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Butylbenzylphenyl ether	85-68-7	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
bis(2-ethylhexyl)phenyl ether	117-81-7	5.0	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Rimethylnaphthalene	117-84-0	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
EL074R: Dltrosamines									
Dibenzosomethylenamine	10695-95-6	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzodimethylamine	55-18-5	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzopyrrolidine	930-55-2	1.0	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzomorpholine	59-89-2	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzodimethylpropylamine	621-64-7	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzopiperidine	100-75-4	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzodimethylamine	924-16-3	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Dibenzodiphenylmethylenamine	86-30-6	1.0	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Riphenylamine	91-80-5	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
EL074E: Dltroaromatics and xetones									
2,6-toluene	109-06-8	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9
Ccetophenone	98-86-2	0.5	16-AUG-2012 13:10	mg/kg	EM120933000-1	16-AUG-2012 13:10	EM120933000-3	16-AUG-2012 13:30	EM120933000-9



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB19(110611) 16-AUG-2012 13:10 EM120933000-1	SB20(0001) 16-AUG-2012 13:10 EM120933000--	SB20(014001)+ 16-AUG-2012 13:15 EM120933000-3	SB21(0001) 16-AUG-2012 13:25 EM120933000-7	SB21(110611) 16-AUG-2012 13:30 EM120933000-9
			Unit	Unit					
EL074E: Dinitroaromatics and x etones 65 continued									
Ditrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
214R1nitrotoYlene	606-20-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
216R1nitrotoYlene	121-14-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
100aphthyYamine	134-32-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
300itroKuinoYne000/ide	56-57-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
400itro000Yidine	99-55-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Czobenzene	103-33-3	1	mg/kg	<1	<1	<1	<1	<1	<1
11-148 rinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lhenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
300minobiphenyY	92-67-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LentachYronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RimethyYaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrobenziYete	510-15-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074F: Halobethers									
Bis)200hYroethyYether	111-44-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis)200hYroetho/ y)methane	111-91-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
300hYrophenyYphenyYether	7005-72-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
300romophenyYphenyYether	101-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074Z : 5hYbrinated Hydrocarbons									
11-000ichYrobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
113000ichYrobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
112000ichYrobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1121300 richYrobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYropropyYene	1888-71-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYrobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYrocycYpentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
LentachYrobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYrobenzene JH5 BV	118-74-1	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EL074H: CniYnes and Benzidines									
CniYne	62-53-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
300hYroamiYne	106-47-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
200itroamiYne	88-74-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
-00itroamiYne	99-09-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0



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 Work Order : EM1209440
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	Client sampling data / time		SB19(110611) 16-AUG-2012 13:10 EM120933000-1	SB20(0001) 16-AUG-2012 13:10 EM120933000--	SB20(014001)+ 16-AUG-2012 13:15 EM120933000-3	SB21(0001) 16-AUG-2012 13:25 EM120933000-7	SB21(110611) 16-AUG-2012 13:30 EM120933000-9
		LOR	Unit					
EL074H: Cnilynes and Benzimidines 65 continued								
Ribenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3,6-Ditroaniyne	100-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5 arbazob	86-74-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
-1'-Richyrobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL074P: Organochyrine Lesticides								
alphaBH5	319-84-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
betaBH5	319-85-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
gammaBH5	58-89-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
deltaBH5	319-86-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Heptach yr	76-44-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Cyirin	309-00-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Heptach yr epo/ide	1024-57-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
alphaEndosuYan	959-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRRE	72-55-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
RieYirin	60-57-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
betaEndosuYan	33213-65-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRRR	72-54-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EndosuYan suYate	1031-07-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRRR	50-29-3	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
EL074J: Organophosphorus Lesticides								
Rich yr, os	62-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Riazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5 h'yrpyrifosdmethyY	5698-13-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
MaYathion	121-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5 h'yrpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
LirimphosethyY	23505-41-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
5 h'yrfen, inphos	470-90-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Lrothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EL080(071): IotaYetroYum Hydrocarbons								
5 + 659 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
510 6513 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
514 6528 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Unit	Client sample ID						
				Client sampling date / time	SB19(110611)	SB20(0001)	SB20(014001)+	SB21(110611)		
Sub-Matrix: SOIL							16-AUG-2012 13:10	16-AUG-2012 13:15	16-AUG-2012 13:25	16-AUG-2012 13:30
EM120933000-1							EM120933000-3	EM120933000-7	EM120933000-9	
EL080(071) : Iota Ytroleum Hydrocarbons 65 continued										
529 65- + Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100
510 65- + Fraction)sumV	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50
EL080(071) : Iota Ytroleum Hydrocarbons 6DELIM 2010 Rraft										
5+ 65 10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10	<10	<10
>5 10 65 1+ Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50
>5 1+ 65- -3 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100
>5- 3 65 30 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100
^ >5 10 65 30 Fraction)sumV	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50
EL21+ : Lerch Ytrate by N5 (MS										
Lerch Ytrate	7601-90-3	10.0	µg/kg	----	----	----	<10.0	<10.0	<10.0	----
EL2- 1 : Ler Ytroleum YCccids and Su Yfonates!										
LFOS	1763-23-1	0.0005	mg/kg	----	----	----	01027	010812	010812	----
LFOC	335-67-1	0.0005	mg/kg	----	----	----	010018	0100-0	0100-0	----
+2 FYrote Ymer Su Yfonate)+2	27619-97-2	0.005	mg/kg	----	----	----	01019	0100+	0100+	----
FtSV										
EL0+S : L5B Surrogate										
Recach YrobiphenY	2051-24-3	0.1	%	7719	+17		8111	7013	7013	+912
EL073S : @D5 Surrogates										
12Rrich YroethaneR3	17060-07-0	0.1	%	8912	801+		771-	7412	7412	9713
I o YtneR8	2037-26-5	0.1	%	9+10	8717		+14	7711	7711	931+
3BRomof Yrobenzene	460-00-4	0.1	%	8417	7710		7311	+719	+719	8413
EL074S : Ccid E/ tractab Y Surrogates										
2FYrophenoy	367-12-4	0.1	%	102	9719		8811	7210	7210	7713
Lheno Yd+	13127-88-3	0.1	%	+1-	+010		+414	4213	4213	4-19
265 h Yrophenoy R3	93951-73-6	0.1	%	7812	7317		7+19	7+11	7+11	7410
2131+R ribromopheno Y	118-79-6	0.1	%	7+10	7419		+814	3819	3819	3312
EL0741 : Base(Deutra YE/ tractab Y Surrogates										
DitrobenzeneR4	4165-60-0	0.1	%	+710	4812		+719	4811	4811	4710
112Rrich YrobenzeneR3	2199-69-1	0.1	%	+31+	4712		+21+	4018	4018	4117
2FYroobiphenY	321-60-8	0.1	%	7113	+41+		7713	+417	+417	+218
CanthraceneR10	1719-06-8	0.1	%	9712	801-		931-	8+17	8+17	9211
3R erphenY R13	1718-51-0	0.1	%	8- 1+	7012		8312	7219	7219	771-
EL080S : I LH)@BI EX Surrogates										
112Rrich YroethaneR3	17060-07-0	0.1	%	9118	8218		791+	7714	7714	100
I o YtneR8	2037-26-5	0.1	%	9418	8712		+1-	7+13	7+13	931-
3BRomof Yrobenzene	460-00-4	0.1	%	9113	831-		8013	7214	7214	901-



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB22(01401)+ 16-AUG-2012 13:40 EM1209330032	SB2-(0011) 16-AUG-2012 13:55 EM1209330034	SB2-(110611) 16-AUG-2012 14:00 EM1209330037	SB23(0011) 16-AUG-2012 14:10 EM1209330039
EC002 : pH (Soil)	----	0.1	pH Unit		417	414	413	712
EC044: Moisture content	----	1.0	%		1-1+	271+	-21+	2311
Moisture content (dried ° 10-5 V)								
EZ 0041 : Iota Y Meta Y by B L G E S								
Crsenic	7440-38-2	5	mg/kg		4	<5	<5	<5
Barium	7440-39-3	10	mg/kg		10	40	2-0	-0
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1
5 admium	7440-43-9	1	mg/kg		<1	<1	<1	<1
5 hromium	7440-47-3	2	mg/kg		--	33	30	--
5 oba Y	7440-48-4	2	mg/kg		<2	-	3	3
5 opper	7440-50-8	5	mg/kg		<5	9	8	8
Nead	7439-92-1	5	mg/kg		13	12	10	20
Manganese	7439-96-5	5	mg/kg		11	-0	9	7-
Dickey	7440-02-0	2	mg/kg		4	10	8	11
@nadium	7440-62-2	5	mg/kg		103	+9	72	99
vinc	7440-66-6	5	mg/kg		<5	10	4	30
EZ 0-41 : Iota Y Aeoco, erab Y Mercury by FRMS								
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1
EL0++: Lo Y ch Y rinatad Bipheny Y L-5 BV								
I ota Y o Y ch Y rinatad bipheny Y	----	0.10	mg/kg		<0.10	<0.10	<0.10	<0.10
EL073C: Monocyc Yc Cromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
Ethy Y benzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
meta 6 & para 6 Y Ylene	108-38-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
ortho 6 Y Ylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
Isopropy Y benzene	98-82-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
n B . r o p y Y benzene	103-65-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
1-148 rimethy Y benzene	108-67-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
sec B u t y Y benzene	135-98-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
112138 rimethy Y benzene	95-63-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
tert B u t y Y benzene	98-06-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
p B s o p r o p y Y o Ylene	99-87-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
n B u t y Y benzene	104-51-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5
EL073B: O / ygenated 5 ompounds								



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB22(01401)+ EM1209330032	SB2-(110611 16-AUG-2012 14:00 EM1209330037	SB23(0001 16-AUG-2012 14:10 EM1209330039
			Unit	SB2-(0001 16-AUG-2012 13:55 EM1209330034			
EL073B: Oxygenated 5 compounds 65 omitted							
@nyYcacetate	108-05-4	5	mg/kg	<5	<5	<5	<5
2BButanone)MEx V	78-93-3	5	mg/kg	<5	<5	<5	<5
3MethyXpentinone)MBx V	108-10-1	5	mg/kg	<5	<5	<5	<5
2He/ anone)MBx V	591-78-6	5	mg/kg	<5	<5	<5	<5
EL0735 : SuYonated 5 compounds							
5arbon disuYide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EL073R: Fumigants							
2I2RrichYpropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I2RrichYpropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
cis6I1- RrichYpropyYne	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
trans6I1- RrichYpropyYne	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I2Rribromoethane)ERBV	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EL073E: HaYgenated Cyphatic 5 compounds							
RichYrodiFYoromethane	75-71-8	5	mg/kg	<5	<5	<5	<5
5 hYbromethane	74-87-3	5	mg/kg	<5	<5	<5	<5
@nyYchYride	75-01-4	5	mg/kg	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5
5 hYbroethane	75-00-3	5	mg/kg	<5	<5	<5	<5
I richYrofFYoromethane	75-69-4	5	mg/kg	<5	<5	<5	<5
1I1RrichYbroethane	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Rdomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
trans6I2RrichYbroethane	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I1RrichYbroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
cis6I2RrichYbroethane	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I1I1RrichYbroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I1RrichYpropyYne	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
5arbon I etrachYride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I2RrichYbroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
I richYbroethane	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ribromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I1I2RrichYbroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I- RrichYpropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
I etrachYbroethane	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1I1I12R etrachYbroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
trans6I13RrichYbroXbutene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
cis6I13RrichYbroXbutene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB22(01401)+ 16-AUG-2012 13:40 EM1209330032	SB2-(110611 16-AUG-2012 14:00 EM1209330037	SB23(0011 16-AUG-2012 14:10 EM1209330039
			Unit	SB2-(0011 16-AUG-2012 13:55 EM1209330034			
EL073E: Halogenated C₉Phatic 5 ompounds 65 ontinued							
1112128 atrach ^o roethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1121-8 rich ^o bropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Lentach ^o roethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
11268Ribromo6 & h ^o bropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EL073F: Halogenated Cromatic 5 ompounds							
5 h ^o brobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
265 h ^o broto ^u ene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
365 h ^o broto ^u ene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
1121-8 rich ^o brobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EL073Z : I rih^omethanes							
5 h ^o broform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Bromodich ^o romethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ribromoch ^o romethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EL074C: Lheno^uc 5 ompounds							
Lheno ^u	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
265 h ^o bropheno ^u	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
26Methy ^u pheno ^u	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
-6& 36Methy ^u pheno ^u	1319-77-3	0.5	mg/kg	<1.0	<1.0	<1.0	<1.0
26Ditropheno ^u	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
21368Trimethy ^u pheno ^u	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
21368Rich ^o bropheno ^u	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
21+68Rich ^o bropheno ^u	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
365 h ^o bro6 6Methy ^u pheno ^u	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2131+68 rich ^o bropheno ^u	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
213148 rich ^o bropheno ^u	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Lentach ^o bropheno ^u	87-86-5	1	mg/kg	<1	<1	<1	<1
EL074B: Lo^uynuc 6ar Cromatic Hydrocarbons							
Daphtha ^u ene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
26Methy ^u napitha ^u ene	91-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
265 h ^o bronaphitha ^u ene	91-58-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ccenaphthy ^u ene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ccenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
F ^u orene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Lhenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB22(0001)	SB22(014001+)	SB2-(0001)	SB2-(110611)	SB23(0001)
			Unit	Unit						16-AUG-2012 13:40	16-AUG-2012 13:55	16-AUG-2012 14:00	16-AUG-2012 14:10
EL074B: LoYnuc Bar Cromatic Hydrocarbons 65 continued									
Anthracene	120-12-7	0.5	mg/kg	<0.5	<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	<0.5
Lyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzofluorenylacetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzanthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo[a]fluoranthene	205-99-2	1	mg/kg	<1	<1	<1	<1	<1	<1
7,12-dimethylbenz[a]anthracene	57-97-6	0.5	mg/kg	<0.5	<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	<0.5
1-methyl-9H-fluorene	56-49-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3,4-tetrahydronaphthalene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3,4-tetrahydronaphthalene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3,4-tetrahydronaphthalene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sum of LCHs	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL0745: L htha Yte Esters									
1,2-dichloroethane	131-11-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloroethane	84-66-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromoethane	84-74-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dibromoethane	85-68-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-trichloroethane	117-81-7	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-trichloroethane	117-84-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074R: Dltrosamines									
1,1-dimethyl-2-pyrrolidone	10595-95-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dimethyl-2-pyrrolidone	55-18-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dimethyl-2-pyrrolidone	930-55-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dimethyl-2-pyrrolidone	59-89-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dimethyl-2-pyrrolidone	621-64-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dimethyl-2-pyrrolidone	100-75-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dimethyl-2-pyrrolidone	924-16-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dimethyl-2-pyrrolidone	86-30-6	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dimethyl-2-pyrrolidone	91-80-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074E: Dltroaromatics and xetones									
1,2-dichloroethane	109-06-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromoethane	98-86-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB22(0001)	SB22(014001+)	SB2-(0001)	SB2-(110611)	SB23(0001)
			Unit	Unit						16-AUG-2012 13:40	16-AUG-2012 13:40	16-AUG-2012 13:55	16-AUG-2012 14:00	16-AUG-2012 14:10
EL074E: Dinitroaromatics and x etones 65 continued									
Ditrobenzene	98-95-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bophorone	78-59-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
214R1nitrotoYlene	606-20-2	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
213R1nitrotoYlene	121-14-2	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
100aphthyYamine	134-32-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
300itroKuinoYne006/ide	56-57-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
400itro00toYidine	99-55-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Czobenzene	103-33-3	1	mg/kg		<1	<1	<1	<1	<1
11-148 rinitrobenzene	99-35-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Lhenacetin	62-44-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
300minobiphenyY	92-67-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
LentachYronitrobenzene	82-68-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Lronamide	23950-58-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
RimethyYaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
5 hYrobenziYete	510-15-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL074F: Halobethers									
Bis)20thYroethyYether	111-44-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bis)20thYroetho/ y)methane	111-91-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
305 hYrophenyYphenyYether	7005-72-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
300romophenyYphenyYether	101-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL074Z : 5 hYbrinated Hydrocarbons									
11-00ichYrobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
11300ichYrobenzene	106-46-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
11200ichYrobenzene	95-50-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYroethane	67-72-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
112130 richYrobenzene	120-82-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYropropyYene	1888-71-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYrobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYrocycYpentadiene	77-47-4	2.5	mg/kg		<2.5	<2.5	<2.5	<2.5	<2.5
LentachYrobenzene	608-93-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
He/ achYrobenzene JH5 BV	118-74-1	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
EL074H: CniYnes and Benzidines									
CniYne	62-53-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
305 hYroamiYne	106-47-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
200itroamiYne	88-74-4	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
-00itroamiYne	99-09-2	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB22(0801)	SB22(014801+)	SB2-(0801)	SB2-(110611)	SB23(0801)
			Unit	EM12093308031						EM12093308032	EM12093308034	EM12093308037	EM12093308039
EL074H: Cnilynes and Benzimidines 65 continued									
Ribenzofuran	132-64-9	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
36DitroaniYne	100-01-6	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
5 arbazob	86-74-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
- l- RrichYrobenzidine	91-94-1	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
EL074P: OrganochYrine Lesticides									
aYhaaBH5	319-84-6	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
betaBH5	319-85-7	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
gammaBH5	58-89-9	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
deYaBH5	319-86-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
HeptachYr	76-44-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
CYrin	309-00-2	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
HeptachYr epo/ ide	1024-57-3	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
aYhaaEndosuYan	959-98-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRE	72-55-9	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
RieYirin	60-57-1	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
betaEndosuYan	33213-65-9	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRR	72-54-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
EndosuYan suYate	1031-07-8	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRI	50-29-3	1.0	mg/kg	16-AUG-2012 13:40	<1.0	<1.0	<1.0	<1.0	<1.0
EL074J: Organophosphorus Lesticides									
RichYr, os	62-73-7	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethoate	60-51-5	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Riazinon	333-41-5	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrpyrifosmethyl	5698-13-0	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
MaYathion	121-75-5	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrpyrifos	2921-88-2	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Lirimphosethyl	23505-41-1	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
5hYrfen, inphos	470-90-6	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Lrothiofos	34643-46-4	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg	16-AUG-2012 13:40	<0.5	<0.5	<0.5	<0.5	<0.5
EL080(071): IotaYetroYum Hydrocarbons									
5 + 659 Fraction	----	10	mg/kg	16-AUG-2012 13:40	<10	<10	<10	<10	<10
510 6513 Fraction	----	50	mg/kg	16-AUG-2012 13:40	<50	<50	<50	<50	<50
514 6528 Fraction	----	100	mg/kg	16-AUG-2012 13:40	<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB22(0001)	SB22(014001+)	SB2-(0001)	SB2-(110611)	SB23(0001)
					EM12093300031	EM12093300032	EM12093300034	EM12093300037	EM12093300039
EL080(071) : Iota Yletrouyum Hydrocarbons 65 continued									
5 29 65 - + Fraction	----	100	mg/kg	16-AUG-2012 13:40	<100	<100	<100	<100	<100
5 10 65 - + Fraction)sumV	----	50	mg/kg	16-AUG-2012 13:40	<50	<50	<50	<50	<50
EL080(071) : Iota Yletrouyum Hydrocarbons 65 DELM 2010 Raft									
5 + 65 10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>5 10 65 1 + Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>5 1 + 65 - 3 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>5 - 3 65 30 Fraction)sumV	----	100	mg/kg		<100	<100	<100	<100	<100
5 10 65 30 Fraction)sumV	----	50	mg/kg		<50	<50	<50	<50	<50
EL21+ : Lerch Ybrate by N5 (MS									
Lerch Ybrate	7601-90-3	10.0	µg/kg		----	<10.0	<10.0	----	----
EL2- 1 : Ler Yuroocty YCids and Su Yonates									
LFOS	1763-23-1	0.0005	mg/kg		----	0107- 2	01234	----	----
LFOC	335-67-1	0.0005	mg/kg		----	01002+	0101+7	----	----
+2 FYrote Ymer Su Yonate)+2	27619-97-2	0.005	mg/kg		----	0103-	01090	----	----
FtSV									
EL0+S : L5B Surrogate									
Recach Yrobipheny	2051-24-3	0.1	%		810	82+	928	8012	8+17
EL073S : @D5 Surrogates									
12Rrich YroethaneR3	17060-07-0	0.1	%		791-	7917	+710	841-	+4+4
l o YleneR8	2037-26-5	0.1	%		9317	8413	7814	10+	7+18
3BRomof Yrobenzene	460-00-4	0.1	%		9011	801+	7811	981+	7+14
EL074S : Ccid E/ tractab Y Surrogates									
2FYuropheno Y	367-12-4	0.1	%		9813	9018	9718	9714	10-
Lheno Yd+	13127-88-3	0.1	%		741+	7413	8112	7119	+21-
265 h YrophenoyR3	93951-73-6	0.1	%		8310	8412	9312	901-	+910
2131+R ribromopheno Y	118-79-6	0.1	%		102	9414	9+1+	8018	4717
EL0741 : Base(Deutra YE/ tractab Y Surrogates									
DitrobenzeneR4	4165-60-0	0.1	%		+312	+ -19	7- 14	+710	3811
112Rrich YrobenzeneR3	2199-69-1	0.1	%		+219	+211	7112	+ +12	3418
2FYurobipheny Y	321-60-8	0.1	%		7313	7117	8211	7414	3911
CanthraceneR10	1719-06-8	0.1	%		9310	8813	9+10	8911	+318
3R erpheny YR13	1718-51-0	0.1	%		7810	8014	8717	7814	421+
EL080S : l LH)@BI EX Surrogates									
112Rrich YroethaneR3	17060-07-0	0.1	%		9010	7917	731+	7813	7-10
l o YleneR8	2037-26-5	0.1	%		911-	8118	7418	841+	7319
3BRomof Yrobenzene	460-00-4	0.1	%		9019	8110	7910	8+10	7- 12



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB23(014001)+ EM12093300040	SB24(0001) EM1209330004-	SB24(014001)+ EM12093300043	SB2+(0001) EM12093300047	SB2+(110011) EM12093300049
EC002 : pH (Soil)		0.1	pH Unit		417	+11	413	418	412
EC044: Moisture content		1.0	%		-112	2214	281-	2318	--17
EZ 0041 : Iota Y Meta Y by B L CSES									
Crsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		-0	-0	40	20	180
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
5 admium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
5 hromium	7440-47-3	2	mg/kg		42	28	33	-9	33
5 oba Y	7440-48-4	2	mg/kg		3	2	3	-	4
5 opper	7440-50-8	5	mg/kg		11	4	8	7	9
Nead	7439-92-1	5	mg/kg		1-	12	11	10	11
Manganese	7439-96-5	5	mg/kg		22	28	19	20	12
DicKEY	7440-02-0	2	mg/kg		11	+	12	7	11
@nadium	7440-62-2	5	mg/kg		77	++	70	91	+0
vinc	7440-66-6	5	mg/kg		12	8	8	4	7
EZ 0-41 : Iota Y Aeco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EL0++: Lo Y ch Y rinatad Bipheny Y L-5 BV									
Iota Y Lo Y ch Y rinatad bipheny Y		0.10	mg/kg		<0.10	<0.10	<0.10	<0.10	<0.10
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethy Y benzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta 6 & para 6 Y Ylene	108-38-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho 6 Y Ylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Isopropy Y benzene	98-82-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
n B . r o p y Y benzene	103-65-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1-14 B rimethy Y benzene	108-67-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
sec B u t y Y benzene	135-98-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
11213 B rimethy Y benzene	95-63-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
tert B u t y Y benzene	98-06-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
p B s o p r o p y Y o Ylene	99-87-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
n B u t y Y benzene	104-51-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL073B: O / ygenatad 5 ompounds									



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	Client sample ID				
			SB23(014001)+	SB24(0001)		SB24(014001)+	SB2+(0001)	SB2+(100011)		
EL073B: Oxygenated 5 compounds 65 omitted										
@nyYcacetate	108-05-4	5	<5	<5	mg/kg	16-AUG-2012 14:10	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
2BButanone)MEx V	78-93-3	5	<5	<5	mg/kg	EM12093300040	EM1209330004-	EM12093300043	EM12093300047	EM12093300049
3MethyXpentanone)MBx V	108-10-1	5	<5	<5	mg/kg					
2He/ anone)MBx V	591-78-6	5	<5	<5	mg/kg					
EL0735 : SuYonated 5 compounds										
5arbon disuYide	75-15-0	0.5	<0.5	<0.5	mg/kg					
EL073R: Fumigants										
2I2RrichYpropane	594-20-7	0.5	<0.5	<0.5	mg/kg					
1I2RrichYpropane	78-87-5	0.5	<0.5	<0.5	mg/kg					
cis6I1- 8RrichYpropyYne	10061-01-5	0.5	<0.5	<0.5	mg/kg					
trans6I1- 8RrichYpropyYne	10061-02-6	0.5	<0.5	<0.5	mg/kg					
1I2Rribromoethane)ERBV	106-93-4	0.5	<0.5	<0.5	mg/kg					
EL073E: HaYgenated Cyphatic 5 compounds										
RichYrodifYmoromethane	75-71-8	5	<5	<5	mg/kg					
5 hYbromethane	74-87-3	5	<5	<5	mg/kg					
@nyYchYride	75-01-4	5	<5	<5	mg/kg					
Bromomethane	74-83-9	5	<5	<5	mg/kg					
5 hYbroethane	75-00-3	5	<5	<5	mg/kg					
I richYrofYmoromethane	75-69-4	5	<5	<5	mg/kg					
1I16RrichYbroethane	75-35-4	0.5	<0.5	<0.5	mg/kg					
Edomethane	74-88-4	0.5	<0.5	<0.5	mg/kg					
trans6I2RrichYbroethane	156-60-5	0.5	<0.5	<0.5	mg/kg					
1I16RrichYbroethane	75-34-3	0.5	<0.5	<0.5	mg/kg					
cis6I2RrichYbroethane	156-59-2	0.5	<0.5	<0.5	mg/kg					
1I116R richYbroethane	71-55-6	0.5	<0.5	<0.5	mg/kg					
1I16RrichYpropyYne	563-58-6	0.5	<0.5	<0.5	mg/kg					
5arbon I etrachYride	56-23-5	0.5	<0.5	<0.5	mg/kg					
1I2RrichYbroethane	107-06-2	0.5	<0.5	<0.5	mg/kg					
I richYbroethane	79-01-6	0.5	<0.5	<0.5	mg/kg					
Ribromomethane	74-95-3	0.5	<0.5	<0.5	mg/kg					
1I1128 richYbroethane	79-00-5	0.5	<0.5	<0.5	mg/kg					
1I- 8RrichYpropane	142-28-9	0.5	<0.5	<0.5	mg/kg					
I etrachYroethane	127-18-4	0.5	<0.5	<0.5	mg/kg					
1I11128 etrachYroethane	630-20-6	0.5	<0.5	<0.5	mg/kg					
trans6I13RrichYbroXbutene	110-57-6	0.5	<0.5	<0.5	mg/kg					
cis6I13RrichYbroXbutene	1476-11-5	0.5	<0.5	<0.5	mg/kg					



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB23(014001)+ EM12093300040	SB24(0001) EM1209330004-	SB24(014001)+ EM12093300043	SB2+(0001) EM12093300047	SB2+(100011) EM12093300049
			Unit	Unit					
EL073E: Halogenated Cyclic 5 ompounds 65 omitted									
1112128 ethachloroethane	79-34-5	0.5	mg/kg	16-AUG-2012 14:10	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 richloropropane	96-18-4	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Lentachloroethane	76-01-7	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
11268Ribromo6-8chloropropane	96-12-8	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
EL073F: Halogenated Aromatic 5 ompounds									
5chlorobenzene	108-90-7	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
265chlorobenzene	95-49-8	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
365chlorobenzene	106-43-4	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 chlorobenzene	87-61-6	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
EL073Z: Irihalomethanes									
5chloroform	67-66-3	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromochloromethane	124-48-1	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
EL074C: Lenoic 5 ompounds									
Lenoic	108-95-2	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
265chloroenoic	95-57-8	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
26Methylenoic	95-48-7	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
-6,8,10Methylenoic	1319-77-3	0.5	mg/kg	16-AUG-2012 14:30	<1.0	<1.0	<1.0	<1.0	<1.0
20Ditropenoic	88-75-5	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
2138Trimethylenoic	105-67-9	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
2138Richloroenoic	120-83-2	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
2148Richloroenoic	87-65-0	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
365chloro6-Methylenoic	59-50-7	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
213148 richloroenoic	88-06-2	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
213148 richloroenoic	95-95-4	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Lentachloroenoic	87-86-5	1	mg/kg	16-AUG-2012 14:30	<1	<1	<1	<1	<1
EL074B: Lenoic Aromatic Hydrocarbons									
Daphthalene	91-20-3	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
26Methylnaphthalene	91-57-6	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
265chloronaphthalene	91-58-7	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Ccenaphthylene	208-96-8	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Ccenaphthene	83-32-9	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5
Lhenanthrene	85-01-8	0.5	mg/kg	16-AUG-2012 14:30	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB23(014001)+ EM12093300040	SB24(0001) EM1209330004-	SB24(014001)+ EM12093300043	SB2+(0001) EM12093300047	SB2+(100011) EM12093300049
			Unit	Unit					
EL074B: LoYnucYar Cromatic Hydrocarbons 65 continued									
Anthracene	120-12-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Lyrene	129-00-0	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzofluorenylacetamide	53-96-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Benzanthracene	56-55-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	218-01-9	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluoranthene	205-99-2 207-08-9	1			<1	<1	<1	<1	<1
7,12-dimethylbenzanthracene	57-97-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluorene	50-32-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1-methylanthracene	56-49-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trimethylbenzofluorene	193-39-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluorene	53-70-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Benzofluorenylamine	191-24-2	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Sum of LCHs	----	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
EL0745: L htha Yte Esters									
Rimethylyphta Yte	131-11-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Riethylyphta Yte	84-66-2	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Riethylyphta Yte	84-74-2	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Butylbenzoylphta Yte	85-68-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
bis(2-ethylhexyl)yphta Yte	117-81-7	5.0			<5.0	<5.0	<5.0	<5.0	<5.0
Riethylyphta Yte	117-84-0	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
EL074R: Dltrosamines									
Deltrosomethylamine	10695-95-6	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Deltrosodimethylamine	55-18-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Deltrosopyrrolidine	930-55-2	1.0			<1.0	<1.0	<1.0	<1.0	<1.0
Deltrosomorpholine	59-89-2	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Deltrosodimethylpropylamine	621-64-7	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Deltrosopiperidine	100-75-4	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Deltrosodibutylamine	924-16-3	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Deltrosodiphenylamine	86-30-6 122-39-4	1.0			<1.0	<1.0	<1.0	<1.0	<1.0
Methylamine	91-80-5	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
EL074E: Dltroaromatics and xetones									
2,6-toluene	109-06-8	0.5			<0.5	<0.5	<0.5	<0.5	<0.5
Ccetophenone	98-86-2	0.5			<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIR

Compound	CAS Number	LOR	Client sampling date / time		SB23(014001)+ EM12093300040	SB24(0001) EM1209330004-	SB24(014001)+ EM12093300043	SB2+(0001) EM12093300047	SB2+(100011) EM12093300049
			Unit	Unit					
EL074E: Nitroaromatics and xetones 65 continued									
Ditrobenzene	98-95-3	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
Bophorone	78-59-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
214RinitrotoYlene	606-20-2	1.0	mg/kg	16-AUG-2012 14:10	<1.0	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
216RinitrotoYlene	121-14-2	1.0	mg/kg	16-AUG-2012 14:10	<1.0	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
100aphthyYamine	134-32-7	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
300itroKuinoYne006/ide	56-57-5	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
400itro000Yidine	99-55-8	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
Czobenzene	103-33-3	1	mg/kg	16-AUG-2012 14:10	<1	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
11-148 rinitrobenzene	99-35-4	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
Lhenacetin	62-44-2	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
300minobiphenyY	92-67-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
LentachYronitrobenzene	82-68-8	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
Lronamide	23950-58-5	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
RimethyYaminoazobenzene	60-11-7	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
5hYrobenziYte	510-15-6	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
EL074F: Halobethers									
Bis)200hYroethyYether	111-44-4	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
Bis)200hYroetho/ y)methane	111-91-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
300hYrophenyYphenyYether	7005-72-3	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
300romophenyYphenyYether	101-55-3	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
EL074Z : 5hYbrinated Hydrocarbons									
11-000ichYrobenzene	541-73-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
113000ichYrobenzene	106-46-7	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
112000ichYrobenzene	95-50-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
He/ achYroethane	67-72-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
112130 richYrobenzene	120-82-1	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
He/ achYropropyYene	1888-71-7	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
He/ achYrobutadiene	87-68-3	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
He/ achYrocycYpentadiene	77-47-4	2.5	mg/kg	16-AUG-2012 14:10	<2.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
LentachYrobenzene	608-93-5	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
He/ achYrobenzene JH5 BV	118-74-1	1.0	mg/kg	16-AUG-2012 14:10	<1.0	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
EL074H: CniYnes and Benzidines									
CniYne	62-53-3	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
300hYroamiYne	106-47-8	0.5	mg/kg	16-AUG-2012 14:10	<0.5	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
200itroamiYne	88-74-4	1.0	mg/kg	16-AUG-2012 14:10	<1.0	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50
-000itroamiYne	99-09-2	1.0	mg/kg	16-AUG-2012 14:10	<1.0	16-AUG-2012 14:30	16-AUG-2012 14:30	16-AUG-2012 14:45	16-AUG-2012 14:50



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB23(014001)+ EM12093300040	SB24(0001) EM1209330004-	SB24(014001)+ EM12093300043	SB2+(0001) EM12093300047	SB2+(100011) EM12093300049
			Unit	Unit					
EL074H: Cnilynes and Benzimidines 65 continued									
Ribenzofuran	132-64-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
30DitroaniYne	100-01-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
5 arbazob	86-74-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
- l- RrichYrobenzidine	91-94-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL074P: OrganochYrine Lesticides									
aYhaaBH5	319-84-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
betaBH5	319-85-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
gammaaBH5	58-89-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
deYaBH5	319-86-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
HeptachYr	76-44-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
CYrin	309-00-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
HeptachYr epo/ ide	1024-57-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
aYhaaEndosuYan	959-98-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
313 RRE	72-55-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
RieYrin	60-57-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
betaEndosuYan	33213-65-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
313 RRR	72-54-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EndosuYan suYate	1031-07-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
313 RRI	50-29-3	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<1.0
EL074J: Organophosphorus Lesticides									
RichYr, os	62-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Rimethoate	60-51-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Riazinon	333-41-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
5hYrpyrifosmethylY	5698-13-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
MaYathion	121-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
5hYrpyrifos	2921-88-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
LirimphosethylY	23505-41-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
5hYrfen, inphos	470-90-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Lrothiofos	34643-46-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EL080(071: IotaYetroYum Hydrocarbons									
5 + 659 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
510 6513 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
514 6528 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB23(014001)+ 16-AUG-2012 14:10 EM12093300040	SB24(014001)+ 16-AUG-2012 14:30 EM12093300043	SB2+(014001) 16-AUG-2012 14:45 EM12093300047	SB2+(1106011) 16-AUG-2012 14:50 EM12093300049
EL080(071) : Iota Yletrouyum Hydrocarbons 65 continued								
529 65- + Fraction	----	100	mg/kg		<100	<100	<100	<100
510 65- + Fraction)sumV	----	50	mg/kg		<50	<50	<50	<50
EL080(071) : Iota Yletrouyum Hydrocarbons 6DELIM 2010 Rraft								
5 + 65 10 Fraction	----	10	mg/kg		<10	<10	<10	<10
>5 10 65 1 + Fraction	----	50	mg/kg		<50	<50	<50	<50
>5 1 + 65 - 3 Fraction	----	100	mg/kg		<100	<100	<100	<100
>5 - 3 65 30 Fraction	----	100	mg/kg		<100	<100	<100	<100
5 10 65 30 Fraction)sumV	----	50	mg/kg		<50	<50	<50	<50
EL21+ : Lerch Ybrate by N5 (MS								
Lerch Ybrate	7601-90-3	10.0	µg/kg		----	<10.0	<10.0	----
EL2- 1 : Ler Yuroocyt YCids and Su Yonates								
LFOS	1763-23-1	0.0005	mg/kg		013- +	010+44	011- 8	----
LFOC	335-67-1	0.0005	mg/kg		0100+7	0100- 0	010028	----
+2 FYorote Ymer Su Yonate)+2	27619-97-2	0.005	mg/kg		01128	010- +	01098	----
FtSV								
EL0+S : L5B Surrogate								
Recach Yrobipheny	2051-24-3	0.1	%		+318	8917	711-	7217
EL07S : @D5 Surrogates								
12Rrich YroethaneR3	17060-07-0	0.1	%		+814	7819	7411	8312
I o YleneR8	2037-26-5	0.1	%		+719	9411	8+13	9414
3BRomof Yrobenzene	460-00-4	0.1	%		7313	8+19	8312	9- 10
EL074S : Ccid E/ tractab Y Surrogates								
2FYuropheno Y	367-12-4	0.1	%		8- 1+	9711	101	9911
Lheno Yd+	13127-88-3	0.1	%		411-	7312	+ -12	+ -14
265 h Yrophenoy R3	93951-73-6	0.1	%		4318	7711	+ +14	+918
2131+R ribomopheno Y	118-79-6	0.1	%		3712	7111	4717	+011
EL0741 : Base(Deutra YE/ tractab Y Surrogates								
DitrobenzeneR4	4165-60-0	0.1	%		- +17	4- 19	3+10	3914
112Rrich YrobenzeneR3	2199-69-1	0.1	%		- 414	4019	3- 11	3- 12
2FYurobipheny Y	321-60-8	0.1	%		- +19	4717	411+	3918
CanthraceneR10	1719-06-8	0.1	%		481-	8214	701+	7217
3R erpheny YR13	1718-51-0	0.1	%		3018	481+	4+4	4118
EL080S : I LH)@BI EX Surrogates								
112Rrich YroethaneR3	17060-07-0	0.1	%		+814	8+14	8- 13	9- 18
I o YleneR8	2037-26-5	0.1	%		+419	921-	8- 19	9114
3BRomof Yrobenzene	460-00-4	0.1	%		7- 12	8+12	831+	9311



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 Work Order : EM1209440
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	Client sample ID			
			SB27(080)1	SB27(1106)11		SB28(080)1	SB28(0148)1+	SB29(080)1	
EC002 : pH (Soil)	----	0.1	318	41-	pH Unit	712	+12	-----	-----
EC044: Moisture 5 ontent	----	1.0	- 117	- 219	%	2718	2314	1914	1914
Moisture 5 ontent (dried ° 10- 5 V									
EZ 0041 : Iota Y Meta Y by B L CSES									
Crsenic	7440-38-2	5	<5	<5	ng/kg	+	<5	-----	-----
Barium	7440-39-3	10	70	210	ng/kg	70	30	-----	-----
Beryllium	7440-41-7	1	<1	1	ng/kg	1	<1	-----	-----
5 admium	7440-43-9	1	<1	<1	ng/kg	<1	<1	-----	-----
5 hromium	7440-47-3	2	22	37	ng/kg	48	34	-----	-----
5 oba Y	7440-48-4	2	3	9	ng/kg	11	3	-----	-----
5 opper	7440-50-8	5	+	10	ng/kg	18	10	-----	-----
Nead	7439-92-1	5	10	11	ng/kg	+4	1+	-----	-----
Manganese	7439-96-5	5	32	1-	ng/kg	21-	24	-----	-----
DicKEY	7440-02-0	2	9	1+	ng/kg	- 0	9	-----	-----
@nadium	7440-62-2	5	47	7-	ng/kg	107	89	-----	-----
vinc	7440-66-6	5	4	+	ng/kg	90	11	-----	-----
Nead	7439-92-1	5	----	----	ng/kg	----	----	20	-----
EZ 0- 41 : Iota Y Aeco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	<0.1	<0.1	ng/kg	<0.1	<0.1	-----	-----
EL0+-+ : Lo Y ch Y rinated Bipheny Y) L 5 BV									
Iota Y Lo Y ch Y rinated bipheny Y	----	0.10	<0.10	<0.10	ng/kg	<0.10	<0.10	-----	-----
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	<0.2	<0.2	ng/kg	<0.2	<0.2	-----	-----
I o Ylene	108-88-3	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
Ethy Ybenzene	100-41-4	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
meta 6 & para 6 Y Yene	108-38-3	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
Styrene	100-42-5	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
ortho 6 Y Yene	95-47-6	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
Isopropy Ybenzene	98-82-8	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
n 1- ropy Ybenzene	103-65-1	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
11- 14 6 rimethy Ybenzene	108-67-8	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
sec 6 Buty Ybenzene	135-98-8	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
11213 6 rimethy Ybenzene	95-63-6	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
tert 6 Buty Ybenzene	98-06-6	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
pe 6 Propy Y Ylene	99-87-6	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----
n 6 Buty Ybenzene	104-51-8	0.5	<0.5	<0.5	ng/kg	<0.5	<0.5	-----	-----



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SB27(0001)	SB27(110011)	SB28(0001)	SB28(0140)+	SB29(0001)
			Unit		EM12093300+1	EM12093300+-	EM12093300+4	EM12093300++	EM12093300+9
EL073B: Oxygenated 5 ompounds									
@nyYcacetate	108-05-4	5	mg/kg	<5	<5	<5	<5	<5	<5
2BButanone)MEx V	78-93-3	5	mg/kg	<5	<5	<5	<5	<5	<5
3MethyXpentanone)MBx V	108-10-1	5	mg/kg	<5	<5	<5	<5	<5	<5
2He/ anone)MBx V	591-78-6	5	mg/kg	<5	<5	<5	<5	<5	<5
EL0735 : SuYonated 5 ompounds									
5 arbon disuYide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL073R: Fumigants									
2I2RrichYpropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I2RrichYpropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis6I1- RrichYpropyYne	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans6I1- RrichYpropyYne	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I2Rribromoethane)ERBV	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL073E: HaYgenated Cyphatic 5 ompounds									
RichYrodiFYoromethane	75-71-8	5	mg/kg	<5	<5	<5	<5	<5	<5
5 hYromethane	74-87-3	5	mg/kg	<5	<5	<5	<5	<5	<5
@nyYchYride	75-01-4	5	mg/kg	<5	<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5	<5	<5
5 hYroethane	75-00-3	5	mg/kg	<5	<5	<5	<5	<5	<5
I richYrofFYoromethane	75-69-4	5	mg/kg	<5	<5	<5	<5	<5	<5
1I1RrichYroethane	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Edomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans6I2RrichYroethane	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I1RrichYroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis6I2RrichYroethane	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I1I1R richYroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I1RrichYpropyYne	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 arbon I etrachYride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I2RrichYroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
I richYroethane	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I1I2R richYroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I- RrichYpropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
I etrachYroethane	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1I1I1I2R etrachYroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans6I13RrichYbroXbutene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis6I13RrichYbroXbutene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB27(0001) 16-AUG-2012 15:40 EM120933000+1	SB27(110011) 16-AUG-2012 15:55 EM120933000+-	SB28(0001) 16-AUG-2012 16:30 EM120933000+4	SB28(014001)+ 16-AUG-2012 16:40 EM120933000++	SB29(0001) 16-AUG-2012 17:15 EM120933000+9
			Unit	Unit					
EL073E: Halogenated Cyclic 5 ompounds 65 omitted									
1112128 ethylpropane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 ethylpropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
112681bromo 6 ethylpropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL073F: Halogenated Aromatic 5 ompounds									
5 ethylbenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265 ethyltoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 ethyltoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1121-8 ethylbenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL073Z: I ethylmethanes									
5 ethylform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ribromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074C: L ethyl 5 ompounds									
L ethyl	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265 ethylpropheno	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
266 ethylpropheno	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
- 6 & 3 ethylpropheno	1319-77-3	0.5	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
267 ethylpropheno	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2136 ethylpropheno	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2136 ethylpropheno	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2146 ethylpropheno	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 ethylpropheno	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2131 ethylpropheno	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
213148 ethylpropheno	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lentachloroetheno	87-86-5	1	mg/kg	<1	<1	<1	<1	<1	<1
EL074B: L ethyl 5 ar Aromatic Hydrocarbons									
Daphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
266 ethylphenanthrene	91-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265 ethylphenanthrene	91-58-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cenaphthene	83-32-9	0.5	mg/kg	<0.5	<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	<0.5
Lethanathrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB27(0001) EM120933000+1	SB27(110611) 16-AUG-2012 15:55 EM120933000+-	SB28(0001) 16-AUG-2012 16:30 EM120933000+4	SB28(014001)+ 16-AUG-2012 16:40 EM120933000++	SB29(0001) 16-AUG-2012 17:15 EM120933000+9
			Unit	Unit					
EL074B: LoYnuc Ear Cromatic Hydrocarbons 65 continued									
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	----
Lyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Dibenzofluorenylacetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Benzanthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Fluorene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Benzofluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	<1	<1	<1	----
7,12-Dimethylbenzanthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Benzofluorene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
1-Methylanthracene	56-49-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
1,2,3-Trimethylbenzofluorene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Benzofluoranthene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Benzofluorene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Sum of LCHs	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
EL0745: L htha Yte Esters									
Dimethylfumarate	131-11-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylfumarate	84-66-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylsuccinate	84-74-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylmaleate	85-68-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylsebacate	117-81-7	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	----
Diethylhexadecanoate	117-84-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
EL074R: Dltrosamines									
Diethylamine	10695-95-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	930-55-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	----
Diethylamine	59-89-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	100-75-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	----
Diethylamine	91-80-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
EL074E: Dltroaromatics and xetones									
Diethylamine	109-06-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----
Diethylamine	98-86-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	----



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB27(0001) 16-AUG-2012 15:40 EM120933000+1	SB27(110611) 16-AUG-2012 15:55 EM120933000+-	SB28(0001) 16-AUG-2012 16:30 EM120933000+4	SB28(014001)+ 16-AUG-2012 16:40 EM120933000++	SB29(0001) 16-AUG-2012 17:15 EM120933000+9
			Unit	Unit					
EL074E: Dinitroaromatics and x etones 65 continued									
Ditrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
21H6Rinitroto Ylene	606-20-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
216Rinitroto Ylene	121-14-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10aphthy Yamine	134-32-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
30DitroKuino Yne06/ ide	56-57-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
40Ditro60to Yidine	99-55-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Czobenzene	103-33-3	1	mg/kg	<1	<1	<1	<1	<1	<1
11-148 rinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lhenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36CminobiphenyY	92-67-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lentach Yronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethy Yaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 h YrobenziYte	510-15-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074F: HaYethers									
Bis)26th YroethyYether	111-44-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis)26th Yroetho/ yMethane	111-91-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 h YrophenyYphenyYether	7005-72-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36BromophenyYphenyYether	101-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074Z : 5 h Ybrinated Hydrocarbons									
11-6Rrich Yrobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1136Rrich Yrobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1126Rrich Yrobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
112136 rich Yrobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach YropropyYne	1888-71-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yrobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach YrocycYpentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Lentach Yrobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
He/ ach Yrobenzene JH5 BV	118-74-1	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EL074H: CniYnes and Benzidines									
CniYne	62-53-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
365 h YroamiYne	106-47-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20DitroamiYne	88-74-4	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
-0DitroamiYne	99-09-2	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0



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 Work Order : EM1209440
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB27(080)1 EM12093300+1	SB27(1106)11 16-AUG-2012 15:55 EM12093300+-	SB28(080)1 16-AUG-2012 16:30 EM12093300+4	SB28(0148)1+ 16-AUG-2012 16:40 EM12093300++	SB29(080)1 16-AUG-2012 17:15 EM12093300+9
			Unit	Unit					
EL074H: Cnilynes and Benzimidines 65 continued									
Ribenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3,6-Ditroaniyne	100-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 arbazob	86-74-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
-1'-richyrobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL074P: Organochyrine Lesticides									
aphaBH5	319-84-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
betaBH5	319-85-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
gammaBH5	58-89-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
deltaBH5	319-86-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptach yr	76-44-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cyirin	309-00-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptach yr epo/ ide	1024-57-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
aphaEndosuYan	959-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRRE	72-55-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RieYirin	60-57-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
betaEndosuYan	33213-65-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRRR	72-54-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EndosuYan suYate	1031-07-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
313 RRII	50-29-3	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
EL074J: Organophosphorus Lesticides									
Rich yr, os	62-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Rimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Riazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 h'brpyrifosdmethyY	5698-13-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MaYathion	121-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 h'brpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LirimphosethyY	23505-41-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5 h'brfen, inphos	470-90-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lrothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EL080(071) : IotaYetroYum Hydrocarbons									
5 + 659 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10	<10
510 6513 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	<50
514-6528 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	700



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB27(0001)	SB27(110611)	SB28(0001)	SB28(01401+)	SB29(0001)
					EM120933000+1	EM120933000+-	EM120933000+4	EM120933000++	EM120933000+9
EL080(071): Iota Yletroum Hydrocarbons 65 continued									
529 65 - + Fraction	----	100	mg/kg	16-AUG-2012 15:40	<100	<100	<100	<100	<100
510 65 - + Fraction)sumV	----	50	mg/kg	16-AUG-2012 15:55	<50	<50	<50	<50	700
EL080(071): Iota Yleco, erab Y Hydrocarbons 6DELM 2010 Rraft									
5 + 65 10 Fraction	----	10	mg/kg	16-AUG-2012 15:55	<10	<10	<10	<10	<10
5 + 65 10 Fraction minus BI EX)F1V	----	10	mg/kg	16-AUG-2012 15:55	----	----	----	----	<10
>5 10 65 1+ Fraction	----	50	mg/kg	16-AUG-2012 15:55	<50	<50	<50	<50	100
>5 1+ 65 - 3 Fraction	----	100	mg/kg	16-AUG-2012 15:55	<100	<100	<100	<100	+30
>5 - 3 65 30 Fraction	----	100	mg/kg	16-AUG-2012 15:55	<100	<100	<100	<100	<100
>5 10 65 30 Fraction)sumV	----	50	mg/kg	16-AUG-2012 15:55	<50	<50	<50	<50	730
EL080: BI EX									
Benzene	71-43-2	0.2	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.2
I o Ylene	108-88-3	0.5	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.5
Ethy benzene	100-41-4	0.5	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.5
meta 6 & para 6 Ylene	108-38-3	0.5	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.5
ortho 6 Ylene	95-47-6	0.5	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.5
EL080: BI EXD									
Sum of BI EX	----	0.2	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.2
I ota Y Ylenes	1330-20-7	0.5	mg/kg	16-AUG-2012 15:55	----	----	----	----	<0.5
Daphtha Ylene	91-20-3	1	mg/kg	16-AUG-2012 15:55	----	----	----	----	<1
EL21+: Lerch Ybrate by N5 (MS									
Lerch Ybrate	7601-90-3	10.0	µg/kg	16-AUG-2012 15:55	<10.0	----	----	<10.0	----
EL2- 1: Ler Yroocoy Ccids and Su Yonates									
L FOS	1763-23-1	0.0005	mg/kg	16-AUG-2012 15:55	01270	----	----	01381	----
L FOC	335-67-1	0.0005	mg/kg	16-AUG-2012 15:55	0100+-	----	----	010111	----
+2 F Ylorote Ymer Su Yonate)+2	27619-97-2	0.005	mg/kg	16-AUG-2012 15:55	01024	----	----	010+0	----
FISV									
EL0++S: L 5 B Surrogate									
Recach Yrobipheny Y	2051-24-3	0.1	%	16-AUG-2012 15:55	871	7-18	8314	701+	----
EL073S: @D5 Surrogates									
112 Rrich broethane 6R3	17060-07-0	0.1	%	16-AUG-2012 15:55	7012	7118	+914	7717	----
I o Ylene 6R8	2037-26-5	0.1	%	16-AUG-2012 15:55	8310	8419	8213	9312	----
3Bromof Ylorobenzene	460-00-4	0.1	%	16-AUG-2012 15:55	8019	8119	7813	8911	----
EL074S: Ccid E/ tractab Y Surrogates									
2F Yloropheno Y	367-12-4	0.1	%	16-AUG-2012 15:55	100	9-1+	711+	8914	----
Lheno 6d+	13127-88-3	0.1	%	16-AUG-2012 15:55	+410	4913	3811	4+17	----
265 h Ybropheno 6R3	93951-73-6	0.1	%	16-AUG-2012 15:55	7114	+112	3718	+210	----



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 Work Order : EM1209440
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		SB27(080)1 16-AUG-2012 15:40 EM120933080+1	SB27(1106)11 16-AUG-2012 15:55 EM120933080+-	SB28(080)1 16-AUG-2012 16:30 EM120933080+4	SB28(0148)1+ 16-AUG-2012 16:40 EM120933080++	SB29(080)1 16-AUG-2012 17:15 EM120933080+9
			Unit	Unit					
EL074S: Ccid E/ tractabY Surrogates 65 ontinued									
2131+8 ribromophenoY	118-79-6	0.1	%		++18	3712	3410	4411	----
EL074I : Base(Deutra YE/ tractabY Surrogates									
DitrobenzeneR4	4165-60-0	0.1	%		4110	4814	4013	3118	----
1125R1chYrobenzeneR3	2199-69-1	0.1	%		391+	3114	- 213	3210	----
26FYuorobiphenyY	321-60-8	0.1	%		4+19	3410	- 41+	3317	----
CnthraceneR10	1719-06-8	0.1	%		++12	++13	411+	+118	----
38 erphenyYR13	1718-51-0	0.1	%		4318	3917	3012	371-	----
EL080S: I L H)@BL EX Surrogates									
1125R1chYroethaneR3	17060-07-0	0.1	%		8118	8119	771+	8719	901-
I oYleneR8	2037-26-5	0.1	%		811+	8- 14	801-	9110	9018
38Bromofuorobenzene	460-00-4	0.1	%		8118	8- 17	781+	9110	8910



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB29(014601)+ 16-AUG-2012 17:20 EM12093306070	SB-0(0601) 16-AUG-2012 17:35 EM12093306071	SB22(014601)+ 16-AUG-2012 17:40 EM12093306072	Q5 10(1+082012) 16-AUG-2012 13:10 EM1209330607-	Q5 12(1+082012) 16-AUG-2012 13:10 EM12093306073
EC002 : pH (Soil)		0.1	pH Unit					+12	412
EC044: Moisture content		1.0	%		2214	2112	1819	181-	2714
EZ 0041 : Iota Y Meta by B L CSES									
Crsenic	7440-38-2	5	mg/kg					<5	<5
Barium	7440-39-3	10	mg/kg					20	30
Beryllium	7440-41-7	1	mg/kg					<1	<1
5 admium	7440-43-9	1	mg/kg					<1	<1
5 hromium	7440-47-3	2	mg/kg					-0	38
5 obaY	7440-48-4	2	mg/kg					<2	-
5 opper	7440-50-8	5	mg/kg					+	9
Nead	7439-92-1	5	mg/kg					11	1-
Manganese	7439-96-5	5	mg/kg					18	20
DicKEY	7440-02-0	2	mg/kg					+	10
@nadium	7440-62-2	5	mg/kg					3+	78
vinc	7440-66-6	5	mg/kg					+	10
Nead	7439-92-1	5	mg/kg		13	14	1+	----	----
EZ 0-41 : Iota Y Aeco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.1	mg/kg					<0.1	<0.1
EL0+-: Lo Y ch Y rinatad Bipheny Y L 5 BV									
Iota Y Lo Y ch Y rinatad bipheny Y		0.10	mg/kg					<0.10	<0.10
EL073C: Monocyc Yc Cromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg					<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg					<0.5	<0.5
Ethy Y benzene	100-41-4	0.5	mg/kg					<0.5	<0.5
meta 6 & para 6 Y Ylene	108-38-3	0.5	mg/kg					<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg					<0.5	<0.5
ortho 6 Y Ylene	95-47-6	0.5	mg/kg					<0.5	<0.5
Isopropy Y benzene	98-82-8	0.5	mg/kg					<0.5	<0.5
n 1-ropY benzene	103-65-1	0.5	mg/kg					<0.5	<0.5
1-148 rimethY benzene	108-67-8	0.5	mg/kg					<0.5	<0.5
sec 6butY benzene	135-98-8	0.5	mg/kg					<0.5	<0.5
112138 rimethY benzene	95-63-6	0.5	mg/kg					<0.5	<0.5
tert 6butY benzene	98-06-6	0.5	mg/kg					<0.5	<0.5
pe 6propylo Ylene	99-87-6	0.5	mg/kg					<0.5	<0.5
n 6butY benzene	104-51-8	0.5	mg/kg					<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	SB29(014601)+ 16-AUG-2012 17:20 EM12093306070	SB-0(0601) 16-AUG-2012 17:35 EM12093306071	SB22(014601)+ 16-AUG-2012 17:40 EM12093306072	Q5 10(1+082012) 16-AUG-2012 13:10 EM12093306073	Q5 12(1+082012) 16-AUG-2012 13:10 EM12093306073	
EL073B: Oxygenated 5 compounds									
@nyYcacetate	108-05-4	5		***	***	***	<5	<5	
2BButanone)MEx V	78-93-3	5		***	***	***	<5	<5	
36Methylpentanone)MBx V	108-10-1	5		***	***	***	<5	<5	
26He/ anone)MBx V	591-78-6	5		***	***	***	<5	<5	
EL0735: Sulfonated 5 compounds									
5 arbon disulfide	75-15-0	0.5		***	***	***	<0.5	<0.5	
EL073R: Fumigants									
2126Rrich'bropropane	594-20-7	0.5		***	***	***	<0.5	<0.5	
1126Rrich'bropropane	78-87-5	0.5		***	***	***	<0.5	<0.5	
cis611- 6Rrich'bropropyl'ene	10061-01-5	0.5		***	***	***	<0.5	<0.5	
trans611- 6Rrich'bropropyl'ene	10061-02-6	0.5		***	***	***	<0.5	<0.5	
1126Rribromoethane)ERBV	106-93-4	0.5		***	***	***	<0.5	<0.5	
EL073E: Halogenated Cyclic 5 compounds									
Rich'brodif'chloromethane	75-71-8	5		***	***	***	<5	<5	
5 h'bro methane	74-87-3	5		***	***	***	<5	<5	
@ny'ch'bride	75-01-4	5		***	***	***	<5	<5	
Bromomethane	74-83-9	5		***	***	***	<5	<5	
5 h'broethane	75-00-3	5		***	***	***	<5	<5	
I rich'brof'chloromethane	75-69-4	5		***	***	***	<5	<5	
1116Rrich'broethene	75-35-4	0.5		***	***	***	<0.5	<0.5	
10domethane	74-88-4	0.5		***	***	***	<0.5	<0.5	
trans61126Rrich'broethene	156-60-5	0.5		***	***	***	<0.5	<0.5	
1116Rrich'broethane	75-34-3	0.5		***	***	***	<0.5	<0.5	
cis61126Rrich'broethene	156-59-2	0.5		***	***	***	<0.5	<0.5	
111116 rich'broethane	71-55-6	0.5		***	***	***	<0.5	<0.5	
1116Rrich'bropropyl'ene	563-58-6	0.5		***	***	***	<0.5	<0.5	
5 arbon I etrach'bride	56-23-5	0.5		***	***	***	<0.5	<0.5	
1126Rrich'broethane	107-06-2	0.5		***	***	***	<0.5	<0.5	
I rich'broethene	79-01-6	0.5		***	***	***	<0.5	<0.5	
Ribromomethane	74-95-3	0.5		***	***	***	<0.5	<0.5	
111126 rich'broethane	79-00-5	0.5		***	***	***	<0.5	<0.5	
11- 6Rrich'bropropane	142-28-9	0.5		***	***	***	<0.5	<0.5	
I etrach'broethene	127-18-4	0.5		***	***	***	<0.5	<0.5	
1111126 etrach'broethane	630-20-6	0.5		***	***	***	<0.5	<0.5	
trans61136Rrich'bro6butene	110-57-6	0.5		***	***	***	<0.5	<0.5	
cis61136Rrich'bro6butene	1476-11-5	0.5		***	***	***	<0.5	<0.5	



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	SB29(014601)+ 16-AUG-2012 17:20 EM12093306070	SB-0(0601) 16-AUG-2012 17:35 EM12093306071	SB22(014601)+ 16-AUG-2012 17:40 EM12093306072	Q5 10(1+082012) 16-AUG-2012 13:10 EM12093306073	Q5 12(1+082012) 16-AUG-2012 13:10 EM12093306073
EL073E: Halogenated C₉Phatic 5 compounds 65 continued								
1112128 etrach ^o roethane	79-34-5	0.5		***	***	***	<0.5	<0.5
1121-8 rich ^o bropropane	96-18-4	0.5		***	***	***	<0.5	<0.5
Lentach ^o roethane	76-01-7	0.5		***	***	***	<0.5	<0.5
1126Ribromo6 & h ^o bropropane	96-12-8	0.5		***	***	***	<0.5	<0.5
EL073F: Halogenated Cromatic 5 compounds								
5 h ^o brobenzene	108-90-7	0.5		***	***	***	<0.5	<0.5
Bromobenzene	108-86-1	0.5		***	***	***	<0.5	<0.5
265 h ^o broto ^u ene	95-49-8	0.5		***	***	***	<0.5	<0.5
365 h ^o broto ^u ene	106-43-4	0.5		***	***	***	<0.5	<0.5
1121-8 rich ^o brobenzene	87-61-6	0.5		***	***	***	<0.5	<0.5
EL073Z: I rih^omethanes								
5 h ^o broform	67-66-3	0.5		***	***	***	<0.5	<0.5
Bromodich ^o romethane	75-27-4	0.5		***	***	***	<0.5	<0.5
Ribromoch ^o romethane	124-48-1	0.5		***	***	***	<0.5	<0.5
Bromoform	75-25-2	0.5		***	***	***	<0.5	<0.5
EL074C: Lheno^uc 5 compounds								
Lheno ^u	108-95-2	0.5		***	***	***	<0.5	<0.5
265 h ^o bropheno ^u	95-57-8	0.5		***	***	***	<0.5	<0.5
26Methy ^u pheno ^u	95-48-7	0.5		***	***	***	<0.5	<0.5
- 6& 36Methy ^u pheno ^u	1319-77-3	0.5		***	***	***	<1.0	<1.0
26Ditropheno ^u	88-75-5	0.5		***	***	***	<0.5	<0.5
2136Rimethy ^u pheno ^u	105-67-9	0.5		***	***	***	<0.5	<0.5
2136Rrich ^o bropheno ^u	120-83-2	0.5		***	***	***	<0.5	<0.5
21+6Rrich ^o bropheno ^u	87-65-0	0.5		***	***	***	<0.5	<0.5
365 h ^o bro6 6Methy ^u pheno ^u	59-50-7	0.5		***	***	***	<0.5	<0.5
2131+6 rich ^o bropheno ^u	88-06-2	0.5		***	***	***	<0.5	<0.5
213148 rich ^o bropheno ^u	95-95-4	0.5		***	***	***	<0.5	<0.5
Lentach ^o bropheno ^u	87-86-5	1		***	***	***	<1	<1
EL074B: Lo^unu^uc 6ar Cromatic Hydrocarbons								
Daphtha ^u ene	91-20-3	0.5		***	***	***	<0.5	<0.5
26Methy ^u napitha ^u ene	91-57-6	0.5		***	***	***	<0.5	<0.5
265 h ^o bronaphitha ^u ene	91-58-7	0.5		***	***	***	<0.5	<0.5
Ccenaphthy ^u ene	208-96-8	0.5		***	***	***	<0.5	<0.5
Ccenaphthene	83-32-9	0.5		***	***	***	<0.5	<0.5
F ^u orene	86-73-7	0.5		***	***	***	<0.5	<0.5
Lhenanthrene	85-01-8	0.5		***	***	***	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	SB29(014601+)	SB-0(0601)	SB22(014601+)	Q5 10(1+082012)	Q5 12(1+082012)
			Unit	EM12093306070	EM12093306071	EM12093306072	EM12093306073	EM12093306073
EL074B: LoYnucYar Cromatic Hydrocarbons 65 continued								
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	<0.5
Lyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	<0.5
Dibenzofluorenylacetamide	53-96-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Benzanthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Fluorene	218-01-9	0.5	mg/kg	----	----	----	<0.5	<0.5
Benzofluoranthene	205-99-2	1	mg/kg	----	----	----	<1	<1
7,12-Dimethylbenzanthracene	57-97-6	0.5	mg/kg	----	----	----	<0.5	<0.5
Benzofluorene	50-32-8	0.5	mg/kg	----	----	----	<0.5	<0.5
1-Methylanthracene	56-49-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1,2,3,4-Tetrahydronaphthalene	193-39-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1,2,3,4-Tetrahydronaphthalene	53-70-3	0.5	mg/kg	----	----	----	<0.5	<0.5
1,2,3,4-Tetrahydronaphthalene	191-24-2	0.5	mg/kg	----	----	----	<0.5	<0.5
Sum of LCHs	----	0.5	mg/kg	----	----	----	<0.5	<0.5
EL0745: L htha Yte Esters								
Dimethylterephthalate	131-11-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylterephthalate	84-66-2	0.5	mg/kg	----	----	----	<0.5	<0.5
Diisobutylterephthalate	84-74-2	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylbutylterephthalate	85-68-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Bis(2-ethylhexyl)terephthalate	117-81-7	5.0	mg/kg	----	----	----	<5.0	<5.0
Diisobutylterephthalate	117-84-0	0.5	mg/kg	----	----	----	<0.5	<0.5
EL074R: Dltrosamines								
Diethylrosomethylamine	10695-95-6	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylrosodimethylamine	55-18-5	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylrosopyrrolidine	930-55-2	1.0	mg/kg	----	----	----	<1.0	<1.0
Diethylrosomorpholine	59-89-2	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylrosodimethylpropylamine	621-64-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylrosopiperidine	100-75-4	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylrosodimethylamine	924-16-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Diethylrosodiphenylamine	86-30-6	1.0	mg/kg	----	----	----	<1.0	<1.0
Riphenylamine	91-80-5	0.5	mg/kg	----	----	----	<0.5	<0.5
EL074E: Dltroaromatics and xetones								
2,4-Dichlorobenzophenone	109-06-8	0.5	mg/kg	----	----	----	<0.5	<0.5
Cetophenone	98-86-2	0.5	mg/kg	----	----	----	<0.5	<0.5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time	SB29(014601)+ 16-AUG-2012 17:20 EM12093306070	SB-0(0601) 16-AUG-2012 17:35 EM12093306071	SB22(014601)+ 16-AUG-2012 17:40 EM12093306072	Q5 10(1+082012) 16-AUG-2012 13:10 EM1209330607-	Q5 12(1+082012) 16-AUG-2012 13:10 EM12093306073
EL074E: Dinitroaromatics and x etones 65 continued								
Ditrobenzene	98-95-3	0.5		----	----	----	<0.5	<0.5
Bophorone	78-59-1	0.5		----	----	----	<0.5	<0.5
21+6Rinitroto Ylene	606-20-2	1.0		----	----	----	<1.0	<1.0
216Rinitroto Ylene	121-14-2	1.0		----	----	----	<1.0	<1.0
10aphthy Yamine	134-32-7	0.5		----	----	----	<0.5	<0.5
30DitroKuino Yne06/ ide	56-57-5	0.5		----	----	----	<0.5	<0.5
40Ditro60to Yidine	99-55-8	0.5		----	----	----	<0.5	<0.5
Czobenzene	103-33-3	1		----	----	----	<1	<1
11-148 rinitrobenzene	99-35-4	0.5		----	----	----	<0.5	<0.5
Lhenacetin	62-44-2	0.5		----	----	----	<0.5	<0.5
36CminobiphenyY	92-67-1	0.5		----	----	----	<0.5	<0.5
Lentach Yronitrobenzene	82-68-8	0.5		----	----	----	<0.5	<0.5
Lronamide	23950-58-5	0.5		----	----	----	<0.5	<0.5
Rimethy Yaminoazobenzene	60-11-7	0.5		----	----	----	<0.5	<0.5
5 h YrobenziYte	510-15-6	0.5		----	----	----	<0.5	<0.5
EL074F: HaYethers								
Bis)26th YroethyYether	111-44-4	0.5		----	----	----	<0.5	<0.5
Bis)26th Yroetho/ yMethane	111-91-1	0.5		----	----	----	<0.5	<0.5
365 h YrophenyYphenyYether	7005-72-3	0.5		----	----	----	<0.5	<0.5
36BromophenyYphenyYether	101-55-3	0.5		----	----	----	<0.5	<0.5
EL074Z : 5 h Ybrinated Hydrocarbons								
11-6Rrich Yrobenzene	541-73-1	0.5		----	----	----	<0.5	<0.5
116Rrich Yrobenzene	106-46-7	0.5		----	----	----	<0.5	<0.5
1126Rrich Yrobenzene	95-50-1	0.5		----	----	----	<0.5	<0.5
He/ ach Yroethane	67-72-1	0.5		----	----	----	<0.5	<0.5
112136 rich Yrobenzene	120-82-1	0.5		----	----	----	<0.5	<0.5
He/ ach YropropyYene	1888-71-7	0.5		----	----	----	<0.5	<0.5
He/ ach Yrobutadiene	87-68-3	0.5		----	----	----	<0.5	<0.5
He/ ach YrocycYpentadiene	77-47-4	2.5		----	----	----	<2.5	<2.5
Lentach Yrobenzene	608-93-5	0.5		----	----	----	<0.5	<0.5
He/ ach Yrobenzene JH5 BV	118-74-1	1.0		----	----	----	<1.0	<1.0
EL074H: CniYnes and Benzidines								
CniYne	62-53-3	0.5		----	----	----	<0.5	<0.5
365 h YroamiYne	106-47-8	0.5		----	----	----	<0.5	<0.5
260itroamiYne	88-74-4	1.0		----	----	----	<1.0	<1.0
-60itroamiYne	99-09-2	1.0		----	----	----	<1.0	<1.0



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Client sampling date / time		SB-0(0001)	SB22(014001)+	Q5 10(1+082012)	Q5 12(1+082012)
			Client sampling date / time	Unit				
EL074H: Cnilynes and Benzimidines 65 continued								
Ribenzofuran	132-64-9	0.5	16-AUG-2012 17:20	mg/kg	EM12093300070	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
3(0)itroaniYne	100-01-6	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
5 arbazob	86-74-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
-l- rrichyrobenzidine	91-94-1	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
EL074P: Organochyrine Lesticides								
aphaBH5	319-84-6	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
betaBH5	319-85-7	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
gammaBH5	58-89-9	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
deYabH5	319-86-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Heptach yr	76-44-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
CYrin	309-00-2	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Heptach yr epo/ ide	1024-57-3	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
aphaEndosuYan	959-98-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
3(3) rRE	72-55-9	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
RieYirin	60-57-1	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Endrin	72-20-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
betaEndosuYan	33213-65-9	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
3(3) rRR	72-54-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
EndosuYan suYate	1031-07-8	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
3(3) rRI	50-29-3	1.0	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
EL074J: Organophosphorus Lesticides								
Rich yr, os	62-73-7	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Rimethoate	60-51-5	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Riazinon	333-41-5	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
5 h yrpyrifosmethyY	5698-13-0	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
MaYathion	121-75-5	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Fenthion	55-38-9	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
5 h yrpyrifos	2921-88-2	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
LirimphosethyY	23505-41-1	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
5 h yrfen, inphos	470-90-6	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Lrothiofos	34643-46-4	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
Ethion	563-12-2	0.5	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
EL080(071): IotaYetroYum Hydrocarbons								
5 + 659 Fraction	----	10	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
510 6513 Fraction	----	50	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10
514 6528 Fraction	----	100	16-AUG-2012 17:35	mg/kg	EM12093300071	16-AUG-2012 17:40	EM12093300072	16-AUG-2012 13:10



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	SB29(014601)+ EM12093306070	SB-0(0601) EM12093306071	SB22(014601)+ EM12093306072	Q5 10(1+082012) EM12093306073	Q5 12(1+082012) EM12093306073
Sub-Matrix: SOIR									
Client sample ID									
Client sampling date / time									
EL080(071) : Iota Yl etro Ylum Hydrocarbons 65 continued									
5 29 65 - + Fraction	----	100	mg/kg	16-AUG-2012 17:20	<100	<100	<100	<100	<100
5 10 65 - + Fraction)sumV	----	50	mg/kg	16-AUG-2012 17:20	4-0	300	10-0	<50	<50
EL080(071) : Iota Yl aeco, erab Y Hydrocarbons 6 DELM 2010 Rraft									
5 + 65 10 Fraction	----	10	mg/kg	16-AUG-2012 17:35	<10	<10	<10	<10	<10
5 + 65 10 Fraction minus BI EX)F1V	----	10	mg/kg	16-AUG-2012 17:35	<10	<10	<10	<10	<10
>5 10 65 1+ Fraction	----	50	mg/kg	16-AUG-2012 17:35	90	<50	230	<50	<50
>5 1+ 65 - 3 Fraction	----	100	mg/kg	16-AUG-2012 17:35	370	- 90	8-0	<100	<100
>5 - 3 65 30 Fraction	----	100	mg/kg	16-AUG-2012 17:35	<100	<100	<100	<100	<100
>5 10 65 30 Fraction)sumV	----	50	mg/kg	16-AUG-2012 17:35	4+0	- 90	1070	<50	<50
EL080: BI EX									
Benzene	71-43-2	0.2	mg/kg	16-AUG-2012 17:35	<0.2	<0.2	<0.2	<0.2	<0.2
I o Ylene	108-88-3	0.5	mg/kg	16-AUG-2012 17:35	<0.5	<0.5	<0.5	<0.5	<0.5
Ethy Ybenzene	100-41-4	0.5	mg/kg	16-AUG-2012 17:35	<0.5	<0.5	<0.5	<0.5	<0.5
meta 6 & para 6 Y Ylene	108-38-3	0.5	mg/kg	16-AUG-2012 17:35	<0.5	<0.5	<0.5	<0.5	<0.5
ortho 6 Y Ylene	95-47-6	0.5	mg/kg	16-AUG-2012 17:35	<0.5	<0.5	<0.5	<0.5	<0.5
EL080: BI EXD									
Sum of BI EX	----	0.2	mg/kg	16-AUG-2012 17:35	<0.2	<0.2	<0.2	<0.2	<0.2
I o ta Y Y Yenes	1330-20-7	0.5	mg/kg	16-AUG-2012 17:35	<0.5	<0.5	<0.5	<0.5	<0.5
Daphtha Ylene	91-20-3	1	mg/kg	16-AUG-2012 17:35	<1	<1	<1	<1	<1
EL0++S: L5B Surrogate									
Recach Ybriopheny Y	2051-24-3	0.1	%	16-AUG-2012 17:40	----	----	----	903	731+
EL073S: @D5 Surrogates									
1126Rich Yroethane 6R3	17060-07-0	0.1	%	16-AUG-2012 17:40	----	----	----	8-12	+712
I o Ylene 6R8	2037-26-5	0.1	%	16-AUG-2012 17:40	----	----	----	9+9	7-1-
36Bromo Ylorobenzene	460-00-4	0.1	%	16-AUG-2012 17:40	----	----	----	924	771-
EL074S: Ccid E/ tractab Y Surrogates									
26F Yloropheno Y	367-12-4	0.1	%	16-AUG-2012 17:40	----	----	----	108	944
L heno Y 6R+	13127-88-3	0.1	%	16-AUG-2012 17:40	----	----	----	+819	481-
265 h Ybriopheno YR3	93951-73-6	0.1	%	16-AUG-2012 17:40	----	----	----	721+	+211
2131+6 ribromopheno Y	118-79-6	0.1	%	16-AUG-2012 17:40	----	----	----	++-	431-
EL0741 : Base(Deutra YE/ tractab Y Surrogates									
Ditrobenzene 6R4	4165-60-0	0.1	%	16-AUG-2012 17:40	----	----	----	4012	3217
1126Rich Ybriobenzene 6R3	2199-69-1	0.1	%	16-AUG-2012 17:40	----	----	----	3811	3114
26F Ylorobipheny Y	321-60-8	0.1	%	16-AUG-2012 17:40	----	----	----	4211	3317
Cnthracene 6R10	1719-06-8	0.1	%	16-AUG-2012 17:40	----	----	----	7012	+114
36 erpheny Y 6R13	1718-51-0	0.1	%	16-AUG-2012 17:40	----	----	----	4-17	3714



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 Project : 212163 1

Analytical Results

Sub-Matrix: SOIN

Compound	CAS Number	LOR	Client sample ID						
			Client sampling date / time	Unit	SB-0(0001)	SB22(014001+)	Q5 10(1+082012)	Q5 12(1+082012)	
EL080S: I L H)@BI EX Surrogates									
1126RICHYroethaneR3	17060-07-0	0.1	8318	831-	9+10	9119	+712		
I oVleneR8	2037-26-5	0.1	8+1-	8319	9418	9310	7112		
36BromofVorobenzene	460-00-4	0.1	831-	8-18	9314	9117	7812		



Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	Client sample ID	Q5 13(1+082012)	Q5 14(1+082012)	Q5 17(1+082012)	Q5 18(1+082012)
						EM12093306074	EM12093306077	EM12093306078	EM12093306079
EZ 020 : Iota Meta Y by B LAMS									
Crsernic	7440-38-2	0.001	mg/L						<0.001
Barium	7440-39-3	0.001	mg/L						<0.001
Beryllium	7440-41-7	0.001	mg/L						<0.001
5 admium	7440-43-9	0.0001	mg/L						<0.0001
5 oba Y	7440-48-4	0.001	mg/L						<0.001
5 hromium	7440-47-3	0.001	mg/L						<0.001
5 opper	7440-50-8	0.001	mg/L						<0.001
Manganese	7439-96-5	0.001	mg/L						<0.001
DicKEY	7440-02-0	0.001	mg/L						<0.001
Nead	7439-92-1	0.001	mg/L						<0.001
@nadium	7440-62-2	0.01	mg/L						<0.01
vinc	7440-66-6	0.005	mg/L						<0.005
EZ 0-41 : Iota Aeoco, erab Y Mercury by FRMS									
Mercury	7439-97-6	0.0001	mg/L						<0.0001
EL080(071 : Iota Yetro Yum Hydrocarbons									
5+ 659 Fraction		20	µg/L			<20		<20	<20
510 6513 Fraction		50	µg/L						<50
514 6528 Fraction		100	µg/L						<100
529 65- + Fraction		50	µg/L						<50
510 65- + Fraction)sumV		50	µg/L						<50
EL080(071 : Iota Y Aeoco, erab Y Hydrocarbons 6DELM 2010 Rraft									
5+ 6510 Fraction		20	µg/L			<20		<20	<20
5+ 6510 Fraction minus BI EX JF1V		20	µg/L						<20
>5 10 651+ Fraction		100	µg/L						<100
>5 1+ 65- .3 Fraction		100	µg/L						<100
>5- 3 6530 Fraction		100	µg/L						<100
>5 10 6530 Fraction)sumV		100	µg/L						<100
EL080: BI EXD									
Benzene	71-43-2	1	µg/L						<1
I o Vene	108-88-3	2	µg/L						<2
Ethy Benzene	100-41-4	2	µg/L						<2
meta6& para6Y Yene	108-38-3	2	µg/L						<2
ortho6Y Yene	95-47-6	2	µg/L						<2
I ota Y Y Yenes	1330-20-7	2	µg/L						<2
Sum of BI EX		1	µg/L						<1
Daphtha Yene	91-20-3	5	µg/L						<5



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Analytical Results

Sub-Matrix: WCIEA

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			Unit	Unit	Unit	Unit
EL080S: I L H)@BI EX Surrogates						
1126RICHYroethaneR3	17060-07-0	0.1	%	9810	8013	9919
I oVleneR8	2037-26-5	0.1	%	103	9718	10+
36BromofVorobenzene	460-00-4	0.1	%	8414	831+	8419
						10-
						104
						8+17
						102
						10-
						8119



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Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time		Client sample ID
				Q5 19(1+082012) 16-AUG-2012 17:45	Q5 20(1+082012) 16-AUG-2012 17:30	
EZ 020 : Iota Meta Y by B LAMS						
Crsenic	7440-38-2	0.001	mg/L	<0.001		6666
Barium	7440-39-3	0.001	mg/L	<0.001		6666
Beryllium	7440-41-7	0.001	mg/L	<0.001		6666
5 admium	7440-43-9	0.0001	mg/L	<0.0001		6666
5 oba Y	7440-48-4	0.001	mg/L	<0.001		6666
5 hromium	7440-47-3	0.001	mg/L	<0.001		6666
5 opper	7440-50-8	0.001	mg/L	<0.001		6666
Manganese	7439-96-5	0.001	mg/L	<0.001		6666
Dickey	7440-02-0	0.001	mg/L	<0.001		6666
Nead	7439-92-1	0.001	mg/L	<0.001		6666
@nadium	7440-62-2	0.01	mg/L	<0.01		6666
vinc	7440-66-6	0.005	mg/L	<0.005		6666
EZ 0-41 : Iota Aeoco, erab Y Mercury by FRMS						
Mercury	7439-97-6	0.0001	mg/L	<0.0001		6666
EL080(071 : Iota Yetro Yum Hydrocarbons						
5+ 659 Fraction		20	µg/L	<20	<20	6666
510 6513 Fraction		50	µg/L	<50		6666
514 6528 Fraction		100	µg/L	<100		6666
529 65- + Fraction		50	µg/L	<50		6666
^ 510 65- + Fraction)sumV		50	µg/L	<50		6666
EL080(071 : Iota Yaeoco, erab Y Hydrocarbons 6DELM 2010 Rraft						
5+ 6510 Fraction		20	µg/L	<20	<20	6666
^ 5+ 6510 Fraction minus BI EX JF1V		20	µg/L	<20		6666
>5 10 651+ Fraction		100	µg/L	<100		6666
>5 1+ 65- .3 Fraction		100	µg/L	<100		6666
>5- 3 6530 Fraction		100	µg/L	<100		6666
^ >5 10 6530 Fraction)sumV		100	µg/L	<100		6666
EL080: BI EXD						
Benzene	71-43-2	1	µg/L	<1		6666
I o Yene	108-88-3	2	µg/L	<2		6666
Ethy Ybenzene	100-41-4	2	µg/L	<2		6666
meta 6 & para 6 Y Yene	108-38-3	2	µg/L	<2		6666
ortho 6 Y Yene	95-47-6	2	µg/L	<2		6666
^ Iota Y Y Yenes	1330-20-7	2	µg/L	<2		6666
^ Sum of BI EX		1	µg/L	<1		6666
Daphtha Yene	91-20-3	5	µg/L	<5		6666



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Analytical Results

Sub-Matrix: WCIEA

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID
			Unit	Unit	
EL080S: I L H)@BI EX Surrogates					
1126161 Dichloroethane	17060-07-0	0.1	7-17	104	6666
107181 Ethylbenzene	2037-26-5	0.1	981-	103	6666
3681 Bromobenzene	460-00-4	0.1	7912	821-	6666



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Surrogate Control Limits

Sub-Matrix: SOIR		Recovery Limits (%)	
Compound	CAS Number	Low	High
EL044S: L5 B Surrogate			
Recach'robiphenyY	2051-24-3	33	133
EL073S: @D5 Surrogates			
112Rrich'broethaneR3	17060-07-0	62	122
I o'yleneR8	2037-26-5	64	120
3Bromof'lorobenzene	460-00-4	66	124
EL074S: Ccid E/ tractabl' Surrogates			
2F'lorophenoY	367-12-4	14	126
Lheno'bi+	13127-88-3	12.2	122
266 h'oropheno'R3	93951-73-6	14.2	127
2131+8 ribromophenoY	118-79-6	12.4	133
EL074I : Base(Deutra)E/ tractabl' Surrogates			
DifrobenzeneR4	4165-60-0	12.4	128
112Rrich'brobenzeneR3	2199-69-1	11.6	108
2F'lorobiphenyY	321-60-8	18.7	127
CntraceneR10	1719-06-8	28.5	142
3B erpheny'R13	1718-51-0	25.8	138
EL080S: I LH)@BI EX Surrogates			
112Rrich'broethaneR3	17060-07-0	57	129
I o'yleneR8	2037-26-5	58	120
3Bromof'lorobenzene	460-00-4	56	126
Sub-Matrix: WCI EA		Recovery Limits (%)	
Compound	CAS Number	Low	High
EL080S: I LH)@BI EX Surrogates			
112Rrich'broethaneR3	17060-07-0	73	131
I o'yleneR8	2037-26-5	72	124
3Bromof'lorobenzene	460-00-4	70	126



Environmental Division

QUALITY CONTROL REPORT

Work Order	: EM1209330	Page	: 1 of 3L
i lreEy	: 5 CARDO NCDE LREALITNI R	bar otayotC	: vEmtoED eEyAl MmmsnoE u elr octEe
i oEyaSy	: u A u RI ØMv bYAl v hvA	i oEyaSy	: AataHd o5gsoE
R55less	: 143 d ØdBUi h I YRM	R55less	: 3 Wesyall I 5 A7trEgnaile VØ Rcsyalra 21- 1
	BUI WYVMVØ , RUATI RbØ 21p4		
v .Dait	: D DatmØelosteCes+ laEer7retØD@C	v .Dait	: sataHØb5gsoE+ aiseEmtoØD
Tele7HbEe	: 6L1 02 98880100	Tele7HbEe	: 02 8439 9L4p
FaSerDre	: 6L1 02 98082411	FaSerDre	: 02 8439 9LpL
PtojeSy	: p1p1L2 1	Qi benel	: NVPu 1999 ASHe5cle B(2) aE5 RbA Qi A2 teqcteDeEy
Alye	: Faskmille	Maye Aad7les I eseime5	: 1- .RUG.p01p
i .Y.j EcDret	:	Øsce Maye	: p9.RUG.p01p
Aad7let	: u MI	NoØf sad7les teSeime5	: 81
Yt5et EcDret	:	NoØf sad7les aEalCse5	: 3-
Qcoye EcDret	: u v/331/1p		

THs te7oty sc7etse5es aEC 7tenmocs te7ot(y)s wnyH yhs tefeteEse@l esclys a77IC yo yhe sad7le(s) as scrDnye5@RII 7ages of yhs te7oty Hane reeE SheSke5 aE5 a77tome5 fot telease@

THs QcalnyCi oEYxol I e7oty SbEjare5 yhe followfEg rEfoTDaynoE:

- bar otayotCMc7ir8aye (MUP) I e7oty; I elayme PetSeEjage MiffeteEse (I PM) aE5 RSSe7yaESe bnd'ys
- u eyhb5 BlaeK (u B) aE5 bar otayotCi oEYxol A7ike (bi A) I e7oty; I eSomeitCaE5 RSSe7yaESe bnd'ys
- u aytx A7ike (u A) I e7oty; I eSomeitCaE5 RSSe7yaESe bnd'ys



WORLD RECOGNISED ACCREDITATION

Signatories

NRTR RSSe5nye5 bar otayotC8p4
 THs 5oScDeEy Has reeE ele5ytoEØalIC sngEe5 rC yhe acyHbtze5 sngEayotres rE5r8aye5 relow@vie5toEe5 sngEEg Has reeE Sattre5 ocyre SoD7iraESe wnyH 7toSe5ctes s7eSifre5 rE p1 i FI Paty11@

Signatories	Position	Accreditation Category
MhaEnFetEaE5o	AeEnot ØotgaE5i HeD'isy	u elr octEe ØotgaE5
baEa NgcØeE	AeEnot bi u A i HeD'isy	AC5EeCYtgaE5
NaESCWaeEg	AeEnot AeDmølayre ØsyxcDeEy i HeD'isy	u elr octEe YtgaE5
P'hialak Øy'hksoEe	bar otayotCu aeEaget . YtgaE5	AC5EeCYtgaE5



Page : p of 3L
 Wotk Ytset : v u 1p09330
 i lreEy : i RI MNy bRNv PØvI PTh bTM
 PtojeSy : p1p1L2 1

General Comments

The aEalQy6al 7toSe5ctes cse5 r C yH vEnmoEDEeEal MmmsnoE Hame reeE 5emelo7e5 foD esyrlrshH5 rEjetEaynoEallic teSogEze5 7toSe5ctes scSH as yHse 7cr lshH5 r C yH UAvPR, RPdR, RA aE5 NvPu @Ø Hbce 5emelo7e5 7toSe5ctes ate eD7loGe5 rE yH ar seESe of 5oSsDeEye5 syaE5at5s of r C SreEyteqces)@

WHete Donsycte 5eyetDreaynoE Hbs r eeE 7etfoiDe5, tescljy ate te7oty5 oEa 5tCwengHy r asr @

WHete a te7oty5 less yHE (X) tescljyrs HqHct yHE yH bYI , yHs DaCre 5ce yo HqHDonsycte SoEjeEy rEscffrreEysaD 7le (te5cSe5 wengHyed 7loGe5) of Dayrx rEjeteteESe@

WHete yH bYI of a te7oty5 tesclj5iffets froD syaE5at5 bYI , yHs DaCre 5ce yo HqHDonsycte SoEjeEy rEscffrreEysaD 7le (te5cSe5 wengHyed 7loGe5) of Dayrx rEjeteteESe@

- #eC: REoECDocs < l efets yo sad7les wHSHate Eoys7eSfrBalic7atyof yHs wotk of5et r cyfoiDe5 7atyof yH Qi 7toSess loy
- i RA NcDr et < i RA tegrsyCEcDret froD 5ayar ase DarEjaEe5 r Ci HeDf6al Rr syaSy5 Aetm6s i HeDf6al Rr syaSy5 Aetm6s is a 5mmsnoE of yH RDetr6aE i HeDf6al AoSteyQ@
- bYI < bIDryof te7otyEg
- I PM< l elayme PetSeEyage MifeteESe
- = < Ø5r6ayes fair65 Qi



Laboratory Duplicate (DUP) Report

The qcalyC SoEJol yetD barotayotC Mc7iH8aye tefets y o a taEoDjC seleS9e5 rEYalar otayotC s7In@bar otayotC 5c7iH8aye 7tom6e rEfofDayoE tegat5Eg DeyHb5 7teS8mE aE5 saD7le H8yetoEenQ@The 7etDnye5 taEges fot yE I elaymE PetSeY MemayoeE (I PM) of bar otayotC Mc7iH8aye ate s7eS8mE rE RbA u eyHb5 QWOvN/28 aE5 ate 5e7eE5eEy oE yE DagEyc5e of tesclys rE SoD7atsoE y o yE lenel of te7otyEg: I esclY X 10 yDes bYI : . No btdry. I esclYr eyweeE 10 aE5 p0 yD es bYI : . 0K . 40K : I esclY%p0 yD es bYI : . 0K . p0K @

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EC002 : Sp HYO(l) s H 5 NoQ 23t 4489s									
v u 1p09330.001	AB1p/0.0@	VR00p: 7d Valce	....	0@	7d UfEY	8@	8@	1@	0K . p0K
v u 1p09330.0p1	AB1- /0.0@	VR00p: 7d Valce	....	0@	7d UfEY	8@	8@	1@	0K . p0K
EC002 : Sp HYO(l) s H 5 NoQ 23t 44u0s									
v u 1p09330.031	ABpp/0.0@	VR00p: 7d Valce	....	0@	7d UfEY	4@	4@	1@	0K . p0K
v u 1p09330.0- 2	QI 10/1L08p01p	VR00p: 7d Valce	....	0@	7d UfEY	L@	4@	4@	0K . p0K
EC002 : Sp HYO(l) s H 5 NoQ 2380uuus									
v u 1p09330.0L1	ABp- /0.0@	VR00p: 7d Valce	....	0@	7d UfEY	3@	3@	0@	0K . p0K
v u 1p093- p.0L1	REoECDocs	VR00p: 7d Valce	....	0@	7d UfEY	- @	L@	1@	0K . p0K
EC0t t : Mo(l) Qre 5 oG@GQH 5 NoQ 23t 4a18s									
v u 1p09329.0p3	REoECDocs	VR044.102: u onsycte i oEYeY/(5tre5 + 102)K	....	1@	K	18@	18@	0@	0K . 40K
v u 1p09329.028	REoECDocs	VR044.102: u onsycte i oEYeY/(5tre5 + 102)K	....	1@	K	X1@	X1@	0@	No btdry
EC0t t : Mo(l) Qre 5 oG@GQH 5 NoQ 23t 4a1us									
v u 1p09330.01-	AB1L/0.0@	VR044.102: u onsycte i oEYeY/(5tre5 + 102)K	....	1@	K	p3@	p3@	0@	0K . p0K
v u 1p09330.02-	ABp1/0.0@	VR044.102: u onsycte i oEYeY/(5tre5 + 102)K	....	1@	K	p2@	p3@	3@	0K . p0K
EC0t t : Mo(l) Qre 5 oG@GQH 5 NoQ 23t 4a14s									
v u 1p09330.04-	ABpL/0.0@	VR044.102: u onsycte i oEYeY/(5tre5 + 102)K	....	1@	K	p3@	p2@	L@	0K . p0K
v u 1p09330.0- 2	QI 10/1L08p01p	VR044.102: u onsycte i oEYeY/(5tre5 + 102)K	....	1@	K	18@	19@	3@	0K . 40K
Eb00t I : I oQi MeQil - 6 B LcCEY H 5 NoQ 23t 4a34s									
v u 1p09330.001	AB1p/0.0@	VG004T: BetClneD	- 330.31.-	1	Dg/kg	1	1	0@	No btdry
		VG004T: i a5DneD	- 330.32.9	1	Dg/kg	X1	X1	0@	No btdry
		VG004T: BatneD	- 330.29.2	10	Dg/kg	L0	40	0@	No btdry
		VG004T: i HoDneD	- 330.3.- 2	p	Dg/kg	28	32	1p@	0K . p0K
		VG004T: i or ay	- 330.38.3	p	Dg/kg	13	12	0@	No btdry
		VG004T: Ni8kel	- 330.0p.0	p	Dg/kg	23	22	0@	0K . 40K
		VG004T: RitseE8	- 330.28.p	4	Dg/kg	X4	X4	0@	No btdry
		VG004T: i o77et	- 330.40.8	4	Dg/kg	1-	1L	- @	No btdry
		VG004T: bea5	- 329.9p.1	4	Dg/kg	1p	11	0@	No btdry
		VG004T: u aEgaEese	- 329.9L.4	4	Dg/kg	p8-	p40	12@	0K . p0K
		VG004T: VaEa5neD	- 330.Lp.p	4	Dg/kg	- 1	Lp	1p@	0K . 40K
		VG004T: ° rES	- 330.LL.L	4	Dg/kg	19	18	9@	No btdry
		VG004T: BetClneD	- 330.31.-	1	Dg/kg	1	1	0@	No btdry
		VG004T: i a5DneD	- 330.32.9	1	Dg/kg	X1	X1	0@	No btdry
		VG004T: BatneD	- 330.29.2	10	Dg/kg	20	30	0@	No btdry
v u 1p09330.018	AB1L/0@0@	VG004T: i HoDneD	- 330.3.- 2	p	Dg/kg	48	40	13@	0K . p0K



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 Wotk Ytset : vu 1p09330
 i IreEy : i RI MNy bRNv P0vI PTh bTM
 PtojeSy : p1p1L2 1

Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
Eb00t I : I oQi MeQil - 6 B LcCEY H 5 NoQ 23t 4a34s cvoCQcneD										
vu 1p09330.018		AB1L/0@0@0@	vG004T: i or aly	-330.38.3	p	Dg/kg	L	L	0@	No btdry
			vG004T: NiSkel	-330.0p.0	p	Dg/kg	12	14	1p@	No btdry
			vG004T: RiseE6	-330.28.p	4	Dg/kg	X4	X4	0@	No btdry
			vG004T: i o77et	-330.40.8	4	Dg/kg	10	1p	1p@	No btdry
			vG004T: bea5	-329.9p.1	4	Dg/kg	18	13	p8@	No btdry
			vG004T: u aEgaEese	-329.9L.4	4	Dg/kg	2p	41	3L@	OK . 40K
			vG004T: VaEa5reD	-330.Lp.p	4	Dg/kg	92	L2	29@	OK . 40K
			vG004T: ° iES	-330.LL.L	4	Dg/kg	1p	1p	0@	No btdry
Eb00t I : I oQi MeQil - 6 B LcCEY H 5 NoQ 23t 4at 0s										
vu 1p09330.031		ABpp/0.0@	vG004T: BetQlreD	-330.31.-	1	Dg/kg	X1	X1	0@	No btdry
			vG004T: i a5DreD	-330.32.9	1	Dg/kg	X1	X1	0@	No btdry
			vG004T: BatreD	-330.29.2	10	Dg/kg	10	p0	0@	No btdry
			vG004T: i HoDreD	-330.3.-.2	p	Dg/kg	22	2L	9@	OK . 40K
			vG004T: i or aly	-330.38.3	p	Dg/kg	Xp	2	32@	No btdry
			vG004T: NiSkel	-330.0p.0	p	Dg/kg	4	8	40@	No btdry
			vG004T: RiseE6	-330.28.p	4	Dg/kg	4	X4	0@	No btdry
			vG004T: i o77et	-330.40.8	4	Dg/kg	X4	4	0@	No btdry
			vG004T: bea5	-329.9p.1	4	Dg/kg	13	13	-@	No btdry
			vG004T: u aEgaEese	-329.9L.4	4	Dg/kg	11	p1	L1@	No btdry
			vG004T: VaEa5reD	-330.Lp.p	4	Dg/kg	103	1p1	13@	OK . p0K
			vG004T: ° iES	-330.LL.L	4	Dg/kg	X4	X4	0@	No btdry
vu 1p09330.049		ABpL/1@1@	vG004T: BetQlreD	-330.31.-	1	Dg/kg	X1	X1	0@	No btdry
			vG004T: i a5DreD	-330.32.9	1	Dg/kg	X1	X1	0@	No btdry
			vG004T: BatreD	-330.29.2	10	Dg/kg	180	p00	-@	OK . p0K
			vG004T: i HoDreD	-330.3.-.2	p	Dg/kg	33	33	0@	OK . p0K
			vG004T: i or aly	-330.38.3	p	Dg/kg	4	4	0@	No btdry
			vG004T: NiSkel	-330.0p.0	p	Dg/kg	11	11	0@	No btdry
			vG004T: RiseE6	-330.28.p	4	Dg/kg	X4	X4	0@	No btdry
			vG004T: i o77et	-330.40.8	4	Dg/kg	9	9	0@	No btdry
			vG004T: bea5	-329.9p.1	4	Dg/kg	11	11	0@	No btdry
			vG004T: u aEgaEese	-329.9L.4	4	Dg/kg	1p	11	9@	No btdry
			vG004T: VaEa5reD	-330.Lp.p	4	Dg/kg	L0	-3	pp@	OK . 40K
			vG004T: ° iES	-330.LL.L	4	Dg/kg	-	L	18@	No btdry
Eb0at I : I oQi AevoFery-ie Mervnr6 - 6 hRMY H 5 NoQ 23t 4a39s										
vu 1p09330.001		AB1p/0.0@	vG024T: u etSct	-329.9.-L	0@	Dg/kg	X0@	X0@	0@	No btdry
vu 1p09330.018		AB1L/0@0@	vG024T: u etSct	-329.9.-L	0@	Dg/kg	X0@	X0@	0@	No btdry
Eb0at I : I oQi AevoFery-ie Mervnr6 - 6 hRMY H 5 NoQ 23t 4at 1s										
vu 1p09330.031		ABpp/0.0@	vG024T: u etSct	-329.9.-L	0@	Dg/kg	X0@	X0@	0@	No btdry
vu 1p09330.049		ABpL/1@1@	vG024T: u etSct	-329.9.-L	0@	Dg/kg	X0@	X0@	0@	No btdry



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0u3C: Mo0ov6vi v CromyQv p6drovryr- oGI H 5 NoQ 23t 42t 1s cvoQQned									
v u 1p09330.031	ABpp/0.000	v P0- 3: v yHr eEzeEe	100.31.3	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: Deya. Z 7ata.&OeEe	108.28.2 10L.3p.2	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: AyQteEe	100.3p.4	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: otyhb.&OeEe	94.3-.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 0o7to7OreEzeEe	98.8p.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: E.Pto7Or eEzeEe	102.L4.1	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 100 TtnDeyhOr eEzeEe	108.L-.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: seS.BcyDr eEzeEe	124.98.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 100 TtnDeyhOr eEzeEe	94.L2.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: yetyBcyDr eEzeEe	98.0L.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 7.0o7to7OyoiceEe	99.8-.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: E.BcyDr eEzeEe	103.41.8	000	Dg/kg	X000	X000	000	No btDy
	ABp-/0.000	v P0- 3: BeEzeEe	- 1.32.p	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: ToIceEe	108.88.2	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: v yHr eEzeEe	100.31.3	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: Deya. Z 7ata.&OeEe	108.28.2 10L.3p.2	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: AyQteEe	100.3p.4	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: otyhb.&OeEe	94.3-.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 0o7to7OreEzeEe	98.8p.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: E.Pto7Or eEzeEe	102.L4.1	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 100 TtnDeyhOr eEzeEe	108.L-.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: seS.BcyDr eEzeEe	124.98.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 100 TtnDeyhOr eEzeEe	94.L2.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: yetyBcyDr eEzeEe	98.0L.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: 7.0o7to7OyoiceEe	99.8-.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 3: E.BcyDr eEzeEe	103.41.8	000	Dg/kg	X000	X000	000	No btDy
EL0u37 : Ox6geGyQd 5 omSonGal H 5 NoQ 23t 4239s									
v u 1p09330.001	AB1p/0.000	v P0- 3: VIED RS0aje	108.04.3	4	Dg/kg	X4	X4	000	No btDy
		v P0- 3: p.BcyEoEe (u v#)	- 8.92.2	4	Dg/kg	X4	X4	000	No btDy
		v P0- 3: 3.u eyH.p.7eEjEoEe (u 0B#)	108.10.1	4	Dg/kg	X4	X4	000	No btDy
		v P0- 3: p.d exaEoEe (u B#)	491.- 8.L	4	Dg/kg	X4	X4	000	No btDy
	AB1-/0.000	v P0- 3: VIED RS0aje	108.04.3	4	Dg/kg	X4	X4	000	No btDy
		v P0- 3: p.BcyEoEe (u v#)	- 8.92.2	4	Dg/kg	X4	X4	000	No btDy
		v P0- 3: 3.u eyH.p.7eEjEoEe (u 0B#)	108.10.1	4	Dg/kg	X4	X4	000	No btDy
		v P0- 3: p.d exaEoEe (u B#)	491.- 8.L	4	Dg/kg	X4	X4	000	No btDy
EL0u37 : Ox6geGyQd 5 omSonGal H 5 NoQ 23t 42t 1s									
v u 1p09330.031	ABpp/0.000	v P0- 3: VIED RS0aje	108.04.3	4	Dg/kg	X4	X4	000	No btDy



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0u37 : OX6geGyQd 5omSonGdl H 5 NoQ23t 42t 1s cvoQqCned									
v u 1p09330.031	ABpp/0.00	v P0-3: p.BcyEoEe (u v#)	- 8.92.2	4	Dg/kg	X4	X4	00	No btdry
		v P0-3: 3.u eyHQ.p.7eEjEoEe (u 0B#)	108.10.1	4	Dg/kg	X4	X4	00	No btdry
		v P0-3: p.d exaEoEe (u B#)	491.- 8.L	4	Dg/kg	X4	X4	00	No btdry
		v P0-3: VIEQ RSejEe	108.04.3	4	Dg/kg	X4	X4	00	No btdry
		v P0-3: p.BcyEoEe (u v#)	- 8.92.2	4	Dg/kg	X4	X4	00	No btdry
		v P0-3: 3.u eyHQ.p.7eEjEoEe (u 0B#)	108.10.1	4	Dg/kg	X4	X4	00	No btdry
		v P0-3: p.d exaEoEe (u B#)	491.- 8.L	4	Dg/kg	X4	X4	00	No btdry
EL0u35 : YnifoGyQd 5omSonGdl H 5 NoQ 23t 4239s									
v u 1p09330.001	AB1p/0.00	v P0-3: i atr oE 5nscifbe	- 4.14.0	00	Dg/kg	X00	X00	00	No btdry
v u 1p09330.0p1	AB1-/0.00	v P0-3: i atr oE 5nscifbe	- 4.14.0	00	Dg/kg	X00	X00	00	No btdry
EL0u35 : YnifoGyQd 5omSonGdl H 5 NoQ 23t 42t 1s									
v u 1p09330.031	ABpp/0.00	v P0-3: i atr oE 5nscifbe	- 4.14.0	00	Dg/kg	X00	X00	00	No btdry
v u 1p09330.0L1	ABp-/0.00	v P0-3: i atr oE 5nscifbe	- 4.14.0	00	Dg/kg	X00	X00	00	No btdry
EL0u3R: hnm(gyGQ H 5 NoQ23t 4239s									
v u 1p09330.001	AB1p/0.00	v P0-3: p0M6Hoto7to7aEe	493.p0.-	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10M6Hoto7to7aEe	- 8.8-. 4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: Ss.10M6Hoto7to7OeEe	100L1.01.4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: yaEs.10M6Hoto7to7OeEe	100L1.0p.L	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10Mir toD oeyHaeE (v MB)	10L.92.3	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: p0M6Hoto7to7aEe	493.p0.-	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10M6Hoto7to7aEe	- 8.8-. 4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: Ss.10M6Hoto7to7OeEe	100L1.01.4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: yaEs.10M6Hoto7to7OeEe	100L1.0p.L	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10Mir toD oeyHaeE (v MB)	10L.92.3	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: p0M6Hoto7to7aEe	493.p0.-	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10M6Hoto7to7aEe	- 8.8-. 4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: Ss.10M6Hoto7to7OeEe	100L1.01.4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: yaEs.10M6Hoto7to7OeEe	100L1.0p.L	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10Mir toD oeyHaeE (v MB)	10L.92.3	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: p0M6Hoto7to7aEe	493.p0.-	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10M6Hoto7to7aEe	- 8.8-. 4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: Ss.10M6Hoto7to7OeEe	100L1.01.4	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: yaEs.10M6Hoto7to7OeEe	100L1.0p.L	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 10Mir toD oeyHaeE (v MB)	10L.92.3	00	Dg/kg	X00	X00	00	No btdry
EL0u3E: pYioGeGyQd Cl(SByQv 5omSonGdl H 5 NoQ 23t 4239s									
v u 1p09330.001	AB1p/0.00	v P0-3: 10M6Hoto7to7aEe	- 4.24.3	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: 05oDeYHaeE	- 3.88.3	00	Dg/kg	X00	X00	00	No btdry
		v P0-3: yaEs.10M6Hoto7to7aEe	14L.L0.4	00	Dg/kg	X00	X00	00	No btdry



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
v u 1p09330.001	AB1p/0.000	EL0u3E: p yjogeOyQd C i SByQv 5 omSonGdl H 5 NoQ 23t 4239s cvoGQdGned	- 4.23.2	00	Dg/kg	X00	X00	00	No btdRy
			14L.49.p	00	Dg/kg	X00	X00	00	No btdRy
			- 1.44.L	00	Dg/kg	X00	X00	00	No btdRy
			4L2.48.L	00	Dg/kg	X00	X00	00	No btdRy
			4L.p2.4	00	Dg/kg	X00	X00	00	No btdRy
			10-.0L.p	00	Dg/kg	X00	X00	00	No btdRy
			- 9.01.L	00	Dg/kg	X00	X00	00	No btdRy
			- 3.94.2	00	Dg/kg	X00	X00	00	No btdRy
			- 9.00.4	00	Dg/kg	X00	X00	00	No btdRy
			13p.p8.9	00	Dg/kg	X00	X00	00	No btdRy
			1p-.18.3	00	Dg/kg	X00	X00	00	No btdRy
			L20.p0.L	00	Dg/kg	X00	X00	00	No btdRy
			110.4-.L	00	Dg/kg	X00	X00	00	No btdRy
			13-L.11.4	00	Dg/kg	X00	X00	00	No btdRy
			- 9.23.4	00	Dg/kg	X00	X00	00	No btdRy
			9L.18.3	00	Dg/kg	X00	X00	00	No btdRy
			- L.01.-	00	Dg/kg	X00	X00	00	No btdRy
			9L.1p.8	00	Dg/kg	X00	X00	00	No btdRy
			- 4.-.1.8	4	Dg/kg	X4	X4	00	No btdRy
			- 3.8-.2	4	Dg/kg	X4	X4	00	No btdRy
- 4.01.3	4	Dg/kg	X4	X4	00	No btdRy			
- 3.82.9	4	Dg/kg	X4	X4	00	No btdRy			
- 4.00.2	4	Dg/kg	X4	X4	00	No btdRy			
- 4.L9.3	4	Dg/kg	X4	X4	00	No btdRy			
- 4.24.3	00	Dg/kg	X00	X00	00	No btdRy			
- 3.88.3	00	Dg/kg	X00	X00	00	No btdRy			
14L.L0.4	00	Dg/kg	X00	X00	00	No btdRy			
- 4.23.2	00	Dg/kg	X00	X00	00	No btdRy			
14L.49.p	00	Dg/kg	X00	X00	00	No btdRy			
- 1.44.L	00	Dg/kg	X00	X00	00	No btdRy			
4L2.48.L	00	Dg/kg	X00	X00	00	No btdRy			
4L.p2.4	00	Dg/kg	X00	X00	00	No btdRy			
10-.0L.p	00	Dg/kg	X00	X00	00	No btdRy			
- 9.01.L	00	Dg/kg	X00	X00	00	No btdRy			
- 3.94.2	00	Dg/kg	X00	X00	00	No btdRy			
- 9.00.4	00	Dg/kg	X00	X00	00	No btdRy			
13p.p8.9	00	Dg/kg	X00	X00	00	No btdRy			
1p-.18.3	00	Dg/kg	X00	X00	00	No btdRy			
L20.p0.L	00	Dg/kg	X00	X00	00	No btdRy			
110.4-.L	00	Dg/kg	X00	X00	00	No btdRy			



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)		
						Original Result	Duplicate Result	RPD (%)			
EL0u3E: pYl0geGyQd Ci(SByQv 5 omSonGdl H 5 NoQ 23t 4239s cvoGQned v u 1p09330.0p1	ABT-70.000	v P0-3: Ss.1@M6Hoto.p.r.cyeEe	13- L.11.4	0@	Dg/kg	X0@	X0@	0@	No btdry		
		v P0-3: 1@2@TeyxaSHotoeyHaeE	- 9.23.4	0@	Dg/kg	X0@	X0@	0@	No btdry		
		v P0-3: 1@2@Ttr6Hoto7to7aEe	9L.18.3	0@	Dg/kg	X0@	X0@	0@	No btdry		
		v P0-3: PeEyaSHotoeyHaeE	- L.01.-	0@	Dg/kg	X0@	X0@	0@	No btdry		
		v P0-3: 1@Mir toDo.2.SHoto7to7aEe	9L.1p.8	0@	Dg/kg	X0@	X0@	0@	No btdry		
		v P0-3: M6Hoto5fllicotoDeyHaeE	- 4- 1.8	4	Dg/kg	X4	X4	0@	No btdry		
		v P0-3: i HotoDeyHaeE	- 3.8- .2	4	Dg/kg	X4	X4	0@	No btdry		
		v P0-3: VIEG SHot6e	- 4.01.3	4	Dg/kg	X4	X4	0@	No btdry		
		v P0-3: BtoDoDeyHaeE	- 3.82.9	4	Dg/kg	X4	X4	0@	No btdry		
		v P0-3: i HotoeyHaeE	- 4.00.2	4	Dg/kg	X4	X4	0@	No btdry		
		v P0-3: Ttr6Hoto7to7aEe	- 4.L9.3	4	Dg/kg	X4	X4	0@	No btdry		
		EL0u3E: pYl0geGyQd Ci(SByQv 5 omSonGdl H 5 NoQ 23t 42t 1s v u 1p09330.031	ABpp0.000	v P0-3: 1@M6SHotoeyHaeE	- 4.24.3	0@	Dg/kg	X0@	X0@	0@	No btdry
				v P0-3: 05oDeyHaeE	- 3.88.3	0@	Dg/kg	X0@	X0@	0@	No btdry
				v P0-3: yaEs.1@M6SHotoeyHaeE	14L.L0.4	0@	Dg/kg	X0@	X0@	0@	No btdry
v P0-3: 1@M6SHotoeyHaeE	- 4.23.2			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: Ss.1@M6SHotoeyHaeE	14L.49.p			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: 1@Ttr6HotoeyHaeE	- 1.44.L			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: 1@M6SHoto7to7aEe	4L2.48.L			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: i atr oE TeyxaSHot6e	4L.p2.4			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: 1@M6SHotoeyHaeE	10- .0L.p			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: Ttr6HotoeyHaeE	- 9.01.L			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: Mir toDoDeyHaeE	- 3.94.2			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: 1@Ttr6HotoeyHaeE	- 9.00.4			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: 1@M6SHoto7to7aEe	13p.p8.9			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: TeyxaSHotoeyHaeE	1p- .18.3			0@	Dg/kg	X0@	X0@	0@	No btdry		
v P0-3: 1@2@TeyxaSHotoeyHaeE	L20.p0.L	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: yaEs.1@M6Hoto.p.r.cyeEe	110.4- .L	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: Ss.1@M6Hoto.p.r.cyeEe	13- L.11.4	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: 1@2@TeyxaSHotoeyHaeE	- 9.23.4	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: 1@2@Ttr6Hoto7to7aEe	9L.18.3	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: PeEyaSHotoeyHaeE	- L.01.-	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: 1@Mir toDo.2.SHoto7to7aEe	9L.1p.8	0@	Dg/kg	X0@	X0@	0@	No btdry				
v P0-3: M6Hoto5fllicotoDeyHaeE	- 4- 1.8	4	Dg/kg	X4	X4	0@	No btdry				
v P0-3: i HotoDeyHaeE	- 3.8- .2	4	Dg/kg	X4	X4	0@	No btdry				
v P0-3: VIEG SHot6e	- 4.01.3	4	Dg/kg	X4	X4	0@	No btdry				
v P0-3: BtoDoDeyHaeE	- 3.82.9	4	Dg/kg	X4	X4	0@	No btdry				
v P0-3: i HotoeyHaeE	- 4.00.2	4	Dg/kg	X4	X4	0@	No btdry				
v P0-3: Ttr6Hoto7to7aEe	- 4.L9.3	4	Dg/kg	X4	X4	0@	No btdry				



Page : 10 of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0u3E: pYioGeYQd CIsByQv 5 omSonGdl H 5 NoQ 23t 42t 1s cvoGQnEd									
v u 1p09330.0L1	ABp- /0.00@	v P0- 3: 1@M6HotoeyH6Ee	- 4.24.3	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 05oDeYH6Ee	- 3.88.3	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: yAeS. 1@M6HotoeyH6Ee	14L.0.4	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6HotoeyH6Ee	- 4.23.2	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: Ss. 1@M6HotoeyH6Ee	14L.49.p	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6HotoeyH6Ee	- 1.44.L	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6Hoto7to7OeEe	4L2.48.L	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: i atr oE TexaSHot6e	4L.p2.4	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6HotoeyH6Ee	10- .0L.p	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: Tr6HotoeyH6Ee	- 9.01.L	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: Mir toDoDeYH6Ee	- 3.94.2	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6HotoeyH6Ee	- 9.00.4	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6Hoto7to7aEe	13p.p8.9	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: TexaSHotoeyH6Ee	1p- .18.3	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6HotoeyH6Ee	L20.p0.L	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: yAeS. 1@M6Hoto.p.r.cyeEe	110.4- .L	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: Ss. 1@M6Hoto.p.r.cyeEe	13- L.11.4	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6HotoeyH6Ee	- 9.23.4	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6Hoto7to7aEe	9L.18.3	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: PeEeSHotoeyH6Ee	- L.01.-	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6Hoto7to7aEe	9L.1p.8	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: M6Hoto5ificotoDeYH6Ee	- 4.- 1.8	4	Dg/kg	X4	X4	0@	No btdRy
		v P0- 3: i HotoDeYH6Ee	- 3.8.- 2	4	Dg/kg	X4	X4	0@	No btdRy
		v P0- 3: VIEG SHot6e	- 4.01.3	4	Dg/kg	X4	X4	0@	No btdRy
		v P0- 3: BtoDoDeYH6Ee	- 3.82.9	4	Dg/kg	X4	X4	0@	No btdRy
		v P0- 3: i HotoeyH6Ee	- 4.00.2	4	Dg/kg	X4	X4	0@	No btdRy
		v P0- 3: Tr6Hoto7to7aEe	- 4.L9.3	4	Dg/kg	X4	X4	0@	No btdRy
EL0u3h: pYioGeYQd CromyQv 5 omSonGdl H 5 NoQ 23t 4239s									
v u 1p09330.001	AB1p/0.00@	v P0- 3: i Hotor eZeEe	108.90.-	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: BtoDor eZeEe	108.8L.1	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: p.i HotoyliceEe	94.39.8	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 3.i HotoyliceEe	10L.32.3	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6Hoto7to7aEe	8- .L1.L	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: i Hotor eZeEe	108.90.-	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: BtoDor eZeEe	108.8L.1	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: p.i HotoyliceEe	94.39.8	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 3.i HotoyliceEe	10L.32.3	0@	Dg/kg	X0@	X0@	0@	No btdRy
		v P0- 3: 1@M6Hoto7to7aEe	8- .L1.L	0@	Dg/kg	X0@	X0@	0@	No btdRy
EL0u3h: pYioGeYQd CromyQv 5 omSonGdl H 5 NoQ 23t 42t 1s									



Page : 11 of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0vI PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID		Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EL0u3h: pYjogeQyQd CromyQv 5 omSonGdl H 5 NoQ 23t 42t 1s cvoGQgnd										
v u 1p09330.031		ABpp/0.000	v P0-3: i Hotor eZeEe	108.90.-	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoDor eZeEe	108.8L.1	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: p.i HotoylceEe	94.39.8	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: 3.i HotoylceEe	10L.32.3	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: 1000 Ttr8Hotor eZeEe	8- .L1.L	000	Dg/kg	X000	X000	000	No btdRy
v u 1p09330.0L1		ABp-/0.000	v P0-3: i Hotor eZeEe	108.90.-	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoDor eZeEe	108.8L.1	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: p.i HotoylceEe	94.39.8	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: 3.i HotoylceEe	10L.32.3	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: 1000 Ttr8Hotor eZeEe	8- .L1.L	000	Dg/kg	X000	X000	000	No btdRy
EL0u3b : I r(BYiomeQyGel H 5 NoQ 23t 4239s										
v u 1p09330.001		AB1p/0.000	v P0-3: i HotofofD	L- .LL.2	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoD056HotoDeyH0eEe	- 4.p- .3	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: Mtr toD0SHotoDeyH0eEe	1p3.38.1	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoDofotD	- 4.p4.p	000	Dg/kg	X000	X000	000	No btdRy
v u 1p09330.0p1		AB1-/0.000	v P0-3: i HotofofD	L- .LL.2	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoD056HotoDeyH0eEe	- 4.p- .3	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: Mtr toD0SHotoDeyH0eEe	1p3.38.1	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoDofotD	- 4.p4.p	000	Dg/kg	X000	X000	000	No btdRy
EL0u3b : I r(BYiomeQyGel H 5 NoQ 23t 42t 1s										
v u 1p09330.031		ABpp/0.000	v P0-3: i HotofofD	L- .LL.2	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoD056HotoDeyH0eEe	- 4.p- .3	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: Mtr toD0SHotoDeyH0eEe	1p3.38.1	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoDofotD	- 4.p4.p	000	Dg/kg	X000	X000	000	No btdRy
v u 1p09330.0L1		ABp-/0.000	v P0-3: i HotofofD	L- .LL.2	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoD056HotoDeyH0eEe	- 4.p- .3	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: Mtr toD0SHotoDeyH0eEe	1p3.38.1	000	Dg/kg	X000	X000	000	No btdRy
			v P0-3: BtoDofotD	- 4.p4.p	000	Dg/kg	X000	X000	000	No btdRy
EL0u3c : L BeGoi(v 5 omSonGdl H 5 NoQ 23t 4280s										
v u 1p09330.001		AB1p/0.000	v P0-4: PHeEol	108.94.p	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: p.i Hoto7HeEol	94.4- .8	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: p.u eyH07HeEol	94.38.-	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: 2. Z 3.u eyH07HeEol	1219.- - .2	000	Dg/kg	X100	X100	000	No btdRy
			v P0-4: p.Nyto7HeEol	88.- 4.4	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: p.MID eyH07HeEol	104.L- .9	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: p.MSHoto7HeEol	1p0.82.p	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: p.MSHoto7HeEol	8- .L4.0	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: 3.i Hoto.2.u eyH07HeEol	49.40.-	000	Dg/kg	X000	X000	000	No btdRy
			v P0-4: p000 Ttr8Hoto7HeEol	88.0L.p	000	Dg/kg	X000	X000	000	No btdRy



Page : 1p of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)		
						Original Result	Duplicate Result	RPD (%)			
v u 1p09330.001	AB1p/0.000	v P0-4: p00 TtrSHoto7HeEol	94.94.3	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: PeEeShoto7HeEol	8-.8L.4	1	Dg/kg	X1	X1	000	No btdry		
		v P0-4: PHeEol	108.94.p	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p.i Hoto7HeEol	94.4-.8	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p.u eyH07HeEol	94.38.-	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: Z 3.u eyH07HeEol	1219.-.-.2	000	Dg/kg	X100	X100	000	No btdry		
		v P0-4: p.Nlyto7HeEol	88.-4.4	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p00 MD eyH07HeEol	104.L-.9	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p00 MSHoto7HeEol	1p0.82.p	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p00 MSHoto7HeEol	8-.L4.0	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: 3.i Hoto.2.u eyH07HeEol	49.40.-	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p00 TtrSHoto7HeEol	88.0L.p	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: p00 TtrSHoto7HeEol	94.94.3	000	Dg/kg	X000	X000	000	No btdry		
		v P0-4: PeEeShoto7HeEol	8-.8L.4	1	Dg/kg	X1	X1	000	No btdry		
		v u 1p09330.031	ABpp/0.000	v P0-4: PHeEol	108.94.p	000	Dg/kg	X000	X000	000	No btdry
				v P0-4: p.i Hoto7HeEol	94.4-.8	000	Dg/kg	X000	X000	000	No btdry
v P0-4: p.u eyH07HeEol	94.38.-			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: Z 3.u eyH07HeEol	1219.-.-.2			000	Dg/kg	X100	X100	000	No btdry		
v P0-4: p.Nlyto7HeEol	88.-4.4			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p00 MD eyH07HeEol	104.L-.9			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p00 MSHoto7HeEol	1p0.82.p			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p00 MSHoto7HeEol	8-.L4.0			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: 3.i Hoto.2.u eyH07HeEol	49.40.-			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p00 TtrSHoto7HeEol	88.0L.p			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p00 TtrSHoto7HeEol	94.94.3			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: PeEeShoto7HeEol	8-.8L.4			1	Dg/kg	X1	X1	000	No btdry		
v P0-4: PHeEol	108.94.p			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p.i Hoto7HeEol	94.4-.8			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: p.u eyH07HeEol	94.38.-			000	Dg/kg	X000	X000	000	No btdry		
v P0-4: Z 3.u eyH07HeEol	1219.-.-.2			000	Dg/kg	X100	X100	000	No btdry		
v P0-4: p.Nlyto7HeEol	88.-4.4	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: p00 MD eyH07HeEol	104.L-.9	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: p00 MSHoto7HeEol	1p0.82.p	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: p00 MSHoto7HeEol	8-.L4.0	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: 3.i Hoto.2.u eyH07HeEol	49.40.-	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: p00 TtrSHoto7HeEol	88.0L.p	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: p00 TtrSHoto7HeEol	94.94.3	000	Dg/kg	X000	X000	000	No btdry				
v P0-4: PeEeShoto7HeEol	8-.8L.4	1	Dg/kg	X1	X1	000	No btdry				



Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
v u 1p09330.001	AB1p0.00@	EL0ut 7 : Lo16Gnvieyr CromyQv p6drovyr- oG H 5 NoQ 23t 4280s	91.p0.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			91.4-.L	0@	Dg/kg	X0@	X0@	0@	No btdry
			91.48.-	0@	Dg/kg	X0@	X0@	0@	No btdry
			p08.9L.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			82.2p.9	0@	Dg/kg	X0@	X0@	0@	No btdry
			8L.-2.-	0@	Dg/kg	X0@	X0@	0@	No btdry
			84.01.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			1p0.1p.-	0@	Dg/kg	X0@	X0@	0@	No btdry
			p0L.33.0	0@	Dg/kg	X0@	X0@	0@	No btdry
			1p9.00.0	0@	Dg/kg	X0@	X0@	0@	No btdry
			42.9L.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			4L.44.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			p18.01.9	0@	Dg/kg	X0@	X0@	0@	No btdry
			4.-9.-L	0@	Dg/kg	X0@	X0@	0@	No btdry
			40.2p.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			40.2p.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			192.29.4	0@	Dg/kg	X0@	X0@	0@	No btdry
			42.-0.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			191.p3.p	0@	Dg/kg	X0@	X0@	0@	No btdry
			....	0@	Dg/kg	X0@	X0@	0@	No btdry
p04.99.p	1	Dg/kg	X1	X1	0@	No btdry			
p0-.08.9									
v u 1p09330.0p1	AB1-/0.00@		91.p0.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			91.4-.L	0@	Dg/kg	X0@	X0@	0@	No btdry
			91.48.-	0@	Dg/kg	X0@	X0@	0@	No btdry
			p08.9L.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			82.2p.9	0@	Dg/kg	X0@	X0@	0@	No btdry
			8L.-2.-	0@	Dg/kg	X0@	X0@	0@	No btdry
			84.01.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			1p0.1p.-	0@	Dg/kg	X0@	X0@	0@	No btdry
			p0L.33.0	0@	Dg/kg	X0@	X0@	0@	No btdry
			1p9.00.0	0@	Dg/kg	X0@	X0@	0@	No btdry
			42.9L.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			4L.44.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			p18.01.9	0@	Dg/kg	X0@	X0@	0@	No btdry
			4.-9.-L	0@	Dg/kg	X0@	X0@	0@	No btdry
			40.2p.8	0@	Dg/kg	X0@	X0@	0@	No btdry
			4L.39.4	0@	Dg/kg	X0@	X0@	0@	No btdry
			192.29.4	0@	Dg/kg	X0@	X0@	0@	No btdry
			42.-0.2	0@	Dg/kg	X0@	X0@	0@	No btdry



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0vI PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID		Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EL0ut 7 : Lo16Gnvieyr CromyQv p6drovyr- oG H 5 NoQ 23t 4280s cvoGQGned										
v u 1p09330.0p1	ABp-10.00		v P0- 4: BeEzo(g@7etOeEe	191.p3.p	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: AcD of PRD s	....	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: BeEzo(r) Z BeEzo(k)ficotaEYeEe	p04.99.p	1	Dg/kg	X1	X1	0@	No btDy
			p0- .08.9							
EL0ut 7 : Lo16Gnvieyr CromyQv p6drovyr- oG H 5 NoQ 23t 4282s										
v u 1p09330.031	ABpp0.00		v P0- 4: Na7H4leEe	91.p0.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: p.u eyHOEa7H4leEe	91.4.- L	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: p.i HotoEa7H4leEe	91.48.-	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: RSeEa7H4OeEe	p08.9L.8	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: RSeEa7H4Ee	82.2p.9	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: FicoteEe	8L.- 2.-	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: PHeEaYeEe	84.01.8	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: REYHaSeEe	1p0.1p.-	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: FicotaEYeEe	p0L.33.0	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: PQeEe	1p9.00.0	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: N.p.FicoteEQ RSeEaDfse	42.9L.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: BeEz(a)EYHaSeEe	4L.44.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: i HCSeEe	p18.01.9	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: - @p.MDeyDr eEz(a)EYHaSeEe	4.- 9.- L	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: BeEzo(a)7QeEe	40.2p.8	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: 2.u eyHOSHlaEYeEe	4L.39.4	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: ESeEo(1 @2@5)7QeEe	192.29.4	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: MreEz(a)EYHaSeEe	42.- 0.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: BeEzo(g@7etOeEe	191.p3.p	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: AcD of PRD s	....	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: BeEzo(r) Z BeEzo(k)ficotaEYeEe	p04.99.p	1	Dg/kg	X1	X1	0@	No btDy
			p0- .08.9							
v u 1p09330.0L1										
		ABp-10.00	v P0- 4: Na7H4leEe	91.p0.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: p.u eyHOEa7H4leEe	91.4.- L	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: p.i HotoEa7H4leEe	91.48.-	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: RSeEa7H4OeEe	p08.9L.8	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: RSeEa7H4Ee	82.2p.9	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: FicoteEe	8L.- 2.-	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: PHeEaYeEe	84.01.8	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: REYHaSeEe	1p0.1p.-	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: FicotaEYeEe	p0L.33.0	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: PQeEe	1p9.00.0	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: N.p.FicoteEQ RSeEaDfse	42.9L.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: BeEz(a)EYHaSeEe	4L.44.2	0@	Dg/kg	X0@	X0@	0@	No btDy
			v P0- 4: i HCSeEe	p18.01.9	0@	Dg/kg	X0@	X0@	0@	No btDy



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Ac r . u aYx: YORN		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EL0ut 7 : L0i6Gnvieyr CromyQv p6drovyr- oG H 5 NoQ 23t 4282s cv0GQgNed											
v u 1p09330.0L1	ABp- /0.00@	v P0- 4: - @p. MDeyHr eEZ(a)aEYHaS8Ee v P0- 4: BeEzo(a)7QeEe v P0- 4: 2. u eYHSHlaEYHeEe v P0- 4: @EeEo(1 @2@5)7QeEe v P0- 4: MreEZ(a@a)EYHaS8Ee v P0- 4: BeEzo(g@7)etQeEe v P0- 4: AcD of PRd s v P0- 4: BeEzo(r) Z BeEzo(k)ficotaEYHeEe	4- . 9- . L 40.2p.8 4L.39.4 192.29.4 42- .0.2 191.p3.p p04.99.p p0- .08.9	0@ 0@ 0@ 0@ 0@ 0@ 0@ 1	Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg	X0@ X0@ X0@ X0@ X0@ X0@ X0@ X1	X0@ X0@ X0@ X0@ X0@ X0@ X0@ X1	0@ 0@ 0@ 0@ 0@ 0@ 0@ 0@	No btDy No btDy No btDy No btDy No btDy No btDy No btDy No btDy		
EL0ut 5 : LB@yiy@ EI @rl H 5 NoQ 23t 4280s											
v u 1p09330.001	AB1p/0.00@	v P0- 4: MDeyHQ 7HyBlaye v P0- 4: MreYHQ 7HyBlaye v P0- 4: MhErcyQ 7HyBlaye v P0- 4: BcyD r eEzQ 7HyBlaye v P0- 4: MhE oSjQ7HyBlaye v P0- 4: rrs(p.eYHHexC) 7HyBlaye v P0- 4: MDeyHQ 7HyBlaye v P0- 4: MreYHQ 7HyBlaye v P0- 4: MhErcyQ 7HyBlaye v P0- 4: BcyD r eEzQ 7HyBlaye v P0- 4: MhE oSjQ7HyBlaye v P0- 4: rrs(p.eYHHexC) 7HyBlaye	121.11.2 83.LL.p 83.- 3.p 84.L8.- 11- .83.0 11- .81.- 121.11.2 83.LL.p 83.- 3.p 84.L8.- 11- .83.0 11- .81.-	0@ 0@ 0@ 0@ 0@ 4@ 0@ 0@ 0@ 0@ 4@	Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg	X0@ X0@ X0@ X0@ X0@ X4@ X0@ X0@ X0@ X0@ X4@	X0@ X0@ X0@ X0@ X0@ X4@ X0@ X0@ X0@ X0@ X4@	0@ 0@ 0@ 0@ 0@ 0@ 0@ 0@ 0@ 0@ 0@	No btDy No btDy No btDy No btDy No btDy No btDy No btDy No btDy No btDy No btDy No btDy		
v u 1p09330.0p1	AB1- /0.00@	v P0- 4: MDeyHQ 7HyBlaye v P0- 4: MreYHQ 7HyBlaye v P0- 4: MhErcyQ 7HyBlaye v P0- 4: BcyD r eEzQ 7HyBlaye v P0- 4: MhE oSjQ7HyBlaye v P0- 4: rrs(p.eYHHexC) 7HyBlaye	121.11.2 83.LL.p 83.- 3.p 84.L8.- 11- .83.0 11- .81.-	0@ 0@ 0@ 0@ 0@ 4@	Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg	X0@ X0@ X0@ X0@ X0@ X4@	X0@ X0@ X0@ X0@ X0@ X4@	0@ 0@ 0@ 0@ 0@ 0@	No btDy No btDy No btDy No btDy No btDy No btDy		
EL0ut 5 : LB@yiy@ EI @rl H 5 NoQ 23t 4282s											
v u 1p09330.031	ABpp/0.00@	v P0- 4: MDeyHQ 7HyBlaye v P0- 4: MreYHQ 7HyBlaye v P0- 4: MhErcyQ 7HyBlaye v P0- 4: BcyD r eEzQ 7HyBlaye v P0- 4: MhE oSjQ7HyBlaye v P0- 4: rrs(p.eYHHexC) 7HyBlaye	121.11.2 83.LL.p 83.- 3.p 84.L8.- 11- .83.0 11- .81.-	0@ 0@ 0@ 0@ 0@ 4@	Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg	X0@ X0@ X0@ X0@ X0@ X4@	X0@ X0@ X0@ X0@ X0@ X4@	0@ 0@ 0@ 0@ 0@ 0@	No btDy No btDy No btDy No btDy No btDy No btDy		
v u 1p09330.0L1	ABp- /0.00@	v P0- 4: MDeyHQ 7HyBlaye v P0- 4: MreYHQ 7HyBlaye v P0- 4: MhErcyQ 7HyBlaye v P0- 4: BcyD r eEzQ 7HyBlaye v P0- 4: MhE oSjQ7HyBlaye v P0- 4: rrs(p.eYHHexC) 7HyBlaye	121.11.2 83.LL.p 83.- 3.p 84.L8.- 11- .83.0 11- .81.-	0@ 0@ 0@ 0@ 0@ 4@	Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg Dg/kg	X0@ X0@ X0@ X0@ X0@ X4@	X0@ X0@ X0@ X0@ X0@ X4@	0@ 0@ 0@ 0@ 0@ 0@	No btDy No btDy No btDy No btDy No btDy No btDy		
EL0ut R: D(QoI ym(CeI H 5 NoQ 23t 4280s											
v u 1p09330.001	AB1p/0.00@	v P0- 4: N.NiytoSDeyHOeYH0aDfEe v P0- 4: N.NiytoS5reyH0aDfEe v P0- 4: N.NiytoSDot7H0fEe	10494.94.L 44.18.4 49.89.p	0@ 0@ 0@	Dg/kg Dg/kg Dg/kg	X0@ X0@ X0@	X0@ X0@ X0@	0@ 0@ 0@	No btDy No btDy No btDy		



Page : 1L of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0ut R: D(QoL ym(Gel H 5 NoQ 23t 4280s cvoGQnEd v u 1p09330.001	AB1p/0.00@	v P0- 4: N.Njytoso5nE.7to7QaD rfe	Lp1.L3.-	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso7rretid rfe	100.- 4.3	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5rcyQaD rfe	9p3.1L.2	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: u eyH7QheEe	91.80.4	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso7Qtolir rfe	920.44.p	1@	Dg/kg	X1@	X1@	0@	No btDy
		v P0- 4: N.Njytoso5rHecQ Z M7rHecQaD rfe	8L.20.L 1pp.29.3	1@	Dg/kg	X1@	X1@	0@	No btDy
		v P0- 4: N.NjytosoDeYDeYHJaD rfe	10494.94.L	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5reYHJaD rfe	44.18.4	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.NjytosoDot7Hol rfe	49.89.p	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5nE.7to7QaD rfe	Lp1.L3.-	0@	Dg/kg	X0@	X0@	0@	No btDy
EL0ut R: D(QoL ym(Gel H 5 NoQ 23t 4282s v u 1p09330.031	ABpp/0.00@	v P0- 4: N.NjytosoDeYDeYHJaD rfe	10494.94.L	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5reYHJaD rfe	44.18.4	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.NjytosoDot7Hol rfe	49.89.p	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5nE.7to7QaD rfe	Lp1.L3.-	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso7rretid rfe	100.- 4.3	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5rcyQaD rfe	9p3.1L.2	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: u eyH7QheEe	91.80.4	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso7Qtolir rfe	920.44.p	1@	Dg/kg	X1@	X1@	0@	No btDy
		v P0- 4: N.Njytoso5rHecQ Z M7rHecQaD rfe	8L.20.L 1pp.29.3	1@	Dg/kg	X1@	X1@	0@	No btDy
		v P0- 4: N.NjytosoDeYDeYHJaD rfe	10494.94.L	0@	Dg/kg	X0@	X0@	0@	No btDy
EL0ut E: D(QoyromyQv I yG Ke@Gel H 5 NoQ 23t 4280s v u 1p09330.001	AB1p/0.00@	v P0- 4: N.Njytoso5reYHJaD rfe	44.18.4	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.NjytosoDot7Hol rfe	49.89.p	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5nE.7to7QaD rfe	Lp1.L3.-	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso7rretid rfe	100.- 4.3	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso5rcyQaD rfe	9p3.1L.2	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: u eyH7QheEe	91.80.4	0@	Dg/kg	X0@	X0@	0@	No btDy
		v P0- 4: N.Njytoso7Qtolir rfe	920.44.p	1@	Dg/kg	X1@	X1@	0@	No btDy
		v P0- 4: N.Njytoso5rHecQ Z M7rHecQaD rfe	8L.20.L 1pp.29.3	1@	Dg/kg	X1@	X1@	0@	No btDy
		v P0- 4: p.PiSol rfe	109.0L.8	0@	Dg/kg	X0@	X0@	0@	No btDy



Page : 1- of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtojeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
v u 1p09330.001	AB1p/0.00	v P0- 4: RSeyp7H8oEe	98.8L.p	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: Ntfor eZeEe	98.94.2	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 0o7HotoEe	- 8.49.1	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 1.Na7HyQaDfEe	123.2p.-	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 3.NtfoqoEoIfe.N.oxrfe	4L.4-.4	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 4.Ntfo.o.yoIc8rEe	99.44.8	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 1@TifEyor eZeEe	99.24.3	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: PHeEaSeYfE	Lp.33.p	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 3.RDIEor r7H8EG	9p.L-.1	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: PeEeSHotoEyor eZeEe	8p.L8.8	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: PtoEaDf8e	p2940.48.4	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: MIDeyH8aDf8oazor eZeEe	L0.11.-	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: i Hotor eZ8t8ye	410.14.L	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: Rzor eZeEe	102.22.2	1	Dg/kg	X1	X1	0@	No bitDy
		v P0- 4: p@MIEYoyolceEe	L0L.p0.p	1@	Dg/kg	X1@	X1@	0@	No bitDy
		v P0- 4: p@MIEYoyolceEe	1p1.13.p	1@	Dg/kg	X1@	X1@	0@	No bitDy
		v P0- 4: p.Pi8olIEe	109.0L.8	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: RSeyp7H8oEe	98.8L.p	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: Ntfor eZeEe	98.94.2	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 0o7HotoEe	- 8.49.1	0@	Dg/kg	X0@	X0@	0@	No bitDy
v P0- 4: 1.Na7HyQaDfEe	123.2p.-	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: 3.NtfoqoEoIfe.N.oxrfe	4L.4-.4	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: 4.Ntfo.o.yoIc8rEe	99.44.8	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: 1@TifEyor eZeEe	99.24.3	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: PHeEaSeYfE	Lp.33.p	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: 3.RDIEor r7H8EG	9p.L-.1	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: PeEeSHotoEyor eZeEe	8p.L8.8	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: PtoEaDf8e	p2940.48.4	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: MIDeyH8aDf8oazor eZeEe	L0.11.-	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: i Hotor eZ8t8ye	410.14.L	0@	Dg/kg	X0@	X0@	0@	No bitDy		
v P0- 4: Rzor eZeEe	102.22.2	1	Dg/kg	X1	X1	0@	No bitDy		
v P0- 4: p@MIEYoyolceEe	L0L.p0.p	1@	Dg/kg	X1@	X1@	0@	No bitDy		
v P0- 4: p@MIEYoyolceEe	1p1.13.p	1@	Dg/kg	X1@	X1@	0@	No bitDy		
EL0ut E: D(QoyromyQvI yGd Ke@Gel H 5 NoQ23t 4282s	ABpp/0.00	v P0- 4: p.Pi8olIEe	109.0L.8	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: RSeyp7H8oEe	98.8L.p	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: Ntfor eZeEe	98.94.2	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 0o7HotoEe	- 8.49.1	0@	Dg/kg	X0@	X0@	0@	No bitDy
		v P0- 4: 1.Na7HyQaDfEe	123.2p.-	0@	Dg/kg	X0@	X0@	0@	No bitDy



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0ut h: D(QoyromyQMI yGd Ke0Gel H 5 NoQ 23t 4282s cvoGQ0ned									
v u 1p09330.031	ABpp/0.000	v P0- 4: 3.NyfoqciEolEe.N.oxrEe	4L.4-.4	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Nyfo o.yolcEe	99.44.8	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 100 TifEyor eEzeEe	99.24.3	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: PHEaSeYf	Lp.33.p	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.RDfEor rHEEG	9p.L-.1	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: PeEjaSHotoEyor eEzeEe	8p.L8.8	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: PtoEaDfEe	p2940.48.4	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: MDeyHGaDfEcozor eEzeEe	L0.11.-	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: i Hotor eEzrlaye	410.14.L	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Rzor eEzeEe	102.22.2	1	Dg/kg	X1	X1	00	No btdry
		v P0- 4: p0MEryoyolceEe	L0L.p0.p	10	Dg/kg	X10	X10	00	No btdry
		v P0- 4: p0MEryoyolceEe	1p1.13.p	10	Dg/kg	X10	X10	00	No btdry
		v P0- 4: p.PfSolEe	109.0L.8	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: RSeyp7HEoEe	98.8L.p	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Nyfor eEzeEe	98.94.2	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Go7HotoEe	- 8.49.1	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 1.Na7HyHGaDfEe	123.2p.-	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.NyfoqciEolEe.N.oxrEe	4L.4-.4	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Nyfo o.yolcEe	99.44.8	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 100 TifEyor eEzeEe	99.24.3	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: PHEaSeYf	Lp.33.p	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.RDfEor rHEEG	9p.L-.1	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: PeEjaSHotoEyor eEzeEe	8p.L8.8	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: PtoEaDfEe	p2940.48.4	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: MDeyHGaDfEcozor eEzeEe	L0.11.-	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: i Hotor eEzrlaye	410.14.L	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Rzor eEzeEe	102.22.2	1	Dg/kg	X1	X1	00	No btdry
		v P0- 4: p0MEryoyolceEe	L0L.p0.p	10	Dg/kg	X10	X10	00	No btdry
		v P0- 4: p0MEryoyolceEe	1p1.13.p	10	Dg/kg	X10	X10	00	No btdry
EL0ut h: pYioe0Berl H 5 NoQ 23t 4280s									
v u 1p09330.001	AB1p/0.000	v P0- 4: Bsp.SHotoeyHQ) eyHt	111.33.3	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Bsp.SHotoeyHoxQ) DeyHt	111.91.1	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.i Hoto7HEEG 7HEEG eyHt	-004.-p.2	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.BtoD o7HEEG 7HEEG eyHt	101.44.2	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Bsp.SHotoeyHQ) eyHt	111.33.3	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: Bsp.SHotoeyHoxQ) DeyHt	111.91.1	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.i Hoto7HEEG 7HEEG eyHt	-004.-p.2	00	Dg/kg	X00	X00	00	No btdry
		v P0- 4: 3.BtoD o7HEEG 7HEEG eyHt	101.44.2	00	Dg/kg	X00	X00	00	No btdry
EL0ut h: pYioe0Berl H 5 NoQ 23t 4282s									



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 Wotk Ytset : vu 1p09330
 i IreEy : i RI MNy bRNV P0v I PTh bTM
 Ptoesy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0ut h : 5 Bior(GyGd p6drovyr- oG H 5 NoQ 23t 4282s cvoGQned									
vu 1p09330.031	ABpp/0.000	vP0-4: Bis(p.SHotoeyHxQ) eyHet	111.33.3	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: Bis(p.SHotoeyHxQ) DeyHxEe	111.91.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 3.i Hoto7HeEQ 7HeEQ eyHet	-004.-p.2	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 3.BtoD o7HeEQ 7HeEQ eyHet	101.44.2	000	Dg/kg	X000	X000	000	No btDy
vu 1p09330.0L1	ABp-/0.000	vP0-4: Bis(p.SHotoeyHxQ) eyHet	111.33.3	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: Bis(p.SHotoeyHxQ) DeyHxEe	111.91.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 3.i Hoto7HeEQ 7HeEQ eyHet	-004.-p.2	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 3.BtoD o7HeEQ 7HeEQ eyHet	101.44.2	000	Dg/kg	X000	X000	000	No btDy
EL0ut b : 5 Bior(GyGd p6drovyr- oG H 5 NoQ 23t 4280s									
vu 1p09330.001	AB1p/0.000	vP0-4: 10M6Hotor eEzeEe	431.-2.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	10L.3L.-	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	94.40.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotoeyHxEe	L.-p.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	1p0.8p.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHoto7to7QeEe	1888.-1.-	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotor cy65reEe	8.-L8.2	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: PeEyaSHotor eEzeEe	L08.92.4	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotor eEzeEe (di B)	118.-3.1	100	Dg/kg	X100	X100	000	No btDy
		vP0-4: d exaSHotoSCS07eEya5reEe	--.3.-.3	p00	Dg/kg	Xp00	Xp00	000	No btDy
vu 1p09330.0p1	AB1-/0.000	vP0-4: 10M6Hotor eEzeEe	431.-2.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	10L.3L.-	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	94.40.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotoeyHxEe	L.-p.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	1p0.8p.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHoto7to7QeEe	1888.-1.-	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotor cy65reEe	8.-L8.2	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: PeEyaSHotor eEzeEe	L08.92.4	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotor eEzeEe (di B)	118.-3.1	100	Dg/kg	X100	X100	000	No btDy
		vP0-4: d exaSHotoSCS07eEya5reEe	--.3.-.3	p00	Dg/kg	Xp00	Xp00	000	No btDy
EL0ut b : 5 Bior(GyGd p6drovyr- oG H 5 NoQ 23t 4282s									
vu 1p09330.031	ABpp/0.000	vP0-4: 10M6Hotor eEzeEe	431.-2.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	10L.3L.-	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	94.40.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotoeyHxEe	L.-p.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: 10M6Hotor eEzeEe	1p0.8p.1	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHoto7to7QeEe	1888.-1.-	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotor cy65reEe	8.-L8.2	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: PeEyaSHotor eEzeEe	L08.92.4	000	Dg/kg	X000	X000	000	No btDy
		vP0-4: d exaSHotor eEzeEe (di B)	118.-3.1	100	Dg/kg	X100	X100	000	No btDy
		vP0-4: d exaSHotoSCS07eEya5reEe	--.3.-.3	p00	Dg/kg	Xp00	Xp00	000	No btDy



Page : p0 of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID		Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EL0ut b : 5Blor(G)Qd p6drovyr- oG H 5 NoQ 23t 4282s cvoGQd										
v u 1p09330.031		ABpp/0.000	v P0- 4: d exaSHotoSCSo7eEya5reEe	-- .- 3. - 3	p0	Dg/kg	Xp0	Xp0	00	No btDy
v u 1p09330.0L1		ABp- /0.000	v P0- 4: 10. MSHotor eEzeEe	431.- 2. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 10. MSHotor eEzeEe	10L. 3L.-	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 10. MSHotor eEzeEe	94. 40. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: d exaSHotoeYaEe	L - . p. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 10. TtrSHotor eEzeEe	1p0. 8p. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: d exaSHoto7to7QeEe	1888.- 1.-	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: d exaSHotor cy05reEe	8. .L8. 2	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: PeEyaSHotor eEzeEe	L08. 92. 4	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: d exaSHotor eEzeEe (di B)	118.- 3. 1	10	Dg/kg	X10	X10	00	No btDy
			v P0- 4: d exaSHotoSCSo7eEya5reEe	-- .- 3. - 3	p0	Dg/kg	Xp0	Xp0	00	No btDy
EL0ut p : CQI(Gel) yGd 7e0e(d)Gel H 5 NoQ 23t 4280s										
v u 1p09330.001		AB1p/0.000	v P0- 4: REHfEe	Lp. 42. 2	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 3. i HotoaEimEe	10L. 3.- 8	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: Mir eZofctaE	12p. L3. 9	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 3. NyktoaEimEe	100. 01. L	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: i atr azole	8L.- 3. 8	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 20. MSHotor eEzHfEe	91. 93. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: p. NyktoaEimEe	88.- 3. 3	10	Dg/kg	X10	X10	00	No btDy
			v P0- 4: 2. NyktoaEimEe	99. 09. p	10	Dg/kg	X10	X10	00	No btDy
			v P0- 4: REHfEe	Lp. 42. 2	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 3. i HotoaEimEe	10L. 3.- 8	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: Mir eZofctaE	12p. L3. 9	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 3. NyktoaEimEe	100. 01. L	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: i atr azole	8L.- 3. 8	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 20. MSHotor eEzHfEe	91. 93. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: p. NyktoaEimEe	88.- 3. 3	10	Dg/kg	X10	X10	00	No btDy
			v P0- 4: 2. NyktoaEimEe	99. 09. p	10	Dg/kg	X10	X10	00	No btDy
EL0ut p : CQI(Gel) yGd 7e0e(d)Gel H 5 NoQ 23t 4282s										
v u 1p09330.031		ABpp/0.000	v P0- 4: REHfEe	Lp. 42. 2	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 3. i HotoaEimEe	10L. 3.- 8	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: Mir eZofctaE	12p. L3. 9	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 3. NyktoaEimEe	100. 01. L	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: i atr azole	8L.- 3. 8	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: 20. MSHotor eEzHfEe	91. 93. 1	00	Dg/kg	X00	X00	00	No btDy
			v P0- 4: p. NyktoaEimEe	88.- 3. 3	10	Dg/kg	X10	X10	00	No btDy
			v P0- 4: 2. NyktoaEimEe	99. 09. p	10	Dg/kg	X10	X10	00	No btDy
v u 1p09330.0L1		ABp- /0.000	v P0- 4: 3. i HotoaEimEe	10L. 3.- 8	00	Dg/kg	X00	X00	00	No btDy



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 Wotk Ytset : v u 1p09330
 i lreEy : i RI MNy bRNv P0vI PTh bTM
 PtojeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)		
						Original Result	Duplicate Result	RPD (%)			
EL0ut P. OrgyGovBior(Ce Lel Qv/del H 5 NoQ23t.4282s cvoCQdned v u 1p09330.0L1	ABp-70.000	v P0-4: Mir eZofctae	12p.L3.9	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 3.NytoaEirEe	100.01.L	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: i atrazole	8L.-3.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 200.MSHot or eZrEe	91.93.1	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: p.NytoaEirEe	88.-3.3	100	Dg/kg	X100	X100	000	No btDy		
		v P0-4: 2.NytoaEirEe	99.09.p	100	Dg/kg	X100	X100	000	No btDy		
		EL0ut P. OrgyGovBior(Ce Lel Qv/del H 5 NoQ23t.4280s									
		v u 1p09330.001	AB1p/0.000	v P0-4: al7Ha.Bdi	219.83.L	000	Dg/kg	X000	X000	000	No btDy
				v P0-4: r eya.Bdi	219.84.-	000	Dg/kg	X000	X000	000	No btDy
				v P0-4: gaDDa.Bdi	48.89.9	000	Dg/kg	X000	X000	000	No btDy
v P0-4: 5elya.Bdi	219.8L.8			000	Dg/kg	X000	X000	000	No btDy		
v P0-4: de7yaSHot	- L.33.8			000	Dg/kg	X000	X000	000	No btDy		
v P0-4: RI5tirE	209.00.p			000	Dg/kg	X000	X000	000	No btDy		
v P0-4: de7yaSHot e7oxEe	10p3.4-.2			000	Dg/kg	X000	X000	000	No btDy		
v P0-4: al7Ha.v E5oscifaE	949.98.8			000	Dg/kg	X000	X000	000	No btDy		
v P0-4: 300.MNV	- p.44.9			000	Dg/kg	X000	X000	000	No btDy		
v P0-4: Mei5tirE	L0.4-.1			000	Dg/kg	X000	X000	000	No btDy		
v u 1p09330.0p1	AB1-70.000	v P0-4: v E5tirE	- p.p0.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: r eya.v E5oscifaE	22p12.L4.9	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 300.MNM	- p.43.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: v E5oscifaE scifaye	1021.0-.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 300.MMT	40.p9.2	100	Dg/kg	X100	X100	000	No btDy		
		v P0-4: al7Ha.Bdi	219.83.L	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: r eya.Bdi	219.84.-	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: gaDDa.Bdi	48.89.9	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 5elya.Bdi	219.8L.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: de7yaSHot	- L.33.8	000	Dg/kg	X000	X000	000	No btDy		
EL0ut P. OrgyGovBior(Ce Lel Qv/del H 5 NoQ23t.4282s v u 1p09330.031	ABpp/0.000	v P0-4: RI5tirE	209.00.p	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: de7yaSHot e7oxEe	10p3.4-.2	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: al7Ha.v E5oscifaE	949.98.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 300.MNV	- p.44.9	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: Mei5tirE	L0.4-.1	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: v E5tirE	- p.p0.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: r eya.v E5oscifaE	22p12.L4.9	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 300.MNM	- p.43.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: v E5oscifaE scifaye	1021.0-.8	000	Dg/kg	X000	X000	000	No btDy		
		v P0-4: 300.MMT	40.p9.2	100	Dg/kg	X100	X100	000	No btDy		
EL0ut P. OrgyGovBior(Ce Lel Qv/del H 5 NoQ23t.4282s											
v u 1p09330.031	ABpp/0.000	v P0-4: al7Ha.Bdi	219.83.L	000	Dg/kg	X000	X000	000	No btDy		



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtojeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0ut P.OrgyGovBior(Ce Lel Qv)del H 5 NoQ23t4282s cvoCQned v u 1p09330.031	ABpp/0.000	v P0- 4: r eya.Bdi	219.84.-	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: gaDDa.Bdi	48.89.9	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: 5elya.Bdi	219.8L.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: de7yeSHot	- L.33.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: RI5tE	209.00.p	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: de7yeSHot e7ox5e	10p3.4-.2	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: al7Ha.v E5oscifaE	949.98.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: 300.MMV	- p.44.9	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: MeI5tE	L0.4-.1	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: v E5tE	- p.p0.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: r eya.v E5oscifaE	22p12.L4.9	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: 300.MMM	- p.43.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: v E5oscifaE sclfaye	1021.0-.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: 300.MMT	40.p9.2	100	Dg/kg	X100	X100	000	No btDy
		v P0- 4: al7Ha.Bdi	219.83.L	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: r eya.Bdi	219.84.-	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: gaDDa.Bdi	48.89.9	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: 5elya.Bdi	219.8L.8	000	Dg/kg	X000	X000	000	No btDy
		v P0- 4: de7yeSHot	- L.33.8	000	Dg/kg	X000	X000	000	No btDy
		EL0ut J: OrgyGoSBol SBornl Lel Qv)del H 5 NoQ23t4280s v u 1p09330.001	AB1p/0.000	v P0- 4: M6SHotnos	Lp.- 2.-	000	Dg/kg	X000	X000	000	No btDy
v P0- 4: MDeybeye	L0.41.4			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: MaztEoE	222.31.4			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: i Hot7Qrfos.DeyHQ	4498.12.0			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: u alayHoE	1p1.- 4.4			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: FeEYHoE	44.28.9			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: i Hot7Qrfos	p9p1.88.p			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: PitID7Hos.eyHQ	p2404.31.1			000	Dg/kg	X000	X000	000	No btDy
v P0- 4: i HotfeEmE7Hos	3- 0.90.L			000	Dg/kg	X000	X000	000	No btDy



Page : p2 of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv PØv I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EL0ut J: OrgyGoSBol SBornl Lel Qv(del) H 5 NoQ23t4280s cvoGQned									
v u 1p09330.001	AB1p/0.000	v P0- 4: PtoyHøfos	23L32.3L.3	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: v yHøE	4L2.1p.p	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MøHotnos	Lp.- 2.-	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MDeyHøE	L0.41.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MazEøE	222.31.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i Hot7Qrfos.DeyHQ	4498.12.0	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: u alayHøE	1p1.- 4.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: FeEyHøE	44.28.9	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i Hot7Qrfos	p9p1.88.p	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: PtitD7Hos.yHQ	p2404.31.1	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i HotfeEmE7Hos	3- 0.90.L	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: PtoyHøfos	23L32.3L.3	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: v yHøE	4L2.1p.p	000	Dg/kg	X000	X000	000	No btdry
EL0ut J: OrgyGoSBol SBornl Lel Qv(del) H 5 NoQ23t4282s									
v u 1p09330.031	ABpp/0.000	v P0- 4: MøHotnos	Lp.- 2.-	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MDeyHøE	L0.41.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MazEøE	222.31.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i Hot7Qrfos.DeyHQ	4498.12.0	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: u alayHøE	1p1.- 4.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: FeEyHøE	44.28.9	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i Hot7Qrfos	p9p1.88.p	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: PtitD7Hos.yHQ	p2404.31.1	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i HotfeEmE7Hos	3- 0.90.L	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: PtoyHøfos	23L32.3L.3	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: v yHøE	4L2.1p.p	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MøHotnos	Lp.- 2.-	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MDeyHøE	L0.41.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: MazEøE	222.31.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i Hot7Qrfos.DeyHQ	4498.12.0	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: u alayHøE	1p1.- 4.4	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: FeEyHøE	44.28.9	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i Hot7Qrfos	p9p1.88.p	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: PtitD7Hos.yHQ	p2404.31.1	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: i HotfeEmE7Hos	3- 0.90.L	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: PtoyHøfos	23L32.3L.3	000	Dg/kg	X000	X000	000	No btdry
		v P0- 4: v yHøE	4L2.1p.p	000	Dg/kg	X000	X000	000	No btdry
v u 1p09330.0L1	ABp-/0.000								
EL040/0u1: i oqi Leøoienm p6droyr- oG H 5 NoQ23t4234s									
v u 1p09330.001	AB1p/0.000	v P080: i L. i 9 FtaSyøE	10	Dg/kg	X10	X10	000	No btdry
v u 1p09330.0p1	AB1-/0.000	v P080: i L. i 9 FtaSyøE	10	Dg/kg	X10	X10	000	No btdry



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv PØv I PTh bTM
 PtoeSy : p1p1L2 1

Laboratory sample ID		Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EL040/0ur1: i oqi Leoienm p6drovyr- oG H 5 NoQ 23t 42t 0s										
v u 1p09330.031		ABpp/0.0@	vP080: i L. i 9 FtaSyøE	....	10	Dg/kg	X10	X10	0@	No btDy
v u 1p09330.0L1		ABp-/0.0@	vP080: i L. i 9 FtaSyøE	....	10	Dg/kg	X10	X10	0@	No btDy
EL040/0ur1: i oqi Leoienm p6drovyr- oG H 5 NoQ 23t 424as										
v u 1p09330.001		AB1p/0.0@	vP0-1: i 14. i p8 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i p9. i 2L FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i 10. i 13 FtaSyøE	....	40	Dg/kg	X40	X40	0@	No btDy
			vP0-1: i 10. i 2L FtaSyøE (scD)	....	40	Dg/kg	X40	X40	0@	No btDy
v u 1p09330.0p1		AB1-/0.0@	vP0-1: i 14. i p8 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i p9. i 2L FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i 10. i 13 FtaSyøE	....	40	Dg/kg	X40	X40	0@	No btDy
			vP0-1: i 10. i 2L FtaSyøE (scD)	....	40	Dg/kg	X40	X40	0@	No btDy
EL040/0ur1: i oqi Leoienm p6drovyr- oG H 5 NoQ 23t 4243s										
v u 1p09330.031		ABpp/0.0@	vP0-1: i 14. i p8 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i p9. i 2L FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i 10. i 13 FtaSyøE	....	40	Dg/kg	X40	X40	0@	No btDy
			vP0-1: i 10. i 2L FtaSyøE (scD)	....	40	Dg/kg	X40	X40	0@	No btDy
v u 1p09330.0L1		ABp-/0.0@	vP0-1: i 14. i p8 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i p9. i 2L FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: i 10. i 13 FtaSyøE	....	40	Dg/kg	X40	X40	0@	No btDy
			vP0-1: i 10. i 2L FtaSyøE (scD)	....	40	Dg/kg	X40	X40	0@	No btDy
EL040/0ur1: i oqi AeoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 4234s										
v u 1p09330.001		AB1p/0.0@	vP080: i L. i 10 FtaSyøE	....	10	Dg/kg	X10	X10	0@	No btDy
v u 1p09330.0p1		AB1-/0.0@	vP080: i L. i 10 FtaSyøE	....	10	Dg/kg	X10	X10	0@	No btDy
EL040/0ur1: i oqi AeoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 42t 0s										
v u 1p09330.031		ABpp/0.0@	vP080: i L. i 10 FtaSyøE	....	10	Dg/kg	X10	X10	0@	No btDy
v u 1p09330.0L1		ABp-/0.0@	vP080: i L. i 10 FtaSyøE	....	10	Dg/kg	X10	X10	0@	No btDy
EL040/0ur1: i oqi AeoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 424as										
v u 1p09330.001		AB1p/0.0@	vP0-1: % 1L. i 23 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: % 23. i 30 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: % 10. i 1L FtaSyøE	....	40	Dg/kg	X40	X40	0@	No btDy
			vP0-1: % 10. i 30 FtaSyøE (scD)	....	40	Dg/kg	X40	X40	0@	No btDy
v u 1p09330.0p1		AB1-/0.0@	vP0-1: % 1L. i 23 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: % 23. i 30 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: % 10. i 1L FtaSyøE	....	40	Dg/kg	X40	X40	0@	No btDy
			vP0-1: % 10. i 30 FtaSyøE (scD)	....	40	Dg/kg	X40	X40	0@	No btDy
EL040/0ur1: i oqi AeoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 4243s										
v u 1p09330.031		ABpp/0.0@	vP0-1: % 1L. i 23 FtaSyøE	....	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: % 23. i 30 FtaSyøE	100	Dg/kg	X100	X100	0@	No btDy
			vP0-1: % 10. i 1L FtaSyøE	40	Dg/kg	X40	X40	0@	No btDy



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNV PØvI PTh bTM
 PtoeSy : p1p1L2 1

Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EL040: 7I EXD H 5 NoQ 23t 42t 0s									
v u 1p09330.031	ABpp/0.0@	v P080: BeEzeEe	- 1.32.p	0@	Dg/kg	X0@	X0@	0@	No btdry
v u 1p09330.0L1	ABp-/0.0@	v P080: TolceEe	108.88.2	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: vYHr eEzeEe	100.31.3	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: Dey. Z 7ata.&OeEe	108.28.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			10L.3p.2						
		v P080: otyHb.&OeEe	94.3-.L	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: Na7H4leEe	91.p0.2	1	Dg/kg	X1	X1	0@	No btdry
		v P080: BeEzeEe	- 1.32.p	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: TolceEe	108.88.2	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: vYHr eEzeEe	100.31.3	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: Dey. Z 7ata.&OeEe	108.28.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			10L.3p.2						
		v P080: otyHb.&OeEe	94.3-.L	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: Na7H4leEe	91.p0.2	1	Dg/kg	X1	X1	0@	No btdry
		v P080: BeEzeEe	- 1.32.p	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: TolceEe	108.88.2	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: vYHr eEzeEe	100.31.3	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: Dey. Z 7ata.&OeEe	108.28.2	0@	Dg/kg	X0@	X0@	0@	No btdry
			10L.3p.2						
		v P080: otyHb.&OeEe	94.3-.L	0@	Dg/kg	X0@	X0@	0@	No btdry
		v P080: Na7H4leEe	91.p0.2	1	Dg/kg	X1	X1	0@	No btdry
EL218: LervEloxyQ - 6 N5/My H 5 NoQ 2380431s									
v u 1p09204.009	REECDocs	v Pp1L: PetSholay	- L01.90.2	10@	µg/kg	X10@	X10@	0@	No btdry
v u 1p09330.01-	AB1L/0.0@	v Pp1L: PetSholay	- L01.90.2	10@	µg/kg	X10@	X10@	0@	No btdry
EL218: LervEloxyQ - 6 N5/My H 5 NoQ 2380432s									
v u 1p09330.0L1	ABp-/0.0@	v Pp1L: PetSholay	- L01.90.2	10@	µg/kg	X10@	X10@	0@	No btdry
EL2a1: LervEloxyQ - 6 N5/My H 5 NoQ 23t 9388s									
v u 1p09330.001	AB1p/0.0@	v Pp21: PFYA	1-L2.p2.1	0@004	Dg/kg	0@28	0@3p	1@	OK .p0K
		v Pp21: PFYR	224.L-.1	0@004	Dg/kg	0@048	0@0L2	-@	OK .40K
		v Pp21: L:p FicotoyeloD et AcifoEaye (L:p FYA)	p-L19.9-.p	0@04	Dg/kg	0@.8	0@48	11@	OK .p0K
		v Pp21: PFYA	1-L2.p2.1	0@004	Dg/kg	0@.2p	0@.33	1p@	OK .p0K
		v Pp21: PFYR	224.L-.1	0@004	Dg/kg	0@pL	0@p3	9@	No btdry
		v Pp21: L:p FicotoyeloD et AcifoEaye (L:p FYA)	p-L19.9-.p	0@04	Dg/kg	0@32	0@40	1L@	OK .40K
Ac r .u ayix: WCI EA									
Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
Eb 0201 : I oGi MeGijl - 6 B LcMY H 5 NoQ 23t 4313s									
v u 1p09204.040	REECDocs	v G0p0R.T.: i aSDreD	- 330.32.9	0@001	Dg/b	X0@001	X0@001	0@	No btdry
		v G0p0R.T.: RtseE6	- 330.28.p	0@01	Dg/b	X0@01	X0@01	0@	No btdry
		v G0p0R.T.: BetOlrD	- 330.31.-	0@01	Dg/b	X0@01	X0@01	0@	No btdry
		v G0p0R.T.: BatreD	- 330.29.2	0@01	Dg/b	X0@01	X0@01	0@	No btdry



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 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNV PØvI PTh bTM
 PtojeSy : p1p1L2 1

Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
Eb0201 : I oQi MeQil - 6 B LdMY H 5 NoQ 23t 4313s cvoGQcneD										
v u 1p09204.040	REoEDocs		v G0p0R.T: i HoDreD	- 330.3.-.2	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: i or aly	- 330.38.3	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: i o77et	- 330.40.8	001	Dg/b	X0001	00p	- p0	No btdry
			v G0p0R.T: :bea5	- 329.9p.1	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: u aEgaEese	- 329.9L.4	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: Ni8kel	- 330.0p.0	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: ° iES	- 330.LL.L	004	Dg/b	X0004	X0004	00	No btdry
			v G0p0R.T: VaEa5reD	- 330.Lp.p	001	Dg/b	X001	X001	00	No btdry
			v G0p0R.T: i a5DreD	- 330.32.9	0001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: Ri5eE6	- 330.28.p	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: BetQlreD	- 330.31.-	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: BatreD	- 330.29.2	001	Dg/b	001	001	00	No btdry
			v G0p0R.T: i HoDreD	- 330.3.-.2	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: i or aly	- 330.38.3	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: i o77et	- 330.40.8	001	Dg/b	X0001	001	00	No btdry
			v G0p0R.T: :bea5	- 329.9p.1	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: u aEgaEese	- 329.9L.4	001	Dg/b	002	00p	00	No btdry
			v G0p0R.T: Ni8kel	- 330.0p.0	001	Dg/b	X0001	X0001	00	No btdry
			v G0p0R.T: ° iES	- 330.LL.L	004	Dg/b	X0004	X0004	00	No btdry
			v G0p0R.T: VaEa5reD	- 330.Lp.p	001	Dg/b	X001	X001	00	No btdry
Eb0at1 : I oQi AevoFery- ie Mervnr6 - 6 hRMY H 5 NoQ 23t 4311s										
v u 1p09204.040	REoEDocs		v G024T: u etSstC	- 329.9.-.L	0001	Dg/b	X0001	X0001	00	No btdry
v u 1p09394.002	REoEDocs		v G024T: u etSstC	- 329.9.-.L	0001	Dg/b	X0001	X0001	00	No btdry
EL040/0ur1: I oQi LeQoienm p6drovyr- oG H 5 NoQ 23t 4132s										
v u 1p09330.080	Qi 19/1L08p01p		v P080: i L. i 9 FtaSyøE	....	p0	µg/b	Xp0	Xp0	00	No btdry
v u 1p09384.003	REoEDocs		v P080: i L. i 9 FtaSyøE	....	p0	µg/b	30	30	00	No btdry
EL040/0ur1: I oQi LeQoienm p6drovyr- oG H 5 NoQ 23t 43a2s										
v u 1p09393.001	REoEDocs		v P0-1: i 14. i p8 FtaSyøE	....	100	µg/b	110	1p0	00	No btdry
			v P0-1: i 10. i 13 FtaSyøE	....	40	µg/b	X40	X40	00	No btdry
			v P0-1: i p9. i 2L FtaSyøE	....	40	µg/b	1p0	110	00	No btdry
EL040/0ur1: I oQi AevoFery- ie p6drovyr- oG cDELM 2010 RryvQH 5 NoQ 23t 4132s										
v u 1p09330.080	Qi 19/1L08p01p		v P080: i L. i 10 FtaSyøE	....	p0	µg/b	Xp0	Xp0	00	No btdry
v u 1p09384.003	REoEDocs		v P080: i L. i 10 FtaSyøE	....	p0	µg/b	30	30	00	No btdry
EL040/0ur1: I oQi AevoFery- ie p6drovyr- oG cDELM 2010 RryvQH 5 NoQ 23t 43a2s										
v u 1p09393.001	REoEDocs		v P0-1: % 10. i 1L FtaSyøE	....	100	µg/b	X100	X100	00	No btdry
			v P0-1: % 1L. i 23 FtaSyøE	....	100	µg/b	p00	p00	00	No btdry
			v P0-1: % 23. i 30 FtaSyøE	....	100	µg/b	X100	X100	00	No btdry
EL040: 7I EXD H 5 NoQ 23t 4132s										
v u 1p09330.080	Qi 19/1L08p01p		v P080: BeEzeEe	- 1.32.p	1	µg/b	X1	X1	00	No btdry



Page : p- of 3L
 Wotk Ytset : v u 1p09330
 i lreEy : i RI MNy bRNv PØv I PTh bTM
 PtojeSy : p1p1L2 1

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
v u 1p09330.080 EL040: 7I EXD H 5 NoG 23t 4132s cvoGQØned QI 19/1L08p01p		v P080: TolceEe	108.88.2	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: v yHØr eEzeEe	100.31.3	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: Deyø. Z 7ata.&ØeEe	108.28.2 10L.3p.2	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: otyHb.&ØeEe	94.3-.L	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: Na7HyløEe	91.p0.2	4	µg/b	X4	X4	0@	No bitDry
		v P080: BeEzeEe	- 1.32.p	1	µg/b	X1	X1	0@	No bitDry
		v P080: TolceEe	108.88.2	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: v yHØr eEzeEe	100.31.3	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: Deyø. Z 7ata.&ØeEe	108.28.2 10L.3p.2	p	µg/b	Xp	Xp	0@	No bitDry
		v P080: otyHb.&ØeEe	94.3-.L	p	µg/b	Xp	Xp	0@	No bitDry
v u 1p09384.003 REØCDocs		v P080: Na7HyløEe	91.p0.2	4	µg/b	X4	X4	0@	No bitDry



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality of the sample and the laboratory control spike are critical for the accuracy of the results. The quality of the sample is determined by the quality of the reagents and the quality of the laboratory control spike. The quality of the laboratory control spike is determined by the quality of the reagents and the quality of the laboratory control spike.

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
Eb00t I : I oGj MeQil - 6 B LcEY H 5 NoQ 23t 4a34s									
vG004T: RteE6	- 330.28.p	4	Dg/kg	X4	120 Dg/kg	103	- 4	121	
vG004T: BatneD	- 330.29.2	10	Dg/kg	X10	129 Dg/kg	104	--	1p-	
vG004T: BetClneD	- 330.31.-	1	Dg/kg	X1	100 Dg/kg	90	- 2	119	
vG004T: i a5DneD	- 330.32.9	1	Dg/kg	X1	100 Dg/kg	90	- 1	1p2	
vG004T: i HoDneD	- 330.3.-2	p	Dg/kg	Xp	100 Dg/kg	101	- 9	1p4	
vG004T: i or aly	- 330.38.3	p	Dg/kg	Xp	100 Dg/kg	92	- 1	1p1	
vG004T: i o77et	- 330.40.8	4	Dg/kg	X4	100 Dg/kg	103	- 9	1p2	
vG004T: bea5	- 329.9p.1	4	Dg/kg	X4	100 Dg/kg	99	--	1p4	
vG004T: u aEgaEese	- 329.9L.4	4	Dg/kg	X4	12- Dg/kg	99	- L	1pL	
vG004T: Ni8kel	- 330.0p.0	p	Dg/kg	Xp	100 Dg/kg	98	- 8	1p8	
vG004T: VaEa5neD	- 330.Lp.p	4	Dg/kg	X4	230 Dg/kg	88	- 8	1p3	
vG004T: ° iES	- 330.LL.L	4	Dg/kg	X4	104 Dg/kg	93	- 4	1p4	
Eb00t I : I oGj MeQil - 6 B LcEY H 5 NoQ 23t 4at 0s									
vG004T: RteE6	- 330.28.p	4	Dg/kg	X4	120 Dg/kg	103	- 4	121	
vG004T: BatneD	- 330.29.2	10	Dg/kg	X10	129 Dg/kg	10-	--	1p-	
vG004T: BetClneD	- 330.31.-	1	Dg/kg	X1	100 Dg/kg	10p	- 2	119	
vG004T: i a5DneD	- 330.32.9	1	Dg/kg	X1	100 Dg/kg	92	- 1	1p2	
vG004T: i HoDneD	- 330.3.-2	p	Dg/kg	Xp	100 Dg/kg	104	- 9	1p4	
vG004T: i or aly	- 330.38.3	p	Dg/kg	Xp	100 Dg/kg	9-	- 1	1p1	
vG004T: i o77et	- 330.40.8	4	Dg/kg	X4	100 Dg/kg	10-	- 9	1p2	
vG004T: bea5	- 329.9p.1	4	Dg/kg	X4	100 Dg/kg	101	--	1p4	
vG004T: u aEgaEese	- 329.9L.4	4	Dg/kg	X4	12- Dg/kg	102	- L	1pL	
vG004T: Ni8kel	- 330.0p.0	p	Dg/kg	Xp	100 Dg/kg	103	- 8	1p8	
vG004T: VaEa5neD	- 330.Lp.p	4	Dg/kg	X4	230 Dg/kg	9p	- 8	1p3	
vG004T: ° iES	- 330.LL.L	4	Dg/kg	X4	104 Dg/kg	99	- 4	1p4	
Eb0at I : I oGj AveoFery- ie Mervnr6 - 6 hMY H 5 NoQ 23t 4a39s									
vG024T: u etStC	- 329.9.-L	00	Dg/kg	X00	100 Dg/kg	89	81	1p2	
Eb0at I : I oGj AveoFery- ie Mervnr6 - 6 hMY H 5 NoQ 23t 4at 1s									
vG024T: u etStC	- 329.9.-L	00	Dg/kg	X00	100 Dg/kg	89	81	1p2	
EL088: Loi6vBior(GyQd 7 (SBe6il HL57s H 5 NoQ 23t 4219s									
vPOLL: Total PolCSHotiEaye5 r r7HeE0s	....	00	Dg/kg	X000	100 Dg/kg	11L	44	124	
EL088: Loi6vBior(GyQd 7 (SBe6il HL57s H 5 NoQ 23t 4281s									
vPOLL: Total PolCSHotiEaye5 r r7HeE0s	....	00	Dg/kg	X000	100 Dg/kg	10p	44	124	
EL0u3C: MoGav6iv CromyQv p6drovyr- oG H 5 NoQ 23t 4239s									



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL0u3C: MoGov6v(v CromyQv p6droyvr- oG H 5 NoQ23t 4239s cvoGQ3ned									
vP0-3: BeEzeEe	-1.32.p	0@	Dg/kg	X0@	1 Dg/kg	109	-4		1p1
vP0-3: TolceEe	108.88.2	0@	Dg/kg	X0@	1 Dg/kg	94@	-L		1p3
vP0-3: vYHr eEzeEe	100.31.3	0@	Dg/kg	X0@	1 Dg/kg	89@	-3		118
vP0-3: Deÿ. Z 7ata.&OeEe	108.28.2 10L.3p.2	0@	Dg/kg	X0@	p Dg/kg	92@	-4		1p1
vP0-3: AyQeEe	100.3p.4	0@	Dg/kg	X0@	1 Dg/kg	83@	L3		1p0
vP0-3: otyHb.&OeEe	94.3.-L	0@	Dg/kg	X0@	1 Dg/kg	93@	--		1p1
vP0-3: Øo7to7Or eEzeEe	98.8p.8	0@	Dg/kg	X0@	1 Dg/kg	8p@	-3		1p0
vP0-3: E.Pto7Or eEzeEe	102.L4.1	0@	Dg/kg	X0@	1 Dg/kg	-9@	L4		11-
vP0-3: 1@TtDeyHr eEzeEe	108.L.-.8	0@	Dg/kg	X0@	1 Dg/kg	-L@	L4		11-
vP0-3: sesBcyDr eEzeEe	124.98.8	0@	Dg/kg	X0@	1 Dg/kg	83@	L-		11-
vP0-3: 1@TtDeyHr eEzeEe	94.L2.L	0@	Dg/kg	X0@	1 Dg/kg	-3@	LL		11-
vP0-3: yetyBcyDr eEzeEe	98.0L.L	0@	Dg/kg	X0@	1 Dg/kg	83@	L8		11L
vP0-3: 7.Øo7to7OyliceEe	99.8.-L	0@	Dg/kg	X0@	1 Dg/kg	-9@	L3		11-
vP0-3: E.BcyDr eEzeEe	103.41.8	0@	Dg/kg	X0@	1 Dg/kg	-p@	49		114
EL0u3C: MoGov6v(v CromyQv p6droyvr- oG H 5 NoQ23t 42t 1s									
vP0-3: BeEzeEe	-1.32.p	0@	Dg/kg	X0@	1 Dg/kg	93@	-4		1p1
vP0-3: TolceEe	108.88.2	0@	Dg/kg	X0@	1 Dg/kg	94@	-L		1p3
vP0-3: vYHr eEzeEe	100.31.3	0@	Dg/kg	X0@	1 Dg/kg	9p@	-3		118
vP0-3: Deÿ. Z 7ata.&OeEe	108.28.2 10L.3p.2	0@	Dg/kg	X0@	p Dg/kg	94@	-4		1p1
vP0-3: AyQeEe	100.3p.4	0@	Dg/kg	X0@	1 Dg/kg	8-@	L3		1p0
vP0-3: otyHb.&OeEe	94.3.-L	0@	Dg/kg	X0@	1 Dg/kg	9-@	--		1p1
vP0-3: Øo7to7Or eEzeEe	98.8p.8	0@	Dg/kg	X0@	1 Dg/kg	92@	-3		1p0
vP0-3: E.Pto7Or eEzeEe	102.L4.1	0@	Dg/kg	X0@	1 Dg/kg	83@	L4		11-
vP0-3: 1@TtDeyHr eEzeEe	108.L.-.8	0@	Dg/kg	X0@	1 Dg/kg	8L@	L4		11-
vP0-3: sesBcyDr eEzeEe	124.98.8	0@	Dg/kg	X0@	1 Dg/kg	8-@	L-		11-
vP0-3: 1@TtDeyHr eEzeEe	94.L2.L	0@	Dg/kg	X0@	1 Dg/kg	84@	LL		11-
vP0-3: yetyBcyDr eEzeEe	98.0L.L	0@	Dg/kg	X0@	1 Dg/kg	89@	L8		11L
vP0-3: 7.Øo7to7OyliceEe	99.8.-L	0@	Dg/kg	X0@	1 Dg/kg	8p@	L3		11-
vP0-3: E.BcyDr eEzeEe	103.41.8	0@	Dg/kg	X0@	1 Dg/kg	-4@	49		114
EL0u37: Ox6geGyQd 5 omSonGdl H 5 NoQ23t 4239s									
vP0-3: VIEØ RSeÿeÿe	108.04.3	4	Dg/kg	X4	10 Dg/kg	L0@	30		128
vP0-3: p.BcyEoEe (u v#)	-8.92.2	4	Dg/kg	X4	10 Dg/kg	80@	L1		132
vP0-3: 3.u eyHr.p.7eÿEoEe (u Ø#)	108.10.1	4	Dg/kg	X4	10 Dg/kg	L9@	L2		12-
vP0-3: p.d exaEoEe (u B#)	491.-.8.L	4	Dg/kg	X4	10 Dg/kg	-3@	L2		122
EL0u37: Ox6geGyQd 5 omSonGdl H 5 NoQ23t 42t 1s									
vP0-3: VIEØ RSeÿeÿe	108.04.3	4	Dg/kg	X4	10 Dg/kg	-8@	30		128
vP0-3: p.BcyEoEe (u v#)	-8.92.2	4	Dg/kg	X4	10 Dg/kg	89@	L1		132



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL0u37 : Ox6geGyQd 5 omSonGdl H 5 NoQ 23t 42t 1s cvoCQmed									
vP0-3: 3.u eyH.p.7eEeEe (u Ø#)	108.10.1	4	Dg/kg	X4	10 Dg/kg	91@	L2	L2	12-
vP0-3: p.dexaEeE (u B#)	491.-8.L	4	Dg/kg	X4	10 Dg/kg	94@	L2	L2	122
EL0u35 : YnifoGyQd 5 omSonGdl H 5 NoQ 23t 4239s									
vP0-3: i atr oE5scrifbe	-4.14.0	0@	Dg/kg	X0@	1 Dg/kg	-0@	4-	4-	1p1
EL0u35 : YnifoGyQd 5 omSonGdl H 5 NoQ 23t 42t 1s									
vP0-3: i atr oE5scrifbe	-4.14.0	0@	Dg/kg	X0@	1 Dg/kg	9p@	4-	4-	1p1
EL0u3R: hnm(gyQ H 5 NoQ 23t 4239s									
vP0-3: p@M8Hoto7to7aEe	493.p0.-	0@	Dg/kg	X0@	1 Dg/kg	L-@	41	41	120
vP0-3: 1@M8Hoto7to7aEe	-8.8-.4	0@	Dg/kg	X0@	1 Dg/kg	91@	-2	-2	1p1
vP0-3: Ss.1@M8Hoto7to7OeEe	100L.1.01.4	0@	Dg/kg	X0@	1 Dg/kg	=44@	49	49	109
vP0-3: yaEs.1@M8Hoto7to7OeEe	100L.1.0p.L	0@	Dg/kg	X0@	1 Dg/kg	=41@	4p	4p	110
vP0-3: 1@Mir toDoeyHaeE (v MB)	10L.92.3	0@	Dg/kg	X0@	1 Dg/kg	83@	L8	L8	1p0
EL0u3R: hnm(gyQ H 5 NoQ 23t 42t 1s									
vP0-3: p@M8Hoto7to7aEe	493.p0.-	0@	Dg/kg	X0@	1 Dg/kg	--@	41	41	120
vP0-3: 1@M8Hoto7to7aEe	-8.8-.4	0@	Dg/kg	X0@	1 Dg/kg	89@	-2	-2	1p1
vP0-3: Ss.1@M8Hoto7to7OeEe	100L.1.01.4	0@	Dg/kg	X0@	1 Dg/kg	8p@	49	49	109
vP0-3: yaEs.1@M8Hoto7to7OeEe	100L.1.0p.L	0@	Dg/kg	X0@	1 Dg/kg	-8@	4p	4p	110
vP0-3: 1@Mir toDoeyHaeE (v MB)	10L.92.3	0@	Dg/kg	X0@	1 Dg/kg	90@	L8	L8	1p0
EL0u3E: pVioGeGyQd Ci(SByQv 5 omSonGdl H 5 NoQ 23t 4239s									
vP0-3: M8Hoto5ficotoDeyHaeE	-4.-1.8	4	Dg/kg	X4	10 Dg/kg	L4@	23	23	1pp
vP0-3: i HotoDeyHaeE	-3.8-.2	4	Dg/kg	X4	10 Dg/kg	93@	4p	4p	122
vP0-3: VIE SHotf5e	-4.01.3	4	Dg/kg	X4	10 Dg/kg	81@	3-	3-	122
vP0-3: BtoD oDeyHaeE	-3.82.9	4	Dg/kg	X4	10 Dg/kg	82@	29	29	11L
vP0-3: i HotoeyHaeE	-4.00.2	4	Dg/kg	X4	10 Dg/kg	94@	32	32	12-
vP0-3: Tt8Hoto7to7OeEe	-4.L9.3	4	Dg/kg	X4	10 Dg/kg	8L@	L1	L1	1pL
vP0-3: 1@M8HotoeyHaeE	-4.24.3	0@	Dg/kg	X0@	1 Dg/kg	8-@	Lp	Lp	1p3
vP0-3: Ø5oDeyHaeE	-3.88.3	0@	Dg/kg	X0@	1 Dg/kg	L9@	3-	3-	11L
vP0-3: yaEs.1@M8HotoeyHaeE	14L.L0.4	0@	Dg/kg	X0@	1 Dg/kg	84@	L9	L9	119
vP0-3: 1@M8HotoeyHaeE	-4.23.2	0@	Dg/kg	X0@	1 Dg/kg	89@	-0	-0	1p0
vP0-3: Ss.1@M8HotoeyHaeE	14L.49.p	0@	Dg/kg	X0@	1 Dg/kg	89@	-p	-p	1p0
vP0-3: 1@Tt8HotoeyHaeE	-1.44.L	0@	Dg/kg	X0@	1 Dg/kg	-3@	L3	L3	11p
vP0-3: 1@M8Hoto7to7OeEe	4L2.48.L	0@	Dg/kg	X0@	1 Dg/kg	82@	-1	-1	11-
vP0-3: i atr oE Tey8Hotof5e	4L.p2.4	0@	Dg/kg	X0@	1 Dg/kg	L-@	41	41	10L
vP0-3: 1@M8HotoeyHaeE	10-.0L.p	0@	Dg/kg	X0@	1 Dg/kg	88@	-0	-0	1pL
vP0-3: Tt8HotoeyHaeE	-9.01.L	0@	Dg/kg	X0@	1 Dg/kg	8-@	-1	-1	1p0
vP0-3: Mir toD oDeyHaeE	-3.94.2	0@	Dg/kg	X0@	1 Dg/kg	83@	-0	-0	1pp
vP0-3: 1@Tt8HotoeyHaeE	-9.00.4	0@	Dg/kg	X0@	1 Dg/kg	92@	-2	-2	1p4
vP0-3: 1@M8Hoto7to7aEe	13p.p8.9	0@	Dg/kg	X0@	1 Dg/kg	9L@	-4	-4	1p4



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL0u3E: pYioGeYQd Ci(SByQv 5 omSonGdl H 5 NoQ 23t 4239s cvoCQChed									
vP0-3: TeyxSHotoeyHaeE	1p-.18.3	0@	Dg/kg	X0@	1 Dg/kg	90@	-1	1p0	
vP0-3: 1@M@ TeyxSHotoeyHaeE	L20.p0.L	0@	Dg/kg	X0@	1 Dg/kg	L0@	43	10L	
vP0-3: yaEs.1@M@Hoto.p.r.cyeEe	110.4.-L	0@	Dg/kg	X0@	1 Dg/kg	L0@	3L	11p	
vP0-3: Ss.1@M@Hoto.p.r.cyeEe	13-L.11.4	0@	Dg/kg	X0@	1 Dg/kg	8p@	p1@	11-	
vP0-3: 1@M@ TeyxSHotoeyHaeE	-9.23.4	0@	Dg/kg	X0@	1 Dg/kg	-9@	-1	121	
vP0-3: 1@M@ TtrSHoto7to7aEe	9L.18.3	0@	Dg/kg	X0@	1 Dg/kg	81@	-0	123	
vP0-3: PeEyaSHotoeyHaeE	-L.01.-	0@	Dg/kg	X0@	1 Dg/kg	38@	30	93	
vP0-3: 1@Mir toDo.2.SHoto7to7aEe	9L.1p.8	0@	Dg/kg	X0@	1 Dg/kg	42@	31	112	
EL0u3E: pYioGeYQd Ci(SByQv 5 omSonGdl H 5 NoQ 23t 42t 1s									
vP0-3: M@HotoSificotodEyaEe	-4.-1.8	4	Dg/kg	X4	10 Dg/kg	L-@	23	1pp	
vP0-3: i HotoDeyHaeE	-3.8.-2	4	Dg/kg	X4	10 Dg/kg	82@	4p	122	
vP0-3: VIE SHotoSfe	-4.01.3	4	Dg/kg	X4	10 Dg/kg	8-@	3-	122	
vP0-3: BtoDoDeyHaeE	-3.82.9	4	Dg/kg	X4	10 Dg/kg	83@	29	11L	
vP0-3: i HotoeyHaeE	-4.00.2	4	Dg/kg	X4	10 Dg/kg	100	32	12-	
vP0-3: TtrSHotoSificotodEyaEe	-4.L9.3	4	Dg/kg	X4	10 Dg/kg	94@	L1	1pL	
vP0-3: 1@M@HotoeyHaeE	-4.24.3	0@	Dg/kg	X0@	1 Dg/kg	84@	Lp	1p3	
vP0-3: 05oDeyHaeE	-3.88.3	0@	Dg/kg	X0@	1 Dg/kg	89@	3-	11L	
vP0-3: yaEs.1@M@HotoeyHaeE	14L.L0.4	0@	Dg/kg	X0@	1 Dg/kg	93@	L9	119	
vP0-3: 1@M@HotoeyHaeE	-4.23.2	0@	Dg/kg	X0@	1 Dg/kg	-9@	-0	1p0	
vP0-3: Ss.1@M@HotoeyHaeE	14L.49.p	0@	Dg/kg	X0@	1 Dg/kg	89@	-p	1p0	
vP0-3: 1@M@HotoeyHaeE	-1.44.L	0@	Dg/kg	X0@	1 Dg/kg	84@	L3	11p	
vP0-3: 1@M@Hoto7to7oEe	4L2.48.L	0@	Dg/kg	X0@	1 Dg/kg	89@	-1	11-	
vP0-3: i atr oE TeyxSHotoSfe	4L.p2.4	0@	Dg/kg	X0@	1 Dg/kg	-L@	41	10L	
vP0-3: 1@M@HotoeyHaeE	10-.0L.p	0@	Dg/kg	X0@	1 Dg/kg	8-@	-0	1pL	
vP0-3: TtrSHotoeyHaeE	-9.01.L	0@	Dg/kg	X0@	1 Dg/kg	9p@	-1	1p0	
vP0-3: Mir toDoDeyHaeE	-3.94.2	0@	Dg/kg	X0@	1 Dg/kg	8L@	-0	1pp	
vP0-3: 1@M@ TtrSHotoeyHaeE	-9.00.4	0@	Dg/kg	X0@	1 Dg/kg	9-@	-2	1p4	
vP0-3: 1@M@Hoto7to7aEe	13p.p8.9	0@	Dg/kg	X0@	1 Dg/kg	9p@	-4	1p4	
vP0-3: TeyxSHotoeyHaeE	1p-.18.3	0@	Dg/kg	X0@	1 Dg/kg	89@	-1	1p0	
vP0-3: 1@M@ TeyxSHotoeyHaeE	L20.p0.L	0@	Dg/kg	X0@	1 Dg/kg	8-@	43	10L	
vP0-3: yaEs.1@M@Hoto.p.r.cyeEe	110.4.-L	0@	Dg/kg	X0@	1 Dg/kg	-0@	3L	11p	
vP0-3: Ss.1@M@Hoto.p.r.cyeEe	13-L.11.4	0@	Dg/kg	X0@	1 Dg/kg	82@	p1@	11-	
vP0-3: 1@M@ TeyxSHotoeyHaeE	-9.23.4	0@	Dg/kg	X0@	1 Dg/kg	94@	-1	121	
vP0-3: 1@M@ TtrSHoto7to7aEe	9L.18.3	0@	Dg/kg	X0@	1 Dg/kg	92@	-0	123	
vP0-3: PeEyaSHotoeyHaeE	-L.01.-	0@	Dg/kg	X0@	1 Dg/kg	-8@	30	93	
vP0-3: 1@Mir toDo.2.SHoto7to7aEe	9L.1p.8	0@	Dg/kg	X0@	1 Dg/kg	8p@	31	112	
EL0u3h: pYioGeYQd CromyQv 5 omSonGdl H 5 NoQ 23t 4239s									
vP0-3: i HotoeEzeEe	108.90.-	0@	Dg/kg	X0@	1 Dg/kg	90@	-8	1p0	
vP0-3: BtoDor eEzeEe	108.8L.1	0@	Dg/kg	X0@	1 Dg/kg	84@	L8	11L	



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL0u3h: pYioGeYQd CromyQy 5 omSonGdl H 5 NoQ 23t 4239s cvoCQChed								
vP0-3: p.i HotoyceEe	94.39.8	0@	Dg/kg	X0@	1 Dg/kg	82@	L-	11-
vP0-3: 3.i HotoyceEe	10L.32.3	0@	Dg/kg	X0@	1 Dg/kg	8p@	L-	114
vP0-3: 1@Tt8Hotor eEzeEe	8-.L1.L	0@	Dg/kg	X0@	1 Dg/kg	84@	L0	1p0
EL0u3h: pYioGeYQd CromyQy 5 omSonGdl H 5 NoQ 23t 42t 1s								
vP0-3: i Hotor eEzeEe	108.90.-	0@	Dg/kg	X0@	1 Dg/kg	9p@	- 8	1p0
vP0-3: BtoDor eEzeEe	108.8L.1	0@	Dg/kg	X0@	1 Dg/kg	8-@	L8	11L
vP0-3: p.i HotoyceEe	94.39.8	0@	Dg/kg	X0@	1 Dg/kg	8-@	L-	11-
vP0-3: 3.i HotoyceEe	10L.32.3	0@	Dg/kg	X0@	1 Dg/kg	82@	L-	114
vP0-3: 1@Tt8Hotor eEzeEe	8-.L1.L	0@	Dg/kg	X0@	1 Dg/kg	80@	L0	1p0
EL0u3b: I r(ByioMeQyGel H 5 NoQ 23t 4239s								
vP0-3: i HotofofD	L-.LL.2	0@	Dg/kg	X0@	1 Dg/kg	84@	- 1	1p1
vP0-3: BtoD o58HotoD eyH eEe	-4.p-.3	0@	Dg/kg	X0@	1 Dg/kg	L4@	L0	108
vP0-3: Mir toD oSHotoD eyH eEe	1p3.38.1	0@	Dg/kg	X0@	1 Dg/kg	49@	38	103
vP0-3: BtoD ofotD	-4.p4.p	0@	Dg/kg	X0@	1 Dg/kg	42@	30	10L
EL0u3b: I r(ByioMeQyGel H 5 NoQ 23t 42t 1s								
vP0-3: i HotofofD	L-.LL.2	0@	Dg/kg	X0@	1 Dg/kg	8-@	- 1	1p1
vP0-3: BtoD o58HotoD eyH eEe	-4.p-.3	0@	Dg/kg	X0@	1 Dg/kg	8p@	L0	108
vP0-3: Mir toD oSHotoD eyH eEe	1p3.38.1	0@	Dg/kg	X0@	1 Dg/kg	81@	38	103
vP0-3: BtoD ofotD	-4.p4.p	0@	Dg/kg	X0@	1 Dg/kg	-@	30	10L
EL0ut C: LBeGoI(v 5 omSonGdl H 5 NoQ 23t 4280s								
vP0-4: PHeEol	108.94.p	0@	Dg/kg	X0@	p@Dg/kg	82@	28	128
vP0-4: p.i Hoto7HeEol	94.4-.8	0@	Dg/kg	X0@	p@Dg/kg	84@	29	1p9
vP0-4: p.u eyD7HeEol	94.38.-	0@	Dg/kg	X0@	p@Dg/kg	LL@	22	12p
vP0-4: 2. Z 3.u eyD7HeEol	1219.-.-.2	0@	Dg/kg	X1@	4 Dg/kg	83@	24	121
vP0-4: p.Ni7to7HeEol	88.-4.4	0@	Dg/kg	X0@	p@Dg/kg	- 3@	21	121
vP0-4: p@MD eyD7HeEol	104.L.-9	0@	Dg/kg	X0@	p@Dg/kg	- 4@	10	124
vP0-4: p@M8Hoto7HeEol	1p0.82.p	0@	Dg/kg	X0@	p@Dg/kg	- p@	24	122
vP0-4: p@M8Hoto7HeEol	8-.L4.0	0@	Dg/kg	X0@	p@Dg/kg	83@	2L	12p
vP0-4: 3.i Hoto.2.u eyD7HeEol	49.40.-	0@	Dg/kg	X0@	p@Dg/kg	8p@	29	132
vP0-4: p@Tt8Hoto7HeEol	88.0L.p	0@	Dg/kg	X0@	p@Dg/kg	83@	23	128
vP0-4: p@Tt8Hoto7HeEol	94.94.3	0@	Dg/kg	X0@	p@Dg/kg	8-@	20@	13p
vP0-4: PeEaSHoto7HeEol	8-.8L.4	1@	Dg/kg	X1	p@Dg/kg	32@	13	12L
EL0ut C: LBeGoI(v 5 omSonGdl H 5 NoQ 23t 4282s								
vP0-4: PHeEol	108.94.p	0@	Dg/kg	X0@	p@Dg/kg	99@	28	128
vP0-4: p.i Hoto7HeEol	94.4-.8	0@	Dg/kg	X0@	p@Dg/kg	10p	29	1p9
vP0-4: p.u eyD7HeEol	94.38.-	0@	Dg/kg	X0@	p@Dg/kg	8p@	22	12p
vP0-4: 2. Z 3.u eyD7HeEol	1219.-.-.2	0@	Dg/kg	X1@	4 Dg/kg	84@	24	121
vP0-4: p.Ni7to7HeEol	88.-4.4	0@	Dg/kg	X0@	p@Dg/kg	8L@	21	121



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Spike Recovery (%)		Recovery Limits (%)	
					Concentration	LCS	Low	High
EL Out C : LBeGoI(v 5 omSonGdl H 5 NoQ 23t 4282s cvoCQcMed								
vP0-4: p0M0MDeYH7HbEol	104.L-.9	00	Dg/kg	X00	p0Dg/kg	- L0	10	124
vP0-4: p0M0M0to7HbEol	1p0.82.p	00	Dg/kg	X00	p0Dg/kg	9p0	24	122
vP0-4: p0M0M0to7HbEol	8-.L4.0	00	Dg/kg	X00	p0Dg/kg	102	2L	12p
vP0-4: 3.i Hoto.2.u eyH07HbEol	49.40.-	00	Dg/kg	X00	p0Dg/kg	112	29	132
vP0-4: p0M0M0to7HbEol	88.0L.p	00	Dg/kg	X00	p0Dg/kg	102	23	128
vP0-4: p0M0M0to7HbEol	94.94.3	00	Dg/kg	X00	p0Dg/kg	109	200	13p
vP0-4: PeEaSHoto7HbEol	8-.8L.4	10	Dg/kg	X1	p0Dg/kg	- 00	13	12L
EL Out 7 : LoI6Gnvieyr CromyQv p6drovyr- oGI H 5 NoQ 23t 4280s								
vP0-4: Na7H4leEe	91.p0.2	00	Dg/kg	X00	p0Dg/kg	820	29	1p8
vP0-4: p.u eyH0Ea7H4leEe	91.4-.L	00	Dg/kg	X00	p0Dg/kg	8-0	30	12L
vP0-4: p.i HotoEa7H4leEe	91.48.-	00	Dg/kg	X00	p0Dg/kg	L20	p90	12-
vP0-4: RSeEa7H4leEe	p08.9L.8	00	Dg/kg	X00	p0Dg/kg	- 90	28	128
vP0-4: RSeEa7H4leEe	82.2p.9	00	Dg/kg	X00	p0Dg/kg	910	34	122
vP0-4: FlocoteEe	8L-.2.-	00	Dg/kg	X00	p0Dg/kg	9L0	3-	12-
vP0-4: PHEaEYHteEe	84.01.8	00	Dg/kg	X00	p0Dg/kg	900	34	122
vP0-4: REYHaSeEe	1p0.1p.-	00	Dg/kg	X00	p0Dg/kg	8-0	33	120
vP0-4: FicotatEYHteEe	p0L.33.0	00	Dg/kg	X00	p0Dg/kg	8-0	3L	128
vP0-4: P0eEe	1p9.00.0	00	Dg/kg	X00	p0Dg/kg	900	32	134
vP0-4: N.p.FicoteEg RSeEaD0e	42.9L.2	00	Dg/kg	X00	p0Dg/kg	810	32	132
vP0-4: BeEz(a)EYHaSeEe	4L.44.2	00	Dg/kg	X00	p0Dg/kg	800	32	129
vP0-4: i H0eEe	p18.01.9	00	Dg/kg	X00	p0Dg/kg	8L0	3p	130
vP0-4: BeEzor(r) Z BeEzo(k)ficotatEYHteEe	p04.99.p	1	Dg/kg	X1	4 Dg/kg	940	32	129
vP0-4: - 0p.MDeYCReEz(a)EYHaSeEe	p0-.08.9	00	Dg/kg	X00	p0Dg/kg	1pp	30	143
vP0-4: BeEzo(a)70eEe	40.2p.8	00	Dg/kg	X00	p0Dg/kg	830	28	128
vP0-4: 2.u eyH0SH0laEYHteEe	4L.39.4	00	Dg/kg	X00	p0Dg/kg	980	3L	1Lp
vP0-4: 05eEo(1000)70eEe	192.29.4	00	Dg/kg	X00	p0Dg/kg	820	39	149
vP0-4: MreEz(a)EYHaSeEe	42.-0.2	00	Dg/kg	X00	p0Dg/kg	820	39	14-
vP0-4: BeEzo(g)07e0eEe	191.p3.p	00	Dg/kg	X00	p0Dg/kg	- 80	38	148
vP0-4: AcD of PRd s	....	00	Dg/kg	X00	....	....	....	....
EL Out 7 : LoI6Gnvieyr CromyQv p6drovyr- oGI H 5 NoQ 23t 4282s								
vP0-4: Na7H4leEe	91.p0.2	00	Dg/kg	X00	p0Dg/kg	10p	29	1p8
vP0-4: p.u eyH0Ea7H4leEe	91.4-.L	00	Dg/kg	X00	p0Dg/kg	104	30	12L
vP0-4: p.i HotoEa7H4leEe	91.48.-	00	Dg/kg	X00	p0Dg/kg	--0	p90	12-
vP0-4: RSeEa7H4leEe	p08.9L.8	00	Dg/kg	X00	p0Dg/kg	940	28	128
vP0-4: RSeEa7H4leEe	82.2p.9	00	Dg/kg	X00	p0Dg/kg	10-	34	122
vP0-4: FlocoteEe	8L-.2.-	00	Dg/kg	X00	p0Dg/kg	11-	3-	12-
vP0-4: PHEaEYHteEe	84.01.8	00	Dg/kg	X00	p0Dg/kg	103	34	122
vP0-4: REYHaSeEe	1p0.1p.-	00	Dg/kg	X00	p0Dg/kg	10p	33	120



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL Out 7 : L016Gnvieyr CromyQv p6drovyr- oGI H 5 NoQ 23t 4282s cvocQQcned								
v P0-4: FicotaEYhEe	p0L-33.0	0@	Dg/kg	X0@	p@Dg/kg	10L	3L	128
v P0-4: PQeEe	1p9.00.0	0@	Dg/kg	X0@	p@Dg/kg	10-	32	134
v P0-4: N.p.FicoteEG RSyaDfEe	42.9L.2	0@	Dg/kg	X0@	p@Dg/kg	11L	32	132
v P0-4: BeEz(a)jEYHaSeE	4L.44.2	0@	Dg/kg	X0@	p@Dg/kg	99@	32	129
v P0-4: i HGeEe	p18.01.9	0@	Dg/kg	X0@	p@Dg/kg	10p	3p	130
v P0-4: BeEzo(r) Z BeEzo(k)ficotaEYhEe	p04.99.p	1	Dg/kg	X1	4 Dg/kg	110	32	129
v P0-4: - @p.MDeYCr eEz(a)jEYHaSeE	4-.9-.L	0@	Dg/kg	X0@	p@Dg/kg	12L	30	143
v P0-4: BeEzo(a)7QeEe	40.2p.8	0@	Dg/kg	X0@	p@Dg/kg	102	28	128
v P0-4: 2.u eyHDSHblaEYhEe	4L.39.4	0@	Dg/kg	X0@	p@Dg/kg	113	3L	1Lp
v P0-4: @5eEo(1@2@5)7QeEe	192.29.4	0@	Dg/kg	X0@	p@Dg/kg	1p0	39	149
v P0-4: Mrr eEz(a@)jEYHaSeE	42.- 0.2	0@	Dg/kg	X0@	p@Dg/kg	11-	39	14-
v P0-4: BeEzo(g@)7et0eEe	191.p3.p	0@	Dg/kg	X0@	p@Dg/kg	1p4	38	148
v P0-4: AcD of PRd s	....	0@	Dg/kg	X0@	....	....	....	....
EL Out 5 : LEB@YiyQ EI Qrl H 5 NoQ 23t 4280s								
v P0-4: MDeyHQ 7HyBlaye	121.11.2	0@	Dg/kg	X0@	p@Dg/kg	8- @	30	13p
v P0-4: MryHQ 7HyBlaye	83.LL.p	0@	Dg/kg	X0@	p@Dg/kg	100	38	130
v P0-4: MhE.r cyD 7HyBlaye	83.- 3.p	0@	Dg/kg	X0@	p@Dg/kg	1p-	28	1L9
v P0-4: BcyD r eEzQ 7HyBlaye	84.L8.-	0@	Dg/kg	X0@	p@Dg/kg	83@	3p	130
v P0-4: r rs(p.eYHCHexD) 7HyBlaye	11- .81.-	0@	Dg/kg	X4@	p@Dg/kg	= 148	3-	144
v P0-4: MhE.oSjQ7HyBlaye	11- .83.0	0@	Dg/kg	X0@	p@Dg/kg	103	3-	12-
EL Out 5 : LEB@YiyQ EI Qrl H 5 NoQ 23t 4282s								
v P0-4: MDeyHQ 7HyBlaye	121.11.2	0@	Dg/kg	X0@	p@Dg/kg	10L	30	13p
v P0-4: MryHQ 7HyBlaye	83.LL.p	0@	Dg/kg	X0@	p@Dg/kg	1p0	38	130
v P0-4: MhE.r cyD 7HyBlaye	83.- 3.p	0@	Dg/kg	X0@	p@Dg/kg	13L	28	1L9
v P0-4: BcyD r eEzQ 7HyBlaye	84.L8.-	0@	Dg/kg	X0@	p@Dg/kg	98@	3p	130
v P0-4: r rs(p.eYHCHexD) 7HyBlaye	11- .81.-	0@	Dg/kg	X4@	p@Dg/kg	12L	3-	144
v P0-4: MhE.oSjQ7HyBlaye	11- .83.0	0@	Dg/kg	X0@	p@Dg/kg	10-	3-	12-
EL Out R: D(Qol ym(Gel H 5 NoQ 23t 4280s								
v P0-4: N.NjyosDeyHQaDfEe	10494.94.L	0@	Dg/kg	X0@	p@Dg/kg	- 4@	1L@	12L
v P0-4: N.Njyos5mYHQaDfEe	44.18.4	0@	Dg/kg	X0@	p@Dg/kg	9- @	22	12p
v P0-4: N.NjyosQtoIfEe	920.44.p	0@	Dg/kg	X1@	p@Dg/kg	- 3@	p- @	120
v P0-4: N.NjyosDor7HblEe	49.89.p	0@	Dg/kg	X0@	p@Dg/kg	- p@	22	121
v P0-4: N.Njyos5nE.7to7GaDfEe	Lp1.L3.-	0@	Dg/kg	X0@	p@Dg/kg	- 4@	2L	1p-
v P0-4: N.Njyos7rEtEe	100.- 4.3	0@	Dg/kg	X0@	p@Dg/kg	- 3@	24	1p8
v P0-4: N.Njyos5mYcQaDfEe	9p3.1L.2	0@	Dg/kg	X0@	p@Dg/kg	83@	2-	129
v P0-4: N.Njyos5r7HEQ Z M7HEQaDfEe	8L.20.L	0@	Dg/kg	X1@	p@Dg/kg	9L@	3p	123
v P0-4: u eyH7QhEe	1pp.29.3	0@	Dg/kg	X0@	p@Dg/kg	121	p3@	132



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	Low	High
EL Out R: D(QoI ym(GeI H 5 NoQ 23t 4282s								
v P0-4: N.Njtosod eyQeyQaD rfe	10494.94.L	0@	Dg/kg	X0@	p@Dg/kg	101	1L@	12L
v P0-4: N.Njtosos5reYQaD rfe	44.18.4	0@	Dg/kg	X0@	p@Dg/kg	110	22	12p
v P0-4: N.Njtosot7QtoIrfEe	920.44.p	0@	Dg/kg	X1@	p@Dg/kg	84@	p-@	120
v P0-4: N.Njtosod ot7Hblfe	49.89.p	0@	Dg/kg	X0@	p@Dg/kg	89@	22	121
v P0-4: N.Njtosos5nE.7to7QaD rfe	Lp1.L3.-	0@	Dg/kg	X0@	p@Dg/kg	8-@	2L	1p-
v P0-4: N.Njtosot7rfetl6rfe	100.-4.3	0@	Dg/kg	X0@	p@Dg/kg	8-@	24	1p8
v P0-4: N.Njtosos5tr cQaD rfe	9p3.1L.2	0@	Dg/kg	X0@	p@Dg/kg	99@	2-	129
v P0-4: N.Njtosos5r7H6EQ Z M7r7H6EQaD rfe	8L.20.L 1pp.29.3	0@	Dg/kg	X1@	p@Dg/kg	113	3p	123
v P0-4: u eyH67QrfeEe	91.80.4	0@	Dg/kg	X0@	p@Dg/kg	= 133	p3@	132
EL Out E: D(QoyromyQvI yGd Ke@GeI H 5 NoQ 23t 4280s								
v P0-4: p.Pr6olrfe	109.0L.8	0@	Dg/kg	X0@	p@Dg/kg	- 1@	10	128
v P0-4: RS9y7H6EoEe	98.8L.p	0@	Dg/kg	X0@	p@Dg/kg	- L@	24	1p8
v P0-4: Njtor eEzeEe	98.94.2	0@	Dg/kg	X0@	p@Dg/kg	--@	2L	1p-
v P0-4: @o7H6toEe	-8.49.1	0@	Dg/kg	X0@	p@Dg/kg	--@	30	12L
v P0-4: p@MEJtoylceEe	L0L.p0.p	0@	Dg/kg	X1@	p@Dg/kg	9p@	3p	130
v P0-4: p@MEJtoylceEe	1p1.13.p	0@	Dg/kg	X1@	p@Dg/kg	9-@	3L	130
v P0-4: 1.Na7H7QaD rfe	123.2p.-	0@	Dg/kg	X0@	p@Dg/kg	30@	10	83
v P0-4: 3.NjtoqcrlEe.N.oxrfe	4L.-.4	0@	Dg/kg	X0@	p@Dg/kg	9-@	1-@	142
v P0-4: Njto.o.yolcrlEe	99.44.8	0@	Dg/kg	X0@	p@Dg/kg	81@	2-	1p4
v P0-4: Rzor eEzeEe	102.22.2	1	Dg/kg	X1	p@Dg/kg	99@	3L	130
v P0-4: 1@TtrEYor eEzeEe	99.24.3	0@	Dg/kg	X0@	p@Dg/kg	- 1@	1p@	141
v P0-4: PH6EaSeYf	Lp.33.p	0@	Dg/kg	X0@	p@Dg/kg	9p@	38	13p
v P0-4: 3.RDrfEor r7H6EQ	9p.L.-1	0@	Dg/kg	X0@	p@Dg/kg	30@	10	9-
v P0-4: PeE9sHotoEYor eEzeEe	8p.L8.8	0@	Dg/kg	X0@	p@Dg/kg	98@	3-	129
v P0-4: PtoEaD rfe	p2940.48.4	0@	Dg/kg	X0@	p@Dg/kg	89@	34	122
v P0-4: MD eyH6aD rfeozor eEzeEe	L0.11.-	0@	Dg/kg	X0@	p@Dg/kg	90@	3p	12L
v P0-4: i Hotor eEz7ayE	410.14.L	0@	Dg/kg	X0@	p@Dg/kg	90@	31	131
EL Out E: D(QoyromyQvI yGd Ke@GeI H 5 NoQ 23t 4282s								
v P0-4: p.Pr6olrfe	109.0L.8	0@	Dg/kg	X0@	p@Dg/kg	81@	10	128
v P0-4: RS9y7H6EoEe	98.8L.p	0@	Dg/kg	X0@	p@Dg/kg	90@	24	1p8
v P0-4: Njtor eEzeEe	98.94.2	0@	Dg/kg	X0@	p@Dg/kg	92@	2L	1p-
v P0-4: @o7H6toEe	-8.49.1	0@	Dg/kg	X0@	p@Dg/kg	89@	30	12L
v P0-4: p@MEJtoylceEe	L0L.p0.p	0@	Dg/kg	X1@	p@Dg/kg	109	3p	130
v P0-4: p@MEJtoylceEe	1p1.13.p	0@	Dg/kg	X1@	p@Dg/kg	1p0	3L	130
v P0-4: 1.Na7H7QaD rfe	123.2p.-	0@	Dg/kg	X0@	p@Dg/kg	3-@	10	83
v P0-4: 3.NjtoqcrlEe.N.oxrfe	4L.-.4	0@	Dg/kg	X0@	p@Dg/kg	80@	1-@	142
v P0-4: Njto.o.yolcrlEe	99.44.8	0@	Dg/kg	X0@	p@Dg/kg	8-@	2-	1p4
v P0-4: Rzor eEzeEe	102.22.2	1	Dg/kg	X1	p@Dg/kg	118	3L	130



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL0ut E: D(Q0yromyQv) yGd Ke0Gel H 5 NoQ 23t 4282s cvoGQ0ned									
v P0-4: 1@TtIeyfor eEzeEe	99.24.3	0@	Dg/kg	X0@	p@Dg/kg	110	1p@	141	
v P0-4: PHeSaSeYfE	Lp.33.p	0@	Dg/kg	X0@	p@Dg/kg	119	38	13p	
v P0-4: 3.RDfEor r7HeEQ	9p.L-1	0@	Dg/kg	X0@	p@Dg/kg	40@	10	9-	
v P0-4: PeEyaSHotoEyor eEzeEe	8p.L8.8	0@	Dg/kg	X0@	p@Dg/kg	118	3-	129	
v P0-4: PtoEaDfEe	p2940.48.4	0@	Dg/kg	X0@	p@Dg/kg	10p	34	122	
v P0-4: MDeyHGaDfEoazor eEzeEe	L0.11.-	0@	Dg/kg	X0@	p@Dg/kg	10-	3p	12L	
v P0-4: i Hotor eEzIaye	410.14.L	0@	Dg/kg	X0@	p@Dg/kg	113	31	131	
EL0ut h: pyioe0erl H 5 NoQ 23t 4280s									
v P0-4: Bis(p.SHotoeyH0) eyHt	111.33.3	0@	Dg/kg	X0@	p@Dg/kg	- 9@	2L	13L	
v P0-4: Bis(p.SHotoeyHxC) DeyHtEe	111.91.1	0@	Dg/kg	X0@	p@Dg/kg	- 1@	30	12L	
v P0-4: 3.i Hoto7HeEQ 7HeEQ eyHt	- 004.- p.2	0@	Dg/kg	X0@	p@Dg/kg	94@	3L	12L	
v P0-4: 3.BtoD07HeEQ 7HeEQ eyHt	101.44.2	0@	Dg/kg	X0@	p@Dg/kg	92@	33	130	
EL0ut h: pyioe0erl H 5 NoQ 23t 4282s									
v P0-4: Bis(p.SHotoeyH0) eyHt	111.33.3	0@	Dg/kg	X0@	p@Dg/kg	9p@	2L	13L	
v P0-4: Bis(p.SHotoeyHxC) DeyHtEe	111.91.1	0@	Dg/kg	X0@	p@Dg/kg	8-@	30	12L	
v P0-4: 3.i Hoto7HeEQ 7HeEQ eyHt	- 004.- p.2	0@	Dg/kg	X0@	p@Dg/kg	112	3L	12L	
v P0-4: 3.BtoD07HeEQ 7HeEQ eyHt	101.44.2	0@	Dg/kg	X0@	p@Dg/kg	113	33	130	
EL0ut b: 5 Blor(GyQd p6drovyr- oG H 5 NoQ 23t 4280s									
v P0-4: 1@M6Hotor eEzeEe	431.- 2.1	0@	Dg/kg	X0@	p@Dg/kg	81@	24	1pp	
v P0-4: 1@M6Hotor eEzeEe	10L.3L.-	0@	Dg/kg	X0@	p@Dg/kg	80@	2L	1p4	
v P0-4: 1@M6Hotor eEzeEe	94.40.1	0@	Dg/kg	X0@	p@Dg/kg	80@	2-	1p2	
v P0-4: d exaSHotoeyHtEe	L- - p.1	0@	Dg/kg	X0@	p@Dg/kg	81@	22	1p2	
v P0-4: 1@TtSHotor eEzeEe	1p0.8p.1	0@	Dg/kg	X0@	p@Dg/kg	L8@	2L	12p	
v P0-4: d exaSHoto7to70eEe	1888.- 1.-	0@	Dg/kg	X0@	p@Dg/kg	83@	pL@	12-	
v P0-4: d exaSHotor cy05reEe	8- .L8.2	0@	Dg/kg	X0@	p@Dg/kg	8-@	30	120	
v P0-4: d exaSHotoSC3o7eEya5reEe	-- .3.- .3	0@	Dg/kg	Xp@	p@Dg/kg	-- @	1-@	131	
v P0-4: PeEyaSHotor eEzeEe	L08.92.4	0@	Dg/kg	X0@	p@Dg/kg	9L@	3L	12L	
v P0-4: d exaSHotor eEzeEe (di B)	118.- 3.1	0@	Dg/kg	X1@	4 Dg/kg	9p@	30	13p	
EL0ut b: 5 Blor(GyQd p6drovyr- oG H 5 NoQ 23t 4282s									
v P0-4: 1@M6Hotor eEzeEe	431.- 2.1	0@	Dg/kg	X0@	p@Dg/kg	94@	24	1pp	
v P0-4: 1@M6Hotor eEzeEe	10L.3L.-	0@	Dg/kg	X0@	p@Dg/kg	9p@	2L	1p4	
v P0-4: 1@M6Hotor eEzeEe	94.40.1	0@	Dg/kg	X0@	p@Dg/kg	94@	2-	1p2	
v P0-4: d exaSHotoeyHtEe	L- - p.1	0@	Dg/kg	X0@	p@Dg/kg	93@	22	1p2	
v P0-4: 1@TtSHotor eEzeEe	1p0.8p.1	0@	Dg/kg	X0@	p@Dg/kg	80@	2L	12p	
v P0-4: d exaSHoto7to70eEe	1888.- 1.-	0@	Dg/kg	X0@	p@Dg/kg	1p4	pL@	12-	
v P0-4: d exaSHotor cy05reEe	8- .L8.2	0@	Dg/kg	X0@	p@Dg/kg	102	30	120	
v P0-4: d exaSHotoSC3o7eEya5reEe	-- .3.- .3	0@	Dg/kg	Xp@	p@Dg/kg	123	1-@	131	
v P0-4: PeEyaSHotor eEzeEe	L08.92.4	0@	Dg/kg	X0@	p@Dg/kg	118	3L	12L	



Page : 2- of 3L
 Wotk Yt5et : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL Out b : 5 Blor(G)Gd p6drovyr- oGI H 5 NoQ 23t 4282s cvocQGned									
v P0-4: d exaSHotor eEzeEe (di B)	118.- 3.1	0@	Dg/kg	X1@	4 Dg/kg	111	30	13p	
EL Out p : CcGf(Gel) yGd 7 eCz(d(Gel) H 5 NoG 23t 4280s									
v P0-4: REHfEe	Lp.42.2	0@	Dg/kg	X0@	p@Dg/kg	4-@	10	113	
v P0-4: 3.i HotoaEiHfEe	10L.3.- 8	0@	Dg/kg	X0@	p@Dg/kg	31@	10	102	
v P0-4: p.NjytoaEiHfEe	88.- 3.3	0@	Dg/kg	X1@	p@Dg/kg	90@	30	13p	
v P0-4: 2.NjytoaEiHfEe	99.09.p	0@	Dg/kg	X1@	p@Dg/kg	L4@	p2@	1p4	
v P0-4: Min eEzofciaE	12p.L3.9	0@	Dg/kg	X0@	p@Dg/kg	91@	3L	123	
v P0-4: 3.NjytoaEiHfEe	100.01.L	0@	Dg/kg	X0@	p@Dg/kg	84@	28	12p	
v P0-4: i atrazole	8L.- 3.8	0@	Dg/kg	X0@	p@Dg/kg	8-@	33	123	
v P0-4: 2@.MSHotor eEzifEe	91.93.1	0@	Dg/kg	X0@	p@Dg/kg	2L@	10	1p3	
EL Out p : CcGf(Gel) yGd 7 eCz(d(Gel) H 5 NoG 23t 4282s									
v P0-4: REHfEe	Lp.42.2	0@	Dg/kg	X0@	p@Dg/kg	- 0@	10	113	
v P0-4: 3.i HotoaEiHfEe	10L.3.- 8	0@	Dg/kg	X0@	p@Dg/kg	33@	10	102	
v P0-4: p.NjytoaEiHfEe	88.- 3.3	0@	Dg/kg	X1@	p@Dg/kg	110	30	13p	
v P0-4: 2.NjytoaEiHfEe	99.09.p	0@	Dg/kg	X1@	p@Dg/kg	- p@	p2@	1p4	
v P0-4: Min eEzofciaE	12p.L3.9	0@	Dg/kg	X0@	p@Dg/kg	110	3L	123	
v P0-4: 3.NjytoaEiHfEe	100.01.L	0@	Dg/kg	X0@	p@Dg/kg	103	28	12p	
v P0-4: i atrazole	8L.- 3.8	0@	Dg/kg	X0@	p@Dg/kg	104	33	123	
v P0-4: 2@.MSHotor eEzifEe	91.93.1	0@	Dg/kg	X0@	p@Dg/kg	38@	10	1p3	
EL Out P. Orgy GovBior(Ge) LeI Qv(del) H 5 NoG 23t 4280s									
v P0-4: aI7Hb.Bdi	219.83.L	0@	Dg/kg	X0@	p@Dg/kg	10p	40	123	
v P0-4: r eya.Bdi	219.84.-	0@	Dg/kg	X0@	p@Dg/kg	91@	3-	124	
v P0-4: gaDD a.Bdi	48.89.9	0@	Dg/kg	X0@	p@Dg/kg	10p	40	12-	
v P0-4: 5elja.Bdi	219.8L.8	0@	Dg/kg	X0@	p@Dg/kg	9L@	38	12L	
v P0-4: d e7yaSHot	-L.33.8	0@	Dg/kg	X0@	p@Dg/kg	9-@	30	128	
v P0-4: RI5tE	209.00.p	0@	Dg/kg	X0@	p@Dg/kg	92@	33	130	
v P0-4: d e7yaSHot e7oxi@e	10p3.4.- 2	0@	Dg/kg	X0@	p@Dg/kg	89@	34	129	
v P0-4: aI7Hb.v E5oscifaE	949.98.8	0@	Dg/kg	X0@	p@Dg/kg	90@	3L	13p	
v P0-4: 3@.MMW	-p.44.9	0@	Dg/kg	X0@	p@Dg/kg	9p@	- 0	120	
v P0-4: MeI5tE	L0.4.- 1	0@	Dg/kg	X0@	p@Dg/kg	100	3-	129	
v P0-4: v E5tE	-p.p0.8	0@	Dg/kg	X0@	p@Dg/kg	8L@	3p	13p	
v P0-4: r eya.v E5oscifaE	22p12.L4.9	0@	Dg/kg	X0@	p@Dg/kg	9p@	3-	131	
v P0-4: 3@.MMW	-p.43.8	0@	Dg/kg	X0@	p@Dg/kg	9p@	3p	13L	
v P0-4: v E5oscifaE scIafaye	1021.0.- 8	0@	Dg/kg	X0@	p@Dg/kg	93@	31	131	
v P0-4: 3@.MMT	40.p9.2	0@	Dg/kg	X1@	p@Dg/kg	9p@	19@	138	
EL Out P. Orgy GovBior(Ge) LeI Qv(del) H 5 NoG 23t 4282s									
v P0-4: aI7Hb.Bdi	219.83.L	0@	Dg/kg	X0@	p@Dg/kg	1p0	40	123	
v P0-4: r eya.Bdi	219.84.-	0@	Dg/kg	X0@	p@Dg/kg	111	3-	124	



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL0ut P OrgyGovBior(Ge LeI Qv(del H 5 NoQ 23t 4282s cvoGQnred									
v P0-4: gaDDa.Bdi	48.89.9	0@	Dg/kg	X0@	p@Dg/kg	1p1	40	12-	
v P0-4: 5elja.Bdi	219.8L.8	0@	Dg/kg	X0@	p@Dg/kg	110	38	12L	
v P0-4: de7yaSHot	-L.33.8	0@	Dg/kg	X0@	p@Dg/kg	118	30	128	
v P0-4: RI5trE	209.00.p	0@	Dg/kg	X0@	p@Dg/kg	109	33	130	
v P0-4: de7yaSHot e7ox0e	10p3.4-.2	0@	Dg/kg	X0@	p@Dg/kg	103	34	129	
v P0-4: ai7H.v E5oscifaE	949.98.8	0@	Dg/kg	X0@	p@Dg/kg	100	3L	13p	
v P0-4: 3@.MMW	-p.44.9	0@	Dg/kg	X0@	p@Dg/kg	104	-0	120	
v P0-4: MeI5trE	L0.4-.1	0@	Dg/kg	X0@	p@Dg/kg	104	3-	129	
v P0-4: v E5trE	-p.p0.8	0@	Dg/kg	X0@	p@Dg/kg	119	3p	13p	
v P0-4: r eja.v E5oscifaE	22p12.L4.9	0@	Dg/kg	X0@	p@Dg/kg	110	3-	131	
v P0-4: 3@.MMW	-p.43.8	0@	Dg/kg	X0@	p@Dg/kg	92@	3p	13L	
v P0-4: v E5oscifaE scifaye	1021.0-.8	0@	Dg/kg	X0@	p@Dg/kg	119	31	131	
v P0-4: 3@.MMT	40.p9.2	0@	Dg/kg	X1@	p@Dg/kg	90@	19@	138	
EL0ut J: OrgyGoSBol SBorml LeI Qv(del H 5 NoQ 23t 4280s									
v P0-4: MSHotms	Lp.-2.-	0@	Dg/kg	X0@	p@Dg/kg	L8@	p1@	121	
v P0-4: MDeyHbye	L0.41.4	0@	Dg/kg	X0@	p@Dg/kg	90@	28	13p	
v P0-4: MiazEoE	222.31.4	0@	Dg/kg	X0@	p@Dg/kg	9L@	2L	122	
v P0-4: i Hot7Qrfos.DeyHQ	4498.12.0	0@	Dg/kg	X0@	p@Dg/kg	9L@	24	132	
v P0-4: u alayH0E	1p1.-4.4	0@	Dg/kg	X0@	p@Dg/kg	98@	24	132	
v P0-4: FeEYH0E	44.28.9	0@	Dg/kg	X0@	p@Dg/kg	90@	p4@	124	
v P0-4: i Hot7Qrfos	p9p1.88.p	0@	Dg/kg	X0@	p@Dg/kg	9L@	2L	12p	
v P0-4: PitrD7Hbs.eYHQ	p2404.31.1	0@	Dg/kg	X0@	p@Dg/kg	9L@	2L	124	
v P0-4: i HofteEmE7Hbs	3-0.90.L	0@	Dg/kg	X0@	p@Dg/kg	93@	24	128	
v P0-4: PtoyH0fos	23L32.3L.3	0@	Dg/kg	X0@	p@Dg/kg	9p@	2-	124	
v P0-4: v yH0E	4L2.1p.p	0@	Dg/kg	X0@	p@Dg/kg	91@	28	12-	
EL0ut J: OrgyGoSBol SBorml LeI Qv(del H 5 NoQ 23t 4282s									
v P0-4: MSHotms	Lp.-2.-	0@	Dg/kg	X0@	p@Dg/kg	82@	p1@	121	
v P0-4: MDeyHbye	L0.41.4	0@	Dg/kg	X0@	p@Dg/kg	11-	28	13p	
v P0-4: MiazEoE	222.31.4	0@	Dg/kg	X0@	p@Dg/kg	104	2L	122	
v P0-4: i Hot7Qrfos.DeyHQ	4498.12.0	0@	Dg/kg	X0@	p@Dg/kg	111	24	132	
v P0-4: u alayH0E	1p1.-4.4	0@	Dg/kg	X0@	p@Dg/kg	118	24	132	
v P0-4: FeEYH0E	44.28.9	0@	Dg/kg	X0@	p@Dg/kg	104	p4@	124	
v P0-4: i Hot7Qrfos	p9p1.88.p	0@	Dg/kg	X0@	p@Dg/kg	108	2L	12p	
v P0-4: PitrD7Hbs.eYHQ	p2404.31.1	0@	Dg/kg	X0@	p@Dg/kg	111	2L	124	
v P0-4: i HofteEmE7Hbs	3-0.90.L	0@	Dg/kg	X0@	p@Dg/kg	118	24	128	
v P0-4: PtoyH0fos	23L32.3L.3	0@	Dg/kg	X0@	p@Dg/kg	110	2-	124	
v P0-4: v yH0E	4L2.1p.p	0@	Dg/kg	X0@	p@Dg/kg	111	28	12-	
EL040/0u1: i oQj Le0oIem p6drovyr- oG H 5 NoQ 23t 4234s									
v P080: i L. i 9 FiasY0E	....	10	Dg/kg	X10	2L Dg/kg	8L@	-0	122	



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EL040/0ur: i oGi LeGoienm p6drovyr- oG H 5 NoQ 23t 42t 0s									
v P080: i L. i 9 FtaSøE	....	10	Dg/kg	X10	2L Dg/kg	9L	-0	-0	122
EL040/0ur: i oGi LeGoienm p6drovyr- oG H 5 NoQ 23t 424as									
v P0-1: i 10. i 13 FtaSøE	....	40	Dg/kg	X40	433 Dg/kg	-8	44	44	1p2
v P0-1: i 14. i p8 FtaSøE	....	100	Dg/kg	X100	1981 Dg/kg	9p	-p	-p	123
v P0-1: i p9. i 2L FtaSøE	....	100	Dg/kg	X100	818 Dg/kg	83	-1	-1	132
v P0-1: i 10. i 2L FtaSøE (scD)	....	40	Dg/kg	X40	....	....	....	....	....
EL040/0ur: i oGi LeGoienm p6drovyr- oG H 5 NoQ 23t 4243s									
v P0-1: i 10. i 13 FtaSøE	....	40	Dg/kg	X40	433 Dg/kg	81	44	44	1p2
v P0-1: i 14. i p8 FtaSøE	....	100	Dg/kg	X100	1981 Dg/kg	94	-p	-p	123
v P0-1: i p9. i 2L FtaSøE	....	100	Dg/kg	X100	818 Dg/kg	82	-1	-1	132
v P0-1: i 10. i 2L FtaSøE (scD)	....	40	Dg/kg	X40	....	....	....	....	....
EL040/0ur: i oGi AevoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 4234s									
v P080: i L. i 10 FtaSøE	....	10	Dg/kg	X10	34 Dg/kg	83	-0	-0	120
EL040/0ur: i oGi AevoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 42t 0s									
v P080: i L. i 10 FtaSøE	....	10	Dg/kg	X10	34 Dg/kg	93	-0	-0	120
EL040/0ur: i oGi AevoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 424as									
v P0-1: % 10. i 1L FtaSøE	....	40	Dg/kg	X40	8-0 Dg/kg	84	L9	L9	1p2
v P0-1: % 1L. i 23 FtaSøE	....	100	Dg/kg	X100	p394 Dg/kg	83	-1	-1	123
v P0-1: % 23. i 30 FtaSøE	....	100	Dg/kg	X100	pL2 Dg/kg	8-	L2	L2	132
v P0-1: % 10. i 30 FtaSøE (scD)	....	100	Dg/kg	X100	....	....	....	....	....
EL040/0ur: i oGi AevoFery- ie p6drovyr- oG cDELM 2010 RryfQH 5 NoQ 23t 4243s									
v P0-1: % 10. i 1L FtaSøE	....	40	Dg/kg	X40	8-0 Dg/kg	90	L9	L9	1p2
v P0-1: % 1L. i 23 FtaSøE	....	100	Dg/kg	X100	p394 Dg/kg	84	-1	-1	123
v P0-1: % 23. i 30 FtaSøE	....	100	Dg/kg	X100	pL2 Dg/kg	80	L2	L2	132
v P0-1: % 10. i 30 FtaSøE (scD)	....	100	Dg/kg	X100	....	....	....	....	....
EL040: 7I EXD H 5 NoQ 23t 42t 0s									
v P080: BeEzeEe	-1.32.p	0	Dg/kg	X0	p Dg/kg	93	-p	-p	1pL
v P080: TolceEe	108.88.2	0	Dg/kg	X0	p Dg/kg	94	-2	-2	1p9
v P080: vYHreEzeEe	100.31.3	0	Dg/kg	X0	p Dg/kg	93	-p	-p	1pL
v P080: Deø. Z 7ata.&OeEe	108.28.2 10L.3p.2	0	Dg/kg	X0	3 Dg/kg	9L	-0	-0	128
v P080: otyhb.&OeEe	94.3-.L	0	Dg/kg	X0	p Dg/kg	99	-2	-2	121
v P080: Na7HaleEe	91.p0.2	1	Dg/kg	X1	0 Dg/kg	1p-	-0	-0	120
EL218: LervEiorY - 6 N5/My H 5 NoQ 2380431s									
v Pp1L: PetShotay	-L01.90.2	10	µg/kg	X10	p4 µg/kg	9-	4L	4L	120
EL218: LervEiorY - 6 N5/My H 5 NoQ 2380432s									
v Pp1L: PetShotay	-L01.90.2	10	µg/kg	X10	p4 µg/kg	98	4L	4L	120



Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report	
				Result	Concentration	Spike Recovery (%)	Recovery Limits (%)
EL2a1: LefninoovØi Cv(dl yGd YnifoGyØi . H 5 NoQ 23t 9388s							
v Pp21: PFYA	1- L2.p2.1	0Ø004	Dg/kg	X0Ø004	0Ø04 Dg/kg	83Ø	43 13L
v Pp21: PFYR	224.L.-1	0Ø004	Dg/kg	X0Ø004	0Ø04 Dg/kg	8pØ	43 123
v Pp21: L.p FicotoyeloDet AcifoEaye (L.p FA)	p- L19.9.-p	0Ø04	Dg/kg	X0Ø04	Ø04 Dg/kg	- 1Ø	4L 128
Ac.r.u.aYtX: WCI EA							
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	Spike Recovery (%)	Recovery Limits (%)
Eb 0201 : I oØi MeØiJl - 6 B LØMY H 5 NoQ 23t 4313s							
v GØp0R.T: RtseES	- 330.28.p	0Ø01	Dg/b	X0Ø01	0ØDg/b	98Ø	8L 110
v GØp0R.T: BetØlreD	- 330.31.-	0Ø01	Dg/b	X0Ø01	0ØDg/b	91Ø	L8 1p8
v GØp0R.T: BatreD	- 330.29.2	0Ø01	Dg/b	X0Ø01	0ØDg/b	99Ø	8- 114
v GØp0R.T: i a5DreD	- 330.32.9	0Ø01	Dg/b	X0Ø01	0ØDg/b	92Ø	8- 111
v GØp0R.T: i HoDreD	- 330.3.-2	0Ø01	Dg/b	X0Ø01	0ØDg/b	10p	8- 114
v GØp0R.T: i or aly	- 330.38.3	0Ø01	Dg/b	X0Ø01	0ØDg/b	9LØ	88 113
v GØp0R.T: i o77et	- 330.40.8	0Ø01	Dg/b	X0Ø01	0ØDg/b	9- Ø	88 110
v GØp0R.T: bea5	- 329.9p.1	0Ø01	Dg/b	X0Ø01	0ØDg/b	10p	90 113
v GØp0R.T: u aEgaEese	- 329.9L.4	0Ø01	Dg/b	X0Ø01	0ØDg/b	10p	8- 112
v GØp0R.T: NØkel	- 330.0p.0	0Ø01	Dg/b	X0Ø01	0ØDg/b	10p	89 112
v GØp0R.T: VaEa5reD	- 330.Lp.p	Ø1	Dg/b	X0Ø1	0ØDg/b	10p	8L 113
v GØp0R.T: ° IES	- 330.LL.L	0Ø04	Dg/b	X0Ø04	0ØDg/b	9pØ	8p 11L
Eb 0at I : I oØi AeovoFery- ie Mervnr6 - 6 hØMY H 5 NoQ 23t 4311s							
v GØ24T: u etSstC	- 329.9.-L	0Ø01	Dg/b	X0Ø01	0Ø100 Dg/b	88Ø	L9 1p4
EL 040/0uJ: I oØi LeØoienm p6drovyr- oØ H 5 NoQ 23t 4132s							
v PØ80: i L. i 9 FtaSØE	....	pØ	µg/b	XpØ	2LØ µg/b	82Ø	-p 12L
EL 040/0uJ: I oØi LeØoienm p6drovyr- oØ H 5 NoQ 23t 43a2s							
v PØ-1: i 10. i 13 FtaSØE	....	40	µg/b	X40	p484 µg/b	- LØ	L3 1p3
v PØ-1: i 14. i p8 FtaSØE	....	100	µg/b	X100	9- pØ µg/b	92Ø	-Ø 120
v PØ-1: i p9. i 2L FtaSØE	....	40	µg/b	X40	2230 µg/b	94Ø	L8 1p8
EL 040/0uJ: I oØi AeovoFery- ie p6drovyr- oØ cDELM 2010 RryfQ H 5 NoQ 23t 4132s							
v PØ80: i L. i 10 FtaSØE	....	pØ	µg/b	XpØ	340 µg/b	80Ø	-Ø 120
EL 040/0uJ: I oØi AeovoFery- ie p6drovyr- oØ cDELM 2010 RryfQ H 5 NoQ 23t 43a2s							
v PØ-1: % 10. i 1L FtaSØE	....	100	µg/b	X100	3044 µg/b	84Ø	-Ø 120
v PØ-1: % 1L. i 23 FtaSØE	....	100	µg/b	X100	10244 µg/b	92Ø	-Ø 120
v PØ-1: % 23. i 30 FtaSØE	....	100	µg/b	X100	890 µg/b	98Ø	-Ø 120
EL 040: 71 EXD H 5 NoQ 23t 4132s							
v PØ80: BeEzeEe	-1.32.p	1	µg/b	X1	pØ µg/b	93Ø	-2 1p-
v PØ80: TolceEe	108.88.2	p	µg/b	Xp	pØ µg/b	92Ø	-3 1p8
v PØ80: vYØr eZeEe	100.31.3	p	µg/b	Xp	pØ µg/b	81Ø	-p 1pL



Page : 31 of 3L
 Wotk Ytset : v u 1p09330
 i lreEy : i RI MNy bRNv PØv I PTh bTM
 PtojeSy : p1p1L2 1

Ac r. u aYix: WCI EA

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report				
				Result	Concentration	Spike Recovery (%)	LCS	Low	High	
EL040: 7I EXD H 5 NoQ 23t 4132s cvoGQ Gned										
v P080: Dey. Z 7ata.&OeEe	108.28.2 10L.3p.2	p	µg/b	Xp	30 µg/b	84@		L9		122
v P080: otyHb.&OeEe	94.3-.L	p	µg/b	Xp	p0 µg/b	8L@		-3		1p8
v P080: Na7HaleEe	91.p0.2	4	µg/b	X4	4 µg/b	93@		-0		120



Page : 3p of 3L
 Wotk Ytset : v u 1p09330
 i IreEy : i RI MNy bRNv P0v I PTh bTM
 PtoeSy : p1p1L2 1

Matrix Spike (MS) Report

The qcalyC S0EYtol yetD u ayxk A7ike (u A) tefets y o aE rEYalarotayotC s7iny saD7le s7ke5 wYH a te7heseEYayme sey of yatgey aEalQes@The 7ct7ose of yHs Qi 7ataDeyet is y DoEjot 7oyEYal Dayix effeSs oE aEalQe teSomeres@vayS i eSomelCbnDnys as 7et lar otayotCMaya QcalyCY r jeSjmes (MQYs)@Eal teSomelCtaEges sjae5 DaCr e wannes5 rE YHe emeYof saD7le Dayix rEjefefeteESe@

Ac r u ayxk: YORN

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
Eb 00t I : I oQj MeQjil - 6 B LcCEY H 5 NoQ 23t 4a34s						
v u 1p09330.002	AB1p/1@1@	v G004T: RkseEES	- 330.28.p	40 Dg/kg	94@	-0 120
		v G004T: BatreD	- 330.29.2	40 Dg/kg	99@	-0 120
		v G004T: BetOllreD	- 330.31.-	40 Dg/kg	10-	-0 120
		v G004T: i a5DreD	- 330.32.9	40 Dg/kg	98@	-0 120
		v G004T: i HoDreD	- 330.3.-.2	40 Dg/kg	98@	-0 120
		v G004T: i o77et	- 330.40.8	40 Dg/kg	102	-0 120
		v G004T: bea5	- 329.9p.1	40 Dg/kg	92@	-0 120
		v G004T: u aEgaEese	- 329.9L.4	40 Dg/kg	9L@	-0 120
		v G004T: Nfkel	- 330.0p.0	40 Dg/kg	9p@	-0 120
		v G004T: VaEa5reD	- 330.Lp.p	40 Dg/kg	98@	-0 120
		v G004T: ° fES	- 330.LL.L	40 Dg/kg	93@	-0 120
Eb 00t I : I oQj MeQjil - 6 B LcCEY H 5 NoQ 23t 4at 0s						
v u 1p09330.03p	ABpp/0@0@	v G004T: RkseEES	- 330.28.p	40 Dg/kg	94@	-0 120
		v G004T: BatreD	- 330.29.2	40 Dg/kg	10p	-0 120
		v G004T: BetOllreD	- 330.31.-	40 Dg/kg	111	-0 120
		v G004T: i a5DreD	- 330.32.9	40 Dg/kg	10p	-0 120
		v G004T: i HoDreD	- 330.3.-.2	40 Dg/kg	100	-0 120
		v G004T: i o77et	- 330.40.8	40 Dg/kg	108	-0 120
		v G004T: bea5	- 329.9p.1	40 Dg/kg	9L@	-0 120
		v G004T: u aEgaEese	- 329.9L.4	40 Dg/kg	10-	-0 120
		v G004T: Nfkel	- 330.0p.0	40 Dg/kg	94@	-0 120
		v G004T: VaEa5reD	- 330.Lp.p	40 Dg/kg	10L	-0 120
		v G004T: ° fES	- 330.LL.L	40 Dg/kg	98@	-0 120
Eb 0at I : I oQj AevoFery- ie Mervnr6 - 6 hRMY H 5 NoQ 23t 4a39s						
v u 1p09330.002	AB1p/1@1@	v G024T: u etSctC	- 329.9.-.L	4@ Dg/kg	93@	-0 1p0
Eb 0at I : I oQj AevoFery- ie Mervnr6 - 6 hRMY H 5 NoQ 23t 4at 1s						
v u 1p09330.03p	ABpp/0@0@	v G024T: u etSctC	- 329.9.-.L	4@ Dg/kg	88@	-0 1p0
EL 088: L oifvBior(GyQd 7 (SBeG6il HL57 s H 5 NoQ 23t 4219s						
v u 1p09330.002	AB1p/1@1@	v P0LL: Total PolCSHotrEaye5 r r7HeECs	....	1@ Dg/kg	94@	44 12p
EL 088: L oifvBior(GyQd 7 (SBeG6il HL57 s H 5 NoQ 23t 4281s						
v u 1p09330.03p	ABpp/0@0@	v P0LL: Total PolCSHotrEaye5 r r7HeECs	....	1@ Dg/kg	- 3@	44 12p
EL 0u3C: MoQov6vi(v CromyQv p6drovyr- oG H 5 NoQ 23t 4239s						
v u 1p09330.002	AB1p/1@1@	v P0-3: BeEzeEe	- 1.32.p	p Dg/kg	94@	L3 1pL
		v P0-3: TolceEe	108.88.2	p Dg/kg	9-@	L4 121



				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)
					MS	MS	
EL0u3C: MoCov6v(iv CromyQv p6drovyr- oG H 5 NoQ 23t 42t 1s							
v u 1p09330.03p	ABpp/0@0@0@	v P0-3: BeEzeEe	- 1.32.p	p Dg/kg	89@	L3	1pL
		v P0-3: TolceEe	108.88.2	p Dg/kg	89@	L4	121
EL0u3E: pylogeQy@d Cj(SByQv 5 omSonGdl H 5 NoQ 23t 4239s							
v u 1p09330.002	AB1p/1@1@	v P0-3: 1@M8HotoeYHeEe	-4.24.3	p Dg/kg	92@	40	1p3
		v P0-3: TrfSHotoeYHeEe	-9.01.L	p Dg/kg	90@	L0	1pp
EL0u3E: pylogeQy@d Cj(SByQv 5 omSonGdl H 5 NoQ 23t 42t 1s							
v u 1p09330.03p	ABpp/0@0@0@	v P0-3: 1@M8HotoeYHeEe	-4.24.3	p Dg/kg	84@	40	1p3
		v P0-3: TrfSHotoeYHeEe	-9.01.L	p Dg/kg	80@	L0	1pp
EL0u3h: pylogeQy@d CromyQv 5 omSonGdl H 5 NoQ 23t 4239s							
v u 1p09330.002	AB1p/1@1@	v P0-3: i Hotor eEzeEe	108.90.-	p Dg/kg	92@	L9	1p9
EL0u3h: pylogeQy@d CromyQv 5 omSonGdl H 5 NoQ 23t 42t 1s							
v u 1p09330.03p	ABpp/0@0@0@	v P0-3: i Hotor eEzeEe	108.90.-	p Dg/kg	8L@	L9	1p9
EL0ut C: LBeGo(v 5 omSonGdl H 5 NoQ 23t 4280s							
v u 1p09330.004	AB12/0.0@0@	v P0-4: PHeEol	108.94.p	4 Dg/kg	L2@	p2@	119
		v P0-4: p.i Hoto7HeEol	94.4-.8	4 Dg/kg	- 1@	21@	11L
		v P0-4: p.Njto7HeEol	88.-4.4	4 Dg/kg	L2@	1L@	114
		v P0-4: 3.i Hoto.2.u eyH7HeEol	49.40.-	4 Dg/kg	- 9@	pp@	1pp
		v P0-4: PeEyaSHoto7HeEol	8-.8L.4	4 Dg/kg	9L@	1-@	13p
EL0ut C: LBeGo(v 5 omSonGdl H 5 NoQ 23t 4282s							
v u 1p09330.034	ABp2/0.0@0@	v P0-4: PHeEol	108.94.p	4 Dg/kg	44@	p2@	119
		v P0-4: p.i Hoto7HeEol	94.4-.8	4 Dg/kg	L1@	21@	11L
		v P0-4: p.Njto7HeEol	88.-4.4	4 Dg/kg	44@	1L@	114
		v P0-4: 3.i Hoto.2.u eyH7HeEol	49.40.-	4 Dg/kg	- 0@	pp@	1pp
		v P0-4: PeEyaSHoto7HeEol	8-.8L.4	4 Dg/kg	9p@	1-@	13p
EL0ut 7: Loif6Gnvieyr CromyQv p6drovyr- oG H 5 NoQ 23t 4280s							
v u 1p09330.004	AB12/0.0@0@	v P0-4: RSeEa7HyHeEe	82.2p.9	4 Dg/kg	83@	p4@	1pp
		v P0-4: PQeEe	1p9.00.0	4 Dg/kg	- 9@	13@	1p-
EL0ut 7: Loif6Gnvieyr CromyQv p6drovyr- oG H 5 NoQ 23t 4282s							
v u 1p09330.034	ABp2/0.0@0@	v P0-4: RSeEa7HyHeEe	82.2p.9	4 Dg/kg	- 4@	p4@	1pp
		v P0-4: PQeEe	1p9.00.0	4 Dg/kg	L3@	13@	1p-
EL0ut R: D(QoI ym(CeI H 5 NoQ 23t 4280s							
v u 1p09330.004	AB12/0.0@0@	v P0-4: N.NjtosonE.7to7OaDfEe	Lp1.L3.-	4 Dg/kg	- 1@	1-@	110
EL0ut R: D(QoI ym(CeI H 5 NoQ 23t 4282s							
v u 1p09330.034	ABp2/0.0@0@	v P0-4: N.NjtosonE.7to7OaDfEe	Lp1.L3.-	4 Dg/kg	40@	1-@	110
EL0ut E: D(QoI ym(CeI yGd Ke@Gdl H 5 NoQ 23t 4280s							
v u 1p09330.004	AB12/0.0@0@	v P0-4: p@MfEYtoyceEe	1p1.13.p	4 Dg/kg	- 8@	p8@	11p



Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%)	
					MS	Low	High
EL0ut E: D(ØyromyQv) yGd KeØCel H 5 NoQ 23t 4282s						
v u 1p09330.034	ABp2/0.0@	v P0-4: p@MExoIceEe	1p1.13.p	4 Dg/kg	-4@	p8@ 11p
EL0ut b : 5 Blor(GyØd p6drovyr- oG H 5 NoQ 23t 4280s						
v u 1p09330.004	AB12/0.0@	v P0-4: 1@MShotor eEzeEe	10L.3L--	4 Dg/kg	L8@	p2 11p
		v P0-4: 1@TtShotor eEzeEe	1p0.8p.1	4 Dg/kg	Lp@	1p@ 111
EL0ut b : 5 Blor(GyØd p6drovyr- oG H 5 NoQ 23t 4282s						
v u 1p09330.034	ABp2/0.0@	v P0-4: 1@MShotor eEzeEe	10L.3L--	4 Dg/kg	48@	p2 11p
		v P0-4: 1@TtShotor eEzeEe	1p0.8p.1	4 Dg/kg	41@	1p@ 111
EL040/0ur1: I oGj LeØoienm p6drovyr- oG H 5 NoQ 23t 4234s						
v u 1p09330.002	AB1p/1@1@	v P080: i L i 9 FtaSyØE	....	p8 Dg/kg	80@	39 1p-
EL040/0ur1: I oGj LeØoienm p6drovyr- oG H 5 NoQ 23t 42t 0s						
v u 1p09330.03p	ABpp/0@0@	v P080: i L i 9 FtaSyØE	....	p8 Dg/kg	--@	39 1p-
EL040/0ur1: I oGj LeØoienm p6drovyr- oG H 5 NoQ 23t 4244s						
v u 1p09330.002	AB1p/1@1@	v P0-1: i 10. i 13 FtaSyØE	....	433 Dg/kg	82@	43 1p2
		v P0-1: i 14. i p8 FtaSyØE	....	1981 Dg/kg	94@	-3 123
		v P0-1: i p9. i 2L FtaSyØE	....	818 Dg/kg	8-@	L2 132
EL040/0ur1: I oGj LeØoienm p6drovyr- oG H 5 NoQ 23t 4243s						
v u 1p09330.03p	ABpp/0@0@	v P0-1: i 10. i 13 FtaSyØE	....	433 Dg/kg	83@	43 1p2
		v P0-1: i 14. i p8 FtaSyØE	....	1981 Dg/kg	9L@	-3 123
		v P0-1: i p9. i 2L FtaSyØE	....	818 Dg/kg	83@	L2 132
EL040/0ur1: I oGj AevoFery- ie p6drovyr- oG cDELM 2010 RryfQ H 5 NoQ 23t 4234s						
v u 1p09330.002	AB1p/1@1@	v P080: i L i 10 FtaSyØE	....	22 Dg/kg	-4@	-0 120
EL040/0ur1: I oGj AevoFery- ie p6drovyr- oG cDELM 2010 RryfQ H 5 NoQ 23t 42t 0s						
v u 1p09330.03p	ABpp/0@0@	v P080: i L i 10 FtaSyØE	....	22 Dg/kg	-2@	-0 120
EL040/0ur1: I oGj AevoFery- ie p6drovyr- oG cDELM 2010 RryfQ H 5 NoQ 23t 4244s						
v u 1p09330.002	AB1p/1@1@	v P0-1: % 10. i 1L FtaSyØE	....	8-0 Dg/kg	89@	43 1p2
		v P0-1: % 1L. i 23 FtaSyØE	....	p394 Dg/kg	8-@	-3 123
		v P0-1: % 23. i 30 FtaSyØE	....	pL2 Dg/kg	89@	L2 132
EL040/0ur1: I oGj AevoFery- ie p6drovyr- oG cDELM 2010 RryfQ H 5 NoQ 23t 4243s						
v u 1p09330.03p	ABpp/0@0@	v P0-1: % 10. i 1L FtaSyØE	....	8-0 Dg/kg	9p@	43 1p2
		v P0-1: % 1L. i 23 FtaSyØE	....	p394 Dg/kg	8-@	-3 123
		v P0-1: % 23. i 30 FtaSyØE	....	pL2 Dg/kg	-8@	L2 132
EL040: 7I EXD H 5 NoQ 23t 42t 0s						
v u 1p09330.03p	ABpp/0@0@	v P080: BeEzeEe	-1.32.p	p Dg/kg	90@	48 12L
		v P080: TolceEe	108.88.2	p Dg/kg	88@	L2 124
EL218: LevBoryQ - 6 N5 /MY H 5 NoQ 2380431s						
v u 1p09204.009	REØEØccs	v Pp1L: PetShotaye	-L01.90.2	p4 µg/kg	93@	-0 120



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 Wotk Ytset : v u 1p09330
 i rreEy : i RI MNy bRNv P0vI PTh bTM
 PtoeSy : p1p1L2 1

Acf.u aytx: Y0IN

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
EL218: LervBoryQ - 6 N5/IMY H 5 NoQ 2380432s	ABp-/0.0@	v Pp1L: PetShotaje	-L01.90.2	p4 µg/kg	92@	-0 120
EL2a1: LerrfhorooVBi Cv(dl yGd YnifoQyQl . H 5 NoQ 2319388s	AB1p/0.0@	v Pp21: PFYA v Pp21: PFYR v Pp21: L.p FfctoyeloDet AcfoEaye (L.p FYA)	1- L2.p2.1 224.L-.1 p- L19.9-.p	0@04 Dg/kg 0@04 Dg/kg @04 Dg/kg	= NoyMeyetDIEe5 - 8@ = NoyMeyetDIEe5	43 13L 43 123 4L 128

Acf.u aytx: WCI EA

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
Eb0201 : I oQi Meqil - 6 B LdMY H 5 NoQ 23t4313s	REoEDocs	v G0p0R.T: RfseE6 v G0p0R.T: BetDlreD v G0p0R.T: BatreD v G0p0R.T: i a5DreD v G0p0R.T: i H0DreD v G0p0R.T: i oraly v G0p0R.T: i o77et v G0p0R.T: bea5 v G0p0R.T: u aEgaEse v G0p0R.T: Nf8kel v G0p0R.T: VaEa5reD v G0p0R.T: rES	-330.28.p -330.31.- -330.29.2 -330.32.9 -330.3-.2 -330.38.3 -330.40.8 -329.9p.1 -329.9L.4 -330.0p.0 -330.Lp.p -330.LL.L	1 Dg/b 1 Dg/b 1 Dg/b 0@4 Dg/b 1 Dg/b 1 Dg/b 1 Dg/b 1 Dg/b 1 Dg/b 1 Dg/b 1 Dg/b 1 Dg/b	121 104 109 103 10L 102 10L 104 108 111 10- 102	-p 13L L1 129 -8 1pL -2 121 L4 121 L8 12p -1 1p4 L8 120 L2 1p9 -p 1p8 LL 120 L- 1p9
Eb0atI : I oQi AevoFery- ie Mervnr6 - 6 hRMY H 5 NoQ 23t4311s	REoEDocs	v G024T: u efStc	-329.9-.L	0@100 Dg/b	90@	-0 120
EL040/0ur1: I oQi LeQoienm p6drovyr- oG H 5 NoQ 23t4132s	Qi p0/1L08p01p	v P080: i L i 9 FtaSye	....	p80 µg/b	84@	41 1p4
EL040/0ur1: I oQi LeQoienm p6drovyr- oG H 5 NoQ 23t43a2s	REoEDocs	v P0-1: i 10. i 13 FtaSye v P0-1: i 14. i p8 FtaSye v P0-1: i p9. i 2L FtaSye	.... .... ....	p484 µg/b 9- p0 µg/b 2230 µg/b	81@ 98@ 99@	L3 1p3 -0 120 L8 1p8
EL040/0ur1: I oQi AevoFery- ie p6drovyr- oG cDELM 2010 RryfQ H 5 NoQ 23t4132s	Qi p0/1L08p01p	v P080: i L i 10 FtaSye	....	220 µg/b	80@	-0 120
EL040/0ur1: I oQi AevoFery- ie p6drovyr- oG cDELM 2010 RryfQ H 5 NoQ 23t43a2s	REoEDocs	v P0-1: % 10. i 1L FtaSye v P0-1: % 1L. i 23 FtaSye v P0-1: % 23. i 30 FtaSye	3044 µg/b 10244 µg/b 890 µg/b	90@ 9-@ 10p	-0 120 -0 120 -0 120
EL040: 7I EXD H 5 NoQ 23t4132s						



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 Wotk Ytset : v u 1p09330
 i rreEy : i RI MNy bRNv P0v I PTh bTM
 PtojeSy : p1p1L2 1

Ac r .u a y r x : WCI EA

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) Report		
					Spike Recovery (%) MS	Recovery Limits (%) Low	High
EL040: 7I EXD H 5 NoQ 23t 4132s cvoGQched v u 1p09330.081	Qi p0/1L08p01p	v P080: BeEzeEe v P080: TolceEe	- 1.32.p 108.88.2	p0 µg/b p0 µg/b	100 89@	L2 L4	121 122



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1209330	Page	: 1 of 4L
LineEy	: I RNs OI bROV PpVn PTc bTs	bat orayorC	: v EnmoED eEyai s nmmMoE A eit ourEe
LineEy	: Ah ARNR sv bl h Nv cvh	l oEjEsy	: haraHd o5gM0E
R55reIM	: 1GB d Yjd W/Nc NI Rs	R55reIM	: B, eMail N5 h prrEgnaie 3 Y RulMraia L171
	W/N, I I s 3 Y 2RV/h TNRbR L14G		
v-Dait	: Darræ.5eioMeCeM@iaEeprer.SOD.au	v-Dait	: MäraHb5gM0E@aiMeEmmo.SoD
TelepH0e	: +61 0L 9880100	TelepH0e	: 0L 8GB9 96C4
FaSMDrite	: +61 0L 9808LG11	FaSMDrite	: 0L 8GB9 9646
Projesy	: 41416L 1	Ql benei	: OvPA 1999 hSh5uie W(L) aE5 Rbh Ql hL requiredEeY
hnye	: Fikrmiile		
l-l-l EuDter	: ---	s aye haDpieMNeSeme5	: 17-RVU-4014
haDpier	: A s N	YMMe s aye	: 49-RVU-4014
l r5er EuDter	: ---	Oo. of MäDpieMreSeme5	: 81
Quoye EuDter	: A v/BB1/14	Oo. of MäDpieMaEaiQMe5	: B7

THMrepyMlperN65eMaECpremmuMrepy(M) wrhYhMrefereESe. NeMhMappiCyo yHb MäDpie(M) aMMit Dnye5. Rli pageMof yHmrepyHame t eeE Sh5Ke5 aE5 approme5 for releaM.

THMrepyrepreyme QuaiyCI oEyoI NeporySoEyarEMyHb folioiwfEg rEforD ayoe:

- REaiQMMD oi5Eg TrDe l oDpinaESe
- QuaiyCI oEyoI ParaDeyer FreqeECCI oDpinaESe
- Wref A eyHb5 huDDarneM
- huDDarCof l uyierM

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 . ork l rser : VA.1409BEO
 I ireEy : I RNs OI bROv PYvN PTC bTs
 ProjeSy : 41416L 1

Analysis Holding Time Compliance

The following report MDD amM exyaSyoE / preparayoe aE5 aEaiQMM yDeM aE5 SoDpareM wNH reSoDDDeE5e5 Hbi5iEg yDeM sayeM repore5 repreMeEy fmiY 5aye of exyaSyoE or aEaiQMM aE5 preSu5eM Mt NequeEy SituyEM aE5 reruEM YforDayoe m aiM promise re yE MaDpie SoEyreer (preMerrayme) froD wHSH yE aEaiQMM airquoy waM yEkeE viapMe5 perne5 yo aEaiQMM repreMeEM EuDter of 5aQM froD MaDpiEg where Eo exyaSyoE / 5geMwoE m rEmone5 or perne5 froD exyaSyoE / 5geMwoE where yHM m preMeEy For SoDpoMje MaDpiEg MaDpiEg 5aye m amMuDe5 yo te yHay of yE of5eM MaDpie SoEyrtyuEg yo yE SoDpoMje haDpie 5aye for lat orayoc pro5uSe5 ieaShayeM m amMuDe5 am yE SoDpiexoe 5aye of yE ieaSHeg proSeNM I uyreM for Hbi5iEg yDe are talMe5 oE VhVPR h, 8B62 RpdR2 Rh aE5 OvPA (1999). R imMieg of t reaSHem m promise IE yE huDDarCofl uyreM

d oi5iEg yDeM for ieaShaye Deyb5M (exSu5i5iEg eiuyrayeM) narC aSSor5iEg yo yE aEaiQeM terEg 5eyerDTe5 oE yE reMiyEg Muiyoe For EoE-moiayie aEaiQeM yE Hbi5iEg yDe SoDpiESe amMeMDeEy SoDpareM yE ieaSH 5aye wNH yE MoryeW aEaiQe Hoi5iEg yDe for yE equumaleEy Mm Deyb5. TheMe Mt Hbi5iEg yDeM are: I rgaE5M (1B5aQM); AerSurC (485aQM) & oyHer DeyM (1805aQM). R re5or5e5 t reaSH yerefore 5oeM Eoy guaraEjee a t reaSH for all EoE-moiayie paraDeyeM

A ayrx: SOIL v naiuyoe: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis	Evaluation	Evaluation
EA002 : pH (Soi5)							
SoiTGass Jar 6 Unpreserved							
hW4/1.0-1.12	hW4/1.0-1.12	226AUG2012	4L-RVU-4014	226AUG2012	44-RVU-4014	✓	✓
hWL/0.0.62	hWL/0.0.62						
hWB/0.0.12	hWB/1.0-1.12						
hWG/0.0.12	hWG1.0-1.12						
hW6/0.0.12	hW6/0.0.62						
hW7/0.0.12	hW7/0.0.62						
hW8/0.0.12	hW8/0.0.62						
hW9/0.0.12	hW9/1.0-1.12						
hW4/0.0.12	hW4/1.0-1.12						
hW4/0.0.12	hW4/0.0.62						
hW4/0.0.12	hW4/1.0-1.12						
hW4/0.0.12	hW4B0.0.62						
hW4/0.0.12	hW4G0.0.62						
hW4/0.0.12	hW46/1.0-1.12						
hW4/0.0.12	hW47/1.0-1.12						
hW4/0.0.12	hW48/0.0.62						
QI 10/160840142	QI 14/160840142						



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A ynrx: SOIL v nriiuyaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EA044: Moisture Content										
SoiTGäss Jar 6 Unpreserved										
hW4/0-0.12	hW4/1.0-1.12	1+6AUG2012	0606	----	----	216AUG2012	L0-RVU-4014	✓		
hW1L/0-0.62	hW1L/0.G.62									
hWB/0-0.12	hWB/1.0-1.12									
hWG/0-0.12	hWG/1.0-1.12									
hW6/0-0.12	hW6/0.G.62									
hW7/0-0.12	hW7/0.G.62									
hW8/0-0.12	hW8/0.G.62									
hW9/0-0.12	hW9/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/1-0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4B/0.G.62									
hW4/0-0.12	hW4G/0.G.62									
hW4/0-0.12	hW4/6/0-0.12									
hW4/0-0.12	hW4/7/1.0-1.12									
hW4/8/0-0.12	hW48/0.G.62									
hW4/9/0-0.12	hW49/0.G.62									
hW4/0-0.12	hW44/0.G.62									
QI 10/160840142	QI 14/16084014									
EG0045: SotaTMetaS by ICPAES										
SoiTGäss Jar 6 Unpreserved										
hW4/0-0.12	hW4/1.0-1.12	1+6AUG2012	226AUG2012	14-FvW401L	14-FvW401L	236AUG2012	14-FvW401L	✓		
hW1L/0-0.12	hW1L/0.G.62									
hWB/0-0.12	hWB/1.0-1.12									
hWG/0-0.12	hWG/1.0-1.12									
hW6/0-0.12	hW6/0.G.62									
hW7/0-0.12	hW7/0.G.62									
hW8/0-0.12	hW8/0.G.62									
hW9/0-0.12	hW9/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/1-0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4B/0.G.62									
hW4/0-0.12	hW4G/0.G.62									
hW4/6-0-0.12	hW4/6/1.0-1.12									
hW4/7-0-0.12	hW4/7/1.0-1.12									
hW4/8-0-0.12	hW48/0.G.62									
hW4/9-0-0.12	hW49/0.G.62									
hW4/0-0.12	hW44/0.G.62									
QI 10/160840142	QI 14/16084014									



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A ynrx: SOIL v nairuaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EG0-45: Sotat7 ecoverabT Mercury by RIMS					
SoitGäss Jar 6 Unpreserved					
hW4/0-0.12	1+6AUG012	226AUG012	1L-hvP-4014	236AUG012	1L-hvP-4014 ✓
hW1L/0.G.0.62					
hWB/1.0-1.12					
hW1G/0-0.12					
hW6/0-0.12					
hW7/0-0.12					
hW8/0-0.12					
hW9/0-0.12					
hW4/0-0.12					
hW41/0-0.12					
hW44/0-0.12					
hW4B/0-0.12					
hW4G/0-0.12					
hW46/0-0.12					
hW47/0-0.12					
hW48/0-0.12					
QI 10/160840142					
EP0+*: PoÿcFBrinated hipFenyS (PCh)					
SoitGäss Jar 6 Unpreserved					
hW4/0-0.12	1+6AUG012	236AUG012	L0-RVU-4014	266AUG012	0L-I | T-4014 ✓
hW1L/0-0.12					
hWB/0-0.12					
hW1G/0-0.12					
hW6/0-0.12					
hW7/0-0.12					
hW8/0-0.12					
hW9/0-0.12					
hW4/0-0.12					
hW41/0-0.12					
hW44/0-0.12					
hW4B/0-0.12					
hW4G/0-0.12					
hW46/0-0.12					
hW47/0-0.12					
hW48/0-0.12					
QI 10/160840142					



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A ynrx: SOIL v nairuaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Sample Date	Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Date analysed	Due for analysis	
EP0E3A: Monocyclic Aromatic Hydrocarbons						
SoitGäss Jar 6 Unpreserved						
hW4/0-0.12	1+6AUG012	216AUG012	L0-RVU-4014	236AUG012	L0-RVU-4014	✓
hW1L/0.G.0.62						
hWB/1.0-1.12						
hW1G/0-0.12						
hW6/0-0.12						
hW7/0-0.12						
hW8/0-0.12						
hW9/0-0.12						
hW4/0-0.12						
hW41/0-0.12						
hW44/0-0.12						
hW4B/0-0.12						
hW4G/0-0.12						
hW46/0-0.12						
hW47/0-0.12						
hW48/0-0.12						
QI 10/160840142						
EP0E3B: Oxygenated Compounds						
SoitGäss Jar 6 Unpreserved						
hW4/0-0.12	1+6AUG012	216AUG012	L0-RVU-4014	236AUG012	L0-RVU-4014	✓
hW1L/0-0.12						
hWB/0-0.12						
hW1G/0-0.12						
hW6/0-0.12						
hW7/0-0.12						
hW8/0-0.12						
hW9/0-0.12						
hW4/0-0.12						
hW41/0-0.12						
hW44/0-0.12						
hW4B/0-0.12						
hW4G/0-0.12						
hW46/0-0.12						
hW47/0-0.12						
hW48/0-0.12						
QI 10/160840142						



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A ynrx: SOIL v nairuaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP0B3C: SuTonated Compounds								
SoiTGäss Jar 6 Unpreserved								
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓	
hW1L/0-0.62	hW1L/0.G.62							
hWB/0-0.12	hWB/1.0-1.12							
hW1G/0-0.12	hW1G/1.0-1.12							
hW6/0-0.12	hW6/0.G.62							
hW7/0-0.12	hW7/0.G.62							
hW8/0-0.12	hW8/0.G.62							
hW9/0-0.12	hW9/1.0-1.12							
hW4/0/0-0.12	hW4/0/0.G.62							
hW4/1/0-0.12	hW4/1/0-1.12							
hW4/4/0-0.12	hW4/4/0.G.62							
hW4B/0-0.12	hW4B/1.0-1.12							
hW4G/0-0.12	hW4G/0.G.62							
hW46/0-0.12	hW46/1.0-1.12							
hW47/0-0.12	hW47/1.0-1.12							
hW48/0-0.12	hW48/0.G.62							
QI 10/160840142	QI 14/16084014							
EP0B3D: Rumigants								
SoiTGäss Jar 6 Unpreserved								
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓	
hW1L/0-0.12	hW1L/0.G.62							
hWB/0-0.12	hWB/1.0-1.12							
hW1G/0-0.12	hW1G/1.0-1.12							
hW6/0-0.12	hW6/0.G.62							
hW7/0-0.12	hW7/0.G.62							
hW8/0-0.12	hW8/0.G.62							
hW9/0-0.12	hW9/1.0-1.12							
hW4/0/0-0.12	hW4/0/0.G.62							
hW4/1/0-0.12	hW4/1/0-1.12							
hW4/4/0-0.12	hW4/4/0.G.62							
hW4B/0-0.12	hW4B/1.0-1.12							
hW4G/0-0.12	hW4G/0.G.62							
hW46/0-0.12	hW46/1.0-1.12							
hW47/0-0.12	hW47/1.0-1.12							
hW48/0-0.12	hW48/0.G.62							
QI 10/160840142	QI 14/16084014							



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A ynrx: SOIL v nriiuyaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EP053E: HaTogenated ATrFatic Compounds										
SoiTGäss Jar 6 Unpreserved										
	hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓			
	hW1L/0.G.0.62									
	hWB/0-0.12									
	hW1G/0-0.12									
	hW6/0-0.12									
	hW7/0-0.12									
	hW8/0-0.12									
	hW9/0-0.12									
	hW4/0-0.12									
	hW41/0-0.12									
	hW44/0-0.12									
	hW4B/0-0.12									
	hW4G/0-0.12									
	hW46/0-0.12									
	hW47/0-0.12									
	hW48/0-0.12									
	QI 10/160840142									
EP053R: HaTogenated Aromatic Compounds										
SoiTGäss Jar 6 Unpreserved										
	hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓			
	hW1L/0-0.12									
	hWB/0-0.12									
	hW1G/0-0.12									
	hW6/0-0.12									
	hW7/0-0.12									
	hW8/0-0.12									
	hW9/0-0.12									
	hW4/0-0.12									
	hW41/0-0.12									
	hW44/0-0.12									
	hW4B/0-0.12									
	hW4G/0-0.12									
	hW46/0-0.12									
	hW47/0-0.12									
	hW48/0-0.12									
	QI 10/160840142									



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A ynrx: SOIL v nairuaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EP0B3G: 5rifA bmetFanes										
SoitG Bss Jar 6 Unpreserved										
	hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓
	hW1L/0.G.0.62									
	hWB/0-0.12									
	hW1B/1.0-1.12									
	hW1G/0-0.12									
	hW1G/1.0-1.12									
	hW16/0-0.12									
	hW16/0.G.0.62									
	hW17/0-0.12									
	hW17/0.G.0.62									
	hW18/0-0.12									
	hW18/0.G.0.62									
	hW19/0-0.12									
	hW19/0-1.12									
	hW4/0-0.12									
	hW4/0.G.0.62									
	hW4/1/0-0.12									
	hW4/1/0-1.12									
	hW4/4/0-0.12									
	hW4/4/0.G.0.62									
	hW4/1/0-1.12									
	hW4/1/0-1.12									
	hW4B/0-0.12									
	hW4B/0.G.0.62									
	hW4G/0-0.12									
	hW4G/0.G.0.62									
	hW46/0-0.12									
	hW46/0-1.12									
	hW47/0-0.12									
	hW47/0-1.12									
	hW48/0-0.12									
	hW48/0.G.0.62									
	QI 14/160840142									
EP0B4A: Pfenotc Compounds										
SoitG Bss Jar 6 Unpreserved										
	hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓
	hW1L/0-0.12									
	hWB/0-0.12									
	hW1B/1.0-1.12									
	hW1G/0-0.12									
	hW1G/1.0-1.12									
	hW16/0-0.12									
	hW16/0.G.0.62									
	hW17/0-0.12									
	hW17/0.G.0.62									
	hW18/0-0.12									
	hW18/0.G.0.62									
	hW19/0-0.12									
	hW19/0-1.12									
	hW4/0-0.12									
	hW4/0.G.0.62									
	hW4/1/0-0.12									
	hW4/1/0-1.12									
	hW4/4/0-0.12									
	hW4/4/0.G.0.62									
	hW4/1/0-1.12									
	hW4/1/0-1.12									
	hW4B/0-0.12									
	hW4B/0.G.0.62									
	hW4G/0-0.12									
	hW4G/0.G.0.62									
	hW46/0-0.12									
	hW46/0-1.12									
	hW47/0-0.12									
	hW47/0-1.12									
	hW48/0-0.12									
	hW48/0.G.0.62									
	QI 14/160840142									



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A ynrx: SOIL v nairuaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EP0B4t: PoTynucTBar Aromatic Hydrocarbons										
SoitGäss Jar 6 Unpreserved										
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓			
hW1L/0-0.62	hW1L/0.G.62									
hWB/0-0.12	hWB/1.0-1.12									
hW1G/0-0.12	hW1G/1.0-1.12									
hW6/0-0.12	hW6/0.G.62									
hW7/0-0.12	hW7/0.G.62									
hW8/0-0.12	hW8/0.G.62									
hW9/0-0.12	hW9/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/1/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
QI 10/160840142	QI 14/16084014									
EP0B4C: PfiFate Esters										
SoitGäss Jar 6 Unpreserved										
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓			
hW1L/0-0.12	hW1L/0.G.62									
hWB/0-0.12	hWB/1.0-1.12									
hW1G/0-0.12	hW1G/1.0-1.12									
hW6/0-0.12	hW6/0.G.62									
hW7/0-0.12	hW7/0.G.62									
hW8/0-0.12	hW8/0.G.62									
hW9/0-0.12	hW9/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/1/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
hW4/0-0.12	hW4/1.0-1.12									
hW4/0-0.12	hW4/0.G.62									
QI 10/160840142	QI 14/16084014									



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 .ork l rser : VA 1409BEO
 i reEy : I RNs OI bROv PpVn PTc bTs
 ProjeSy : 41416L 1

A ynrx: SOIL v nriiuyaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Sample Date		Extraction / Preparation		Analysis	
	Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP0B4D: Nitrosamines						
SoitGäss Jar 6 Unpreserved						
hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓
hW1L/0.G.0.62						
hWB/1.0-1.12						
hW1G/1.0-1.12						
hW16/0.G.0.62						
hW17/0.G.0.62						
hW18/0.G.0.62						
hW19/1.0-1.12						
hW40/0.G.0.62						
hW41/0-0.12						
hW44/0-0.12						
hW4L/0-0.12						
hW4B/0-0.12						
hW4G/0-0.12						
hW46/0-0.12						
hW47/0-0.12						
hW48/0-0.12						
QI 10/160840142						
EP0B4E: Nitroaromatics and Ketones						
SoitGäss Jar 6 Unpreserved						
hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓
hW1L/0-0.12						
hWB/0-0.12						
hW1G/0-0.12						
hW16/0-0.12						
hW17/0-0.12						
hW18/0-0.12						
hW19/0-0.12						
hW40/0-0.12						
hW41/0-0.12						
hW44/0-0.12						
hW4L/0-0.12						
hW4B/0-0.12						
hW4G/0-0.12						
hW46/0-0.12						
hW47/0-0.12						
hW48/0-0.12						
QI 10/160840142						



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A ayrx: SOIL v naituaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EP0B4R: HaTbetfers										
SoiTGäss Jar 6 Unpreserved										
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓			
hW1L/0-0.62	hW1L/0.G.62									
hWB/0-0.12	hWB/1.0-1.12									
hW1G/0-0.12	hW1G/1.0-1.12									
hW6/0-0.12	hW6/0.G.62									
hW7/0-0.12	hW7/0.G.62									
hW8/0-0.12	hW8/0.G.62									
hW9/0-0.12	hW9/1.0-1.12									
hW4/0/0-0.12	hW4/0/0.G.62									
hW4/1/0-0.12	hW4/1/0-1.12									
hW4/4/0-0.12	hW4/4/0.G.62									
hW4B/0-0.12	hW4B/0.G.62									
hW4G/0-0.12	hW4G/0.G.62									
hW46/0-0.12	hW46/1.0-1.12									
hW47/0-0.12	hW47/1.0-1.12									
hW48/0-0.12	hW48/0.G.62									
QI 10/160840142	QI 14/16084014									
EP0B4G: CFTrinated Hydrocarbons										
SoiTGäss Jar 6 Unpreserved										
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓			
hW1L/0-0.12	hW1L/0.G.62									
hWB/0-0.12	hWB/1.0-1.12									
hW1G/0-0.12	hW1G/1.0-1.12									
hW6/0-0.12	hW6/0.G.62									
hW7/0-0.12	hW7/0.G.62									
hW8/0-0.12	hW8/0.G.62									
hW9/0-0.12	hW9/1.0-1.12									
hW4/0/0-0.12	hW4/0/0.G.62									
hW4/1/0-0.12	hW4/1/0-1.12									
hW4/4/0-0.12	hW4/4/0.G.62									
hW4B/0-0.12	hW4B/0.G.62									
hW4G/0-0.12	hW4G/0.G.62									
hW46/0-0.12	hW46/1.0-1.12									
hW47/0-0.12	hW47/1.0-1.12									
hW48/0-0.12	hW48/0.G.62									
QI 10/160840142	QI 14/16084014									



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A ynrx: SOIL v nairuaywE: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method		Sample Date		Extraction / Preparation		Analysis	
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP0B4H: AniThes and henzidines							
SoiTGäss Jar 6 Unpreserved							
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓
hW1L/0-0.62	hW1L/0.G.62						
hWB/0-0.12	hWB/1.0-1.12						
hW1G/0-0.12	hW1G/1.0-1.12						
hW6/0-0.12	hW6/0.G.62						
hW7/0-0.12	hW7/0.G.62						
hW8/0-0.12	hW8/0.G.62						
hW9/0-0.12	hW9/1.0-1.12						
hW4/0-0.12	hW4/0.G.62						
hW4/1/0-0.12	hW4/1.0-1.12						
hW4/0-0.12	hW4/0.G.62						
hW4/0-0.12	hW4/1.0-1.12						
hW4B/0-0.12	hW4B/0.G.62						
hW4G/0-0.12	hW4G/0.G.62						
hW46/0-0.12	hW46/1.0-1.12						
hW47/0-0.12	hW47/1.0-1.12						
hW48/0-0.12	hW48/0.G.62						
QI 10/160840142	QI 14/16084014						
EP0B4I: OrganocFbrine Pesticides							
SoiTGäss Jar 6 Unpreserved							
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	L0-RVU-4014	✓	2BBAUG012	0L-I | T-4014	✓
hW1L/0-0.12	hW1L/0.G.62						
hWB/0-0.12	hWB/1.0-1.12						
hW1G/0-0.12	hW1G/1.0-1.12						
hW6/0-0.12	hW6/0.G.62						
hW7/0-0.12	hW7/0.G.62						
hW8/0-0.12	hW8/0.G.62						
hW9/0-0.12	hW9/1.0-1.12						
hW4/0-0.12	hW4/0.G.62						
hW4/1/0-0.12	hW4/1.0-1.12						
hW4/0-0.12	hW4/0.G.62						
hW4B/0-0.12	hW4B/0.G.62						
hW4G/0-0.12	hW4G/0.G.62						
hW46/0-0.12	hW46/1.0-1.12						
hW47/0-0.12	hW47/1.0-1.12						
hW48/0-0.12	hW48/0.G.62						
QI 10/160840142	QI 14/16084014						



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A ayrx: SOIL v nairuay0E: * = d oi5iEg yDe t reaSh; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted		Due for extraction		Date analysed	Due for analysis	Evaluation
EP0B4J: OrganopFospForus Pesticides								
SoiTG äss Jar 6 Unpreserved								
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012		L0-RVU-4014		2B6AUG012	0L-I | T-4014	✓
hW1/0-0.12	hW1/0.G.0.62							✓
hWB/0-0.12	hWB/1.0-1.12							
hWG/0-0.12	hWG/1.0-1.12							
hW6/0-0.12	hW6/0.G.0.62							
hW7/0-0.12	hW7/0.G.0.62							
hW8/0-0.12	hW8/0.G.0.62							
hW9/0-0.12	hW9/1.0-1.12							
hW4/0/0-0.12	hW4/0/0.G.0.62							
hW4/1/0-0.12	hW4/1/0-1.12							
hW4/4/0-0.12	hW4/4/0.G.0.62							
hW4/L/0-0.12	hW4/L/1.0-1.12							
hW4/B/0-0.12	hW4/B/0.G.0.62							
hW4/G/0-0.12	hW4/G/0.G.0.62							
hW4/6/0-0.12	hW4/6/1.0-1.12							
hW4/7/0-0.12	hW4/7/1.0-1.12							
hW4/8/0-0.12	hW4/8/0.G.0.62							
QI 10/160840142	QI 14/16084014							



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A ayrx: SOIL v naliuay0E: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method		Sample Date		Extraction / Preparation		Analysis	
Container / Client Sample ID(s)		Date extracted	Date analysed	Due for extraction	Due for analysis	Evaluation	Evaluation
EP080/0B1: 5otaTPetroTsum Hydrocarbons							
SoiT Gäss Jar 6 Unpreserved							
hW4/0-0.12	hW4/1.0-1.12	216AUG012	236AUG012	L0-RVU-4014	L0-RVU-4014	✓	✓
hW1L/0-0.62	hW1L/0.G.62						
hWB/1.0-1.12	hWB/1.0-1.12						
hWG/0-0.12	hWG/1.0-1.12						
hW6/0-0.12	hW6/0.G.62						
hW7/0-0.12	hW7/0.G.62						
hW8/0-0.12	hW8/0.G.62						
hW9/0-0.12	hW9/1.0-1.12						
hW4/0/0-0.12	hW4/0/0.G.62						
hW4/1/0-0.12	hW4/1/0-1.12						
hW4/4/0-0.12	hW4/4/0.G.62						
hW4B/0-0.12	hW4B/0.G.62						
hW4G/0-0.12	hW4G/0.G.62						
hW46/0-0.12	hW46/1.0-1.12						
hW47/0-0.12	hW47/1.0-1.12						
hW48/0-0.12	hW48/0.G.62						
hW49/0-0.12	hW49/0.G.62						
hWL/0/0-0.12	hW4/0.G.62						
QI 10/160840142	QI 14/16084014						
SoiT Gäss Jar 6 Unpreserved							
hW4/0-0.12	hW4/1.0-1.12	1+6AUG012	2B6AUG012	L0-RVU-4014	06-I | T-4014	✓	✓
hW1L/0-0.12	hW1L/0.G.62						
hWB/0-0.12	hWB/1.0-1.12						
hWG/0-0.12	hWG/1.0-1.12						
hW6/0-0.12	hW6/0.G.62						
hW7/0-0.12	hW7/0.G.62						
hW8/0-0.12	hW8/0.G.62						
hW9/0-0.12	hW9/1.0-1.12						
hW4/0/0-0.12	hW4/0/0.G.62						
hW4/1/0-0.12	hW4/1/0-1.12						
hW4/4/0-0.12	hW4/4/0.G.62						
hW4B/0-0.12	hW4B/0.G.62						
hW4G/0-0.12	hW4G/0.G.62						
hW46/0-0.12	hW46/1.0-1.12						
hW47/0-0.12	hW47/1.0-1.12						
hW48/0-0.12	hW48/0.G.62						
hW49/0-0.12	hW49/0.G.62						
hWL/0/0-0.12	hW4/0.G.62						
QI 10/160840142	QI 14/16084014						



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 ProjeSy : 41416L 1

A ayrx: SOIL v naliuay0E: * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EP080/0Bt: 50at77 ecoverab 7 Hydrocarbons 6NEPM 2010 Draft										
SoiTG 5ss Jar 6 Unpreserved										
	hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓			
	hW1L/0.G.0.62									
	hW1B/1.0-1.12									
	hW1G/1.0-1.12									
	hW16/0-0.12									
	hW17/0-0.12									
	hW18/0-0.12									
	hW19/0-0.12									
	hW40/0-0.12									
	hW41/0-0.12									
	hW44/0-0.12									
	hW4B/0-0.12									
	hW4G/0-0.12									
	hW46/0-0.12									
	hW47/1.0-1.12									
	hW48/0-0.12									
	hW49/0-0.12									
	hW40/0-0.12									
	QI 14/160840142									
SoiTG 5ss Jar 6 Unpreserved										
	hW4/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓			
	hW1L/0-0.12									
	hW1B/1.0-1.12									
	hW1G/1.0-1.12									
	hW16/0-0.12									
	hW17/0-0.12									
	hW18/0-0.12									
	hW19/0-0.12									
	hW40/0-0.12									
	hW41/0-0.12									
	hW44/0-0.12									
	hW4B/0-0.12									
	hW4G/0-0.12									
	hW46/0-0.12									
	hW47/1.0-1.12									
	hW48/0-0.12									
	hW49/0-0.12									
	hW40/0-0.12									
	QI 14/160840142									
EP080: h 5EX										
SoiTG 5ss Jar 6 Unpreserved										
	hW49/0-0.12	1+6AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓			
	hW40/0-0.12									



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A ayrx: SOIL v nauuay0E * = d oi5iEg yDe t reaSH; ✓ = , nHE Hoi5iEg yDe.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis	
			Date extracted	Due for extraction	Date analysed	Due for analysis
EP080: h5EXN						
SoiT Gëss Jar 6Unpreserved	hW49/0.G.0.62 hW44/0.G.0.6	1+6AUG0012	216AUG0012	L0-RVU-4014	236AUG0012	L0-RVU-4014 ✓
EP21*: PercFËbrate by LC/MS						
SoiT Gëss Jar 6Unpreserved	hW1L/0.G.0.62 hW1G0-0.12 hW17/0-0.12 hW19/0-0.12 hW41/0-0.12 hW4L/0-0.12 hW4G0.G.0.62 hW46/0-0.12 hW48/0.G.0.6	1+6AUG0012	246AUG0012	1L-hvP-4014	246AUG0012	44-hvP-4014 ✓
EP2-1: PerfTiroocytAcids and SuTonates						
Snap Lock hag	hW1L/0.G.0.62 hW1G0-0.12 hW17/0-0.12 hW19/0-0.12 hW41/0-0.12 hW4L/0-0.12 hW4G0.G.0.62 hW46/0-0.12 hW48/0.G.0.6	1+6AUG0012	286AUG0012	14-FvW401L	286AUG0012	07-H | T-4014 ✓
A ayrx: WA5E7						
Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis	
EG0205: SotaTMetaË by ICPMS						
Cëar Pëstic hottË 6Nitric Acid; Unfiltered	QI 19/16084014	1+6AUG0012	216AUG0012	14-FvW401L	216AUG0012	14-Fv W401L ✓
EG0-45: SotaT7 ecoverabË Mercury by RIMS						
Cëar Pëstic hottË 6Nitric Acid; Unfiltered	QI 18/160840142	1+6AUG0012	216AUG0012	1L-hvP-4014	216AUG0012	1L-hv P-4014 ✓
EP080/0B1: SotaTPetroËum Hydrocarbons						
Amber Gëss hottË 6Unpreserved	QI 18/160840142	1+6AUG0012	216AUG0012	4L-RVU-4014	226AUG0012	L0-hvP-4014 ✓
Amber VOC ViaT6SuTuric Acid	QI 1B/160840142 QI 17/160840142 QI 18/160840142 QI 40/16084014	1+6AUG0012	216AUG0012	L0-RVU-4014	236AUG0012	L0-RVU-4014 ✓



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A ayrx: WA5E7 v nairuay0E: * = d oi5ifeg yDe t reaSH; ✓ = , nHE Hoi5ifeg yDe.

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/0B1: SotaT7 ecoverab T Hydrocarbons 6NEPM 2010 Draft										
Amber G lāss h ott T 6Unpreserved										
QI 18/160840142	QI 19/16084014	216AUG012	4L-RVU-4014	✓	226AUG012	L0-hvP-4014	✓	226AUG012	L0-hvP-4014	✓
Amber VOC ViaT6SuTturic Acid										
QI 1B/160840142	QI 1G/160840142	216AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓
QI 16/160840142	QI 17/160840142									
QI 18/160840142	QI 19/160840142									
QI 40/16084014										
EP080: h 5EXN										
Amber VOC ViaT6SuTturic Acid										
QI 18/160840142	QI 19/16084014	216AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓	236AUG012	L0-RVU-4014	✓



Quality Control Parameter Frequency Compliance

The following repository MD D ar n M i y e f r e q u e n c y o f i a t o r a y o r C Q I h a D p i e M a E i O n e S w r y H E y e a E i O y G a i i o y M r E w r H S H y H e M i t D n y e S M a D p i e M w M w H e r e) p r o S e M e S . R S u a i r a y e M b o u i s t e g r e a y e r y H e o r e q u a i y o y e e x p e S e S r a y e . R i n i M e g o f t r e a S h e M M p r o m e S i e y e h u D D a r C o f l u y r e M

A y r n x : S O I L v m a i u y o E : * = Q u a l i t y C I o E y r o i f r e q u e n c y o f i a t o r a y o r C Q I h a D p i e M a E i O n e S w r y H E y e a E i O y G a i i o y M r E w r H S H y H e M i t D n y e S M a D p i e M w M w H e r e) p r o S e M e S . R S u a i r a y e M b o u i s t e g r e a y e r y H e o r e q u a i y o y e e x p e S e S r a y e . R i n i M e g o f t r e a S h e M M p r o m e S i e y e h u D D a r C o f l u y r e M

Quality Control Specification	Rate (%)		Count		Evaluation
	Expected	Actual	QC	Regular	
bat orayorCs upliBayeM(s VP)					
A o m M u r e l o E y e Y	100	114	6	G4	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
PerShoraye rE h o i t M a E 5 h e s i D e E y M t C b l / A h	100	1-1+	L	44	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
PerfluorooSQ RS6MaE5 h u i f o E a y e M t C b l / A h / A h	100	118	4	17	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
pd (1:G)	100	1-1-	6	BG	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
P o i C S h o r i E a y e 5 W p H e E Q M (P I W)	100	111	B	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
h e D m m o i a y i e l r g a E S I o D p o u E 5 M	100	111	B	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T o y l A e r S u r C t C F A h	100	111	B	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T o y l A e y a l M t C Y P - R v h	100	100	B	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T P d - h e D m m o i a y i e F r a S y o E	100	100	B	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T P d 3 o i a y e M M T v X	100	100	B	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
3 o i a y e l r g a E S I o D p o u E 5 M	100	111	B	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
bat orayorCI oEYoi haDpieM(bl h)					
PerShoraye rE h o i t M a E 5 h e s i D e E y M t C b l / A h	400	911	4	44	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
PerfluorooSQ RS6MaE5 h u i f o E a y e M t C b l / A h / A h	400	419	1	17	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
P o i C S h o r i E a y e 5 W p H e E Q M (P I W)	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
h e D m m o i a y i e l r g a E S I o D p o u E 5 M	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T o y l A e r S u r C t C F A h	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T o y l A e y a l M t C Y P - R v h	400	410	4	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T P d - h e D m m o i a y i e F r a S y o E	400	410	4	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T P d 3 o i a y e M M T v X	400	410	4	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
3 o i a y e l r g a E S I o D p o u E 5 M	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
AeyH5 WaEkM(AW)					
PerShoraye rE h o i t M a E 5 h e s i D e E y M t C b l / A h	400	911	4	44	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
PerfluorooSQ RS6MaE5 h u i f o E a y e M t C b l / A h / A h	400	419	1	17	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
P o i C S h o r i E a y e 5 W p H e E Q M (P I W)	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
h e D m m o i a y i e l r g a E S I o D p o u E 5 M	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T o y l A e r S u r C t C F A h	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T o y l A e y a l M t C Y P - R v h	400	410	4	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T P d - h e D m m o i a y i e F r a S y o E	400	410	4	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
T P d 3 o i a y e M M T v X	400	410	4	B0	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
3 o i a y e l r g a E S I o D p o u E 5 M	400	41+	4	L6	Ov PA 1999 h S h e 5 u i e W L a e 5 R b h Q l h L r e q u i r e D e E y
Aayr h pikelM(Ah)					
PerShoraye rE h o i t M a E 5 h e s i D e E y M t C b l / A h	400	911	4	44	R b h Q l h L r e q u i r e D e E y
PerfluorooSQ RS6MaE5 h u i f o E a y e M t C b l / A h / A h	400	419	1	17	R b h Q l h L r e q u i r e D e E y
P o i C S h o r i E a y e 5 W p H e E Q M (P I W)	400	41+	4	L6	R b h Q l h L r e q u i r e D e E y
h e D m m o i a y i e l r g a E S I o D p o u E 5 M	400	41+	4	L6	R b h Q l h L r e q u i r e D e E y
T o y l A e r S u r C t C F A h	400	41+	4	L6	R b h Q l h L r e q u i r e D e E y
T o y l A e y a l M t C Y P - R v h	400	410	4	B0	R b h Q l h L r e q u i r e D e E y
T P d - h e D m m o i a y i e F r a S y o E	400	410	4	B0	R b h Q l h L r e q u i r e D e E y



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A ayrx: SOIL v maiuayoe: * = QuaiyCI oEyoI frequeESCoywryHE MpeSf6ayoe; ✓ = QuaiyCI oEyoI frequeESCwryHE MpeSf6ayoe.

Analytical Methods	Method	Count			Rate (%)		Evaluation	Quality Control Specification
		QC	Regular	Actual	Expected	Actual			Expected
A ayrx h pikelM(Ah) - l oEYue5	v P080	4	B0	410	410	✓	Rbh Ql hL requireDeEy	
TPd 3oiayneMMTv X	v P07B	4	L6	41+	410	✓	Rbh Ql hL requireDeEy	
3oiayne l rgaESl oDpouE5M								
A ayrx: WA5E7								
QuaiyCI oEyoI haDpie TQpe								
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	Quality Control Specification	
bat orayotCs upli6ayelM(s VP)								
Toyl A erSurCt CFvAh	v U0LGT	4	1L	143	1010	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
Toyl A eyalMt CY P-Ah - hurye R	v U040R-T	4	18	1111	1010	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
TPd - h eD mmiayie FraSyoe	v P071	1	1G	+1B	1010	✗	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
TPd 3oiayneMMTv X	v P080	4	17	1118	1010	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
bat orayotCI oEyoI haDpieM(bl h)								
Toyl A erSurCt CFvAh	v U0LGT	1	1L	BB	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
Toyl A eyalMt CY P-Ah - hurye R	v U040R-T	1	18	41+	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
TPd - h eD mmiayie FraSyoe	v P071	1	1G	+1B	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
TPd 3oiayneMMTv X	v P080	1	17	419	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
A ey#5 WaEkM(AW)								
Toyl A erSurCt CFvAh	v U0LGT	1	1L	BB	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
Toyl A eyalMt CY P-Ah - hurye R	v U040R-T	1	18	41+	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
TPd - h eD mmiayie FraSyoe	v P071	1	1G	+1B	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
TPd 3oiayneMMTv X	v P080	1	17	419	410	✓	Ov PA 1999 h S#e5uie W(L) aE5 Rbh Ql hL requireDeEy	
A ayrx h pikelM(Ah)								
Toyl A erSurCt CFvAh	v U0LGT	1	1L	BB	410	✓	Rbh Ql hL requireDeEy	
Toyl A eyalMt CY P-Ah - hurye R	v U040R-T	1	18	41+	410	✓	Rbh Ql hL requireDeEy	
TPd - h eD mmiayie FraSyoe	v P071	1	1G	+1B	410	✓	Rbh Ql hL requireDeEy	
TPd 3oiayneMMTv X	v P080	1	17	419	410	✓	Rbh Ql hL requireDeEy	



Brief Method Summaries

The aEaiQrBai proSsureMuM65 tCyHe v EnnoED eEYai i mmMoE Hane t eeE 5enaeiope5 froD eMAt iMhE5 rEYerayoEaiiCreSogEze5 proSsureMIMSH aiMhVb6 put iMhE5 t CyHe Vh v PR2RPdR2Rh aE5 OvPA. Y HouM6 5enaeiope5 proSsureMare eDpioG5 rEYhe at IME5e of 5oSuD eEY5 MaE5ar5Mor t C5rEYrequeM. The foiiowEg repory pronomeMt nre f5eM6rpyoEMof yE aEaiQrBai proSsureMeDpioG5 for relmiiMrepor5e rEYhe i enryf5aje of REaiQMM hourSaMfroD wHSHRbh DeyH65Mhane t eeE 5enaeiope5 are pronome5 wYHE yE A eyHb5 s eM6rpyoEM

Analytical Methods	Method	Matrix	Method Descriptions
pd (1:G)	vR004	hl Yb	(RPdR 41Mje5.2BQ00+) pd rM5eyrDIE5 oE M6n M6D pieMafyer a 1:G M6n/wayer leaSH THMD eyHb5 rMSoD piaEY wYHOvPA (1999) hShE5uie WL) (A eyHb5 10L)
A onMure l oEeEY	vR0GG-10L	hl Yb	R gramDeyrS proS5e5ure t aM65 oE weghYioM6ner a 14 Hour 5rOEG per65 ay10L-10G5egreemI . THMD eyHb5 rM SoD piaEYwYHOvPA (4010 s rafy) hShE5uie WL) hE5yO E 7.1 aE5 Tat ie 1 (1B 5aCHi5IEg yDe).
Tojai A eyaiMt CY P-Rv/h	vU00GT	hl Yb	(RPdR 41Mje5.2L140; VhvPR h, 8B6 - 6010) (Y PRV/h) A eyaiMare 5eyrDIE5 foiiowEg aE appropriate aS6 5rgeM6E of yE M6n. The Y PRV h yeS-Erque r6EIM6M6D pieM6E a piaMD a2eD rYEG a 5-hara5erM6S M6eSruD t aM65 oE D eyaiMpreM6EY. Y eEYerM6eM6e5 wameieEgY-Mare SoD pare5 agatElyYh6M6 of Dayrx DayShE5 M6E5ar5M THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL)
Tojai A erSurCt CFYA h	vU0LGT	hl Yb	Rh LG002RPdR 41Mje5.2 L114 d g - W(Flow-rEe5yO E (hEi i4)(l ois 3apour geEerayoE) RRh) FYA-RRh rMaE auyoD aye5 fiaDeieM6yoD rS at M6rpyO E yeS-Erque. A erSurCIE M6r5Mare 5eyrDIE5 foiiowEg aE appropriate aS6 5rgeM6E. Y E5D erSurC rMre5u5e5 oE rE5e yo ayD rS D erSurCrapour t ChEi i4 wHSH rM6E purge5 rEyo a H6aye5 quanz Seii. QuaEYr5ayO E rM t CSoD parTEg at M6rt aE5e agatElyY a Sait rayO E Surme. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL)
PoiCSHorrEaye5 WpH6EQM(PI W)	vP066	hl Yb	(VhvPR h, 8B6 - 8470W) vxyaSMare aEaiOv65 t Ci apriiarCUI /A h aE5 quaEYr5ayO E rM t CSoD parTEg aE agatElyY aE eMAt iMhE5 GporEY Sait rayO E Surme. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL) (A eyHb5 G0B)
TPd - heD m6oiayE Fra5yO E	vP071	hl Yb	(VhvPR h, 8B6 - 801GR) haD pie exyaSMare aEaiOv65 t Ci apriiarCUI /F5 aE5 quaEYr5e5 agatElyY aEaEe M6E5ar5M6ner yE raEge l 10 - l L6. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL) (A eyHb5 G06.1)
3oiayE l rgaE6I oD pouE5M	vP07B	hl Yb	(VhvPR h, 8B6 - 8460W) vxyaSMare aEaiOv65 t CPurge aE5 Trap2l apriiarCUI /A h. QuaEYr5ayO E rM t C SoD parTEg aE agatElyY aE eMAt iMhE5 GporEY Sait rayO E Surme. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL) (A eyHb5 G01)
heD m6oiayE l rgaE6I oD pouE5M	vP07G	hl Yb	(VhvPR h, 8B6 - 8470W) vxyaSMare aEaiOv65 t Ci apriiarCUI /A h aE5 quaEYr5ayO E rM t CSoD parTEg aE agatElyY aE eMAt iMhE5 GporEY Sait rayO E Surme. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL) (A eyHb5 G04)
TPd 3oiayE MMTv X	vP080	hl Yb	(VhvPR h, 8B6 - 8460W) vxyaSMare aEaiOv65 t CPurge aE5 Trap2l apriiarCUI /A h. QuaEYr5ayO E rM t C SoD parTEg aE agatElyY aE eMAt iMhE5 GporEY Sait rayO E Surme. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL) (A eyHb5 G01)
PerShoraye rE homMaE5 he5fD eEYMt C bl /A h	vP416	hl Yb	Vh vPR A eyHb5 68G: Gg of M6D pie rM6xyraM6e5 wYH4GD b of wayer aS6 rE5e5 wYH aS6y6 aS62f6r5e5 wYH a 0.4 uD f6yer (p exyeE5 exyaSYH6i5IEg yDe) aE5 aEaiOv65 t Cbl /A h rE v h Y(Eegayme) Do5e.
PerfluorooSQ RS6MaE5 huifoEayeMt C bl /A h/A h	* vP4L1	hl Yb	Y-e d ouM6. R por5yO E of M6n rM6ake5 rE M65nID HC5toxi5e foiiowE5 t CexyaSYO E wYH D eyH6Eoi. The exyaSYM EuyyraiM65 wYH d i aE5 aE ai6uoyyakeE yo 5rEeM6M2D a5e up rE D ot i6e pH6M6. REaiQMM rM t Cbl /A h a h 2v h Y Oegayme A o5e uMfEg A NA.
Tojai A eyaiMt CY P-Ah - hurye R	vU040R-T	, RTVN	(RPdR 41Mje5.2L14G VhvPR h, 8B6 - 60402Rbh Q, YvOv U040): The Y PA h yeS-Erque uy6rizeMa H6g HC effir6EYar6oE piaMD a yo rE5ze M6e5e5e eieD eEY M6Mare yE E patM65 rEyo a H6g H rnaSuD D aMIM6eSyoD eyer2 wHSH M6parayE M6e aEaiQeMt aM65 oE Y6r 5M6E5Y D aMIM6o 5harge rayO M6rpor yo y6r D eaMireDeYt Ca 5M6E5e 5OeO5e rE E 5eye5p6r.
Tojai A erSurCt CFYA h	vU0LGT	, RTVN	Rh LG002 RPdR 41Mje5. L114 d g - W(Flow-rEe5yO E (hEi i4)(l ois 3apour geEerayoE) RRh) FYA-RRh rMaE auyoD aye5 fiaDeieM6yoD rS at M6rpyO E yeS-Erque. R t r6D ayeT r6D rE5e reageEYMuM65 yo oxi5rM6 aE CorgaE5 D erSurC SoD pouE5M6E yE uEfr5e5 M6D pie. The rE5D erSurC rMre5u5e5 oE rE5e yo ayD rS D erSurCrapour t C hEi i4 wHSH rM6E purge5 rEyo a H6aye5 quanz Seii. QuaEYr5ayO E rM t CSoD parTEg at M6rt aE5e agatElyY a Sait rayO E Surme. THMD eyHb5 rMSoD piaEYwYHOvPA (1999) hShE5uie WL) (Rpp5x. 4)



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Analytical Methods	Method	Matrix	Method Descriptions
TPD - heD mloiayie FraSyoE	VP071	, RTVN	Vhv PR h, 8B6 - 801GR The M&D pie exyaSyMaEaiQV&5 t Cj apiriarCUI /FY& aE5 quaEYfir&aypE rMt CSoD parM&E agarElMyaE eM&at iRM&5 GpotEySait raypE Surme of E-RikaEe MaE5ar5M THMDeyH5 rM&SoD pir&EYwYH Ov PA (1999) h SHe5uie WL) (Rpp5x. 4)
TPD 3oiayieMMWT v X	VP080	, RTVN	Vhv PR h, 8B6 - 8460W , ayer M&D pieMare 5meSjCpurge5 prr&or yo aEaiQMMt Cj apiriarCUI /A h aE5 quaEYfir&aypE rMt CSoD parM&E agarElMyaE eM&at iRM&5 GpotEySait raypE Surme. RiyerEaymeiCza M&D pie rM equim raye5 rE a Hea5M&paSe m&ai aE5 a poryoE of yHe Hea5M&paSe 5eyerD rE&5 t CUI A h aEaiQMM THMDeyH5 rM SoD pir&EYwYH Ov PA (1999) h SHe5uie WL) (Rpp5x. 4)
Preparation Methods	Method	Matrix	Method Descriptions
1:GM&it& / wayer leaSHfor M&iut ie aEaiQeM	vOLB	h l Y&	10 g of M&it rMD rxe5 wYHG D&b of 5mM&ie5 wayer aE5 yuDt ie5 eE5 omer eE5 for 1 Hbur. , ayer M&iut ie M&iyWare leaSH&5 froD yHe M&it t CyHe SoEYEuouMIM&peEM&E. haD pieMare M&ye5 aE5 yHe wayer fimeye5 off for aEaiQMM
haD pie v xyaSyoE for PerShoraye	VP416-PN	h l Y&	Vhv v PR 68G0.
haD pie v xyaSyoE for PerfluoroaikQ l oD pouE5M	VP4L1-PN	h l Y&	Y&-d ouM&
A ey&Eoir&v xyaSyoE of honiMfor Purge aE5 Trap	I NU16	h l Y&	(Vhv PR h, 8B6 - G0L0R) Gg of M&it& rMM&H&keE wYH Mirrogaye aE5 10D b Dey&H&Eoi prr&or yo aEaiQMMt CPurge aE5 Trap - UI /A h.
TuDt ier v xyaSyoE of hoir&M(l pyoER - l oE&EYrayfEg)	I NU17R	h l Y&	Y&-H&uM&ZA eSHe&E&ai agny&opE (yuDt ier). 40g of M&D pie2Oa4h l BaE5 Mirrogaye are exyaSye5 wYH1G0Db 1:1 s l A /RS&yoEe t CeE5 omer eE5 yuDt ie. The M&imeEYrM&5eSaEYe525eHC5raye5 aE5 SoESeEYraye5 (t C Ks) yo yHe 5eM&ie5 m&it&De for aEaiQMM
TuDt ier v xyaSyoE of hoir&M(l pyoE W- OoE-SoE&EYrayfEg)	I NU17W	h l Y&	Y&-H&uM&ZA eSHe&E&ai agny&opE (yuDt ier). 10g of M&D pie2Oa4h l BaE5 Mirrogaye are exyaSye5 wYH40Db 1:1 s l A /RS&yoEe t CeE5 omer eE5 yuDt ie. The M&imeEYrM&5eSaEYe5 5meSjCyo a UI m&ai for aEaiQMM
s rgeM&yoE for Tojai NeSonerat ie A ey&aim	VO4G	, RTVN	Vhv PR h, 8B6-L00GA eyH5 L00G&Ma Oyr&Sd C5rosHor&SaS6 5rgeM&yoE proSe5ure uM&5 yo prepare MirfaSe aE5 grouE5 wayer M&D pieMfor aEaiQMMt CY PRv h or Y PA h. THMDeyH5 rM&SoD pir&EYwYH Ov PA (1999) h SHe5uie WL) (Rpp5x. 4)
heparayorCFuEEei v xyaSyoE of brqu&5M	I NU1B	, RTVN	Vhv PR h, 8B6 - LG10W G00 Db yo 1b of M&D pie rMyaEMerres yo a M&eparayorCFuEEei aE5 M&er&ailCexyaSye5 yHee yD eMuM&fEg 60Db s l A for eaSHexyaSy The reM&iy&EYexyaSylare SoDt rE&E525eHC5raye5 aE5 SoESeEYraye5 for aEaiQMM THMDeyH5 rM&SoD pir&EYwYH Ov PA (1999) h SHe5uie WL) (Rpp5x. 4). Rbh SefaiuyexSu5eM&5D eEy wH&SHD aCt e reM&5eEYrE yHe SoEyarEer.
3oiayieM, ayer PreparaypE	I NU16-	, RTVN	R GD b airquoyor GD b of a 5niuye5 M&D pie rMa55e5 yo a B0 Db 3 l l m&ai for M&atgrfEg.



Summary of Outliers

Outliers : Quality Control Samples

The following report High/Low/Outliers (QL) Nepony hurrogaje reSomeC iDnM are MayS aE5 t aM65 oE VhVPR h, 8B6 or Rbh-Q, WOLB (E yE at M6E5e of M6Sf6S VhvPR iDnM). THH repory5MbiaQMQL I uynerM(t reaShM) oECC

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

A ayrx: SOIL

I oDpouE5 Uroup CaDe	bat orayrChadpie Y	I ireEyhadpie Y	AnaTyte	I Rh OuDter	s aya	biDnM	Comment
Laboratory Control Spike (LCS) 7 recoveries							
vP07Bs : FuDigaEJM	491L046-00G	----	cis8l-8DicF BropropyEn	10061-01-G	CGO %	CB-109%	7 ecovery Bess tFan Bower controTmit
vP07Bs : FuDigaEJM	491L046-00G	----	trans8l-8DicF BropropyEn	10061-04-6	Cl.9 %	CB-110%	7 ecovery Bess tFan Bower controTmit
vP07G : PHyHalaya vMerM	491L0L8-00G	----	bis(28ifY Fexy Y pFtFa Ete	117-81-7	1CB %	B7-1G9%	7 ecovery greater tFan upper controTmit
vP07Gs : OiyroM8DIEEM	491L0B0-00G	----	MetFapyriTene	91-80-G	1BB %	4B.B-1BL%	7 ecovery greater tFan upper controTmit
Matrix Spike (MS) 7 recoveries							
vP4L1: PerfluoroSQ RS6MaE5 hulfoEayeM	VA1409BB0-001	hW14/0-0.1	PROS	176L-4L-1	Ooy s eyerDIEE5	----	MS recovery not determined, background BveTgreater tFan or equaTto 3x spike BveT
vP4L1: PerfluoroSQ RS6MaE5 hulfoEayeM	VA1409BB0-001	hW14/0-0.1	+2 RLorote Bomer SuTonate (+.2 RS)	47619-97-4	Ooy s eyerDIEE5	----	MS recovery not determined, background BveTgreater tFan or equaTto 3x spike BveT

- Ror aTmatrices, no MetFod h ank vaTie outTers occur!
- Ror aTmatrices, no DupTicate outTers occur!

Regular Sample Surrogates

hut -A ayrx: SOIL

I oDpouE5 Uroup CaDe	bat orayrChadpie Y	I ireEyhadpie Y	AnaTyte	I Rh OuDter	s aya	biDnM	Comment
Samples Submitted							
vP07G: RS5 vxya8jat ie hurrogajeM	VA1409BB0-009	hW1B/0-0.1	28RFluoropFenoT	L67-14-B	146 %	1B-146 %	7 ecovery greater tFan upper data qua Tty objective
vP07G: RS5 vxya8jat ie hurrogajeM	VA1409BB0-04G	hW18/0-0.1	28RFluoropFenoT	L67-14-B	11L0 %	1B-146 %	7 ecovery greater tFan upper data qua Tty objective

Outliers : Analysis Holding Time Compliance

THMreporY5MbiaQMD015IEg TDe t reaShMoEC I ECyHb relMeSjme vxya8y8E / Preparay8E aE5/or REaiQMMSoD poEeEyMere 5MbiaQ55.

- No AnaTysis HoTing 5ime OutTers existi

Outliers : Frequency of Quality Control Samples

The following report High/Low/Outliers (QL) Nepony hurrogaje reSomeC iDnM are MayS aE5 t aM65 oE VhVPR h, 8B6 or Rbh-Q, WOLB (E yE at M6E5e of M6Sf6S VhvPR iDnM). THH repory5MbiaQMQL I uynerM(t reaShM) oECC

A ayrx: WA5E7



Page : 4L of 4L
 .ork I r5er : VA.1409BEO
 I ireEy : I RNs OI bROv PpVn PTc bTs
 ProjeSy : 41416L 1

A ayrx: WA5E7

QuairCI oEyoi hpeStf8ayoE	I ouEy		Naye (%)		QuairCI oEyoi hpeStf8ayoE
	QI	Neguar	RQuai	v xpeSje5	
bat orajorCs upif8ajeM(s VP)	1	1G	6.7	10.0	Ov PA 1999 h Ste5ule W(L) aE5 Rbh QI hL requireDeEy
TPd -heDmmiayhe FraSyøE					

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EM1210620	Page	: 1 of 4
Amendment	: 1	Laboratory	: Environmental Division Melbourne
Client	: CARDNO LANE PIPER PTY LTD	Contact	: Sarah Hodgson
Contact	: MS MARIA DE LOS REYES	Address	: 4 Westall Rd Springvale VIC Australia 3171
Address	: 154 HIGHBURY ROAD	E-mail	: sarah.hodgson@alsenviro.com
	BURWOOD VIC, AUSTRALIA 3125	Telephone	: 03 8549 9652
E-mail	: maria.delosreyes@lanepiper.com.au	Facsimile	: 03 8549 9626
Telephone	: +61 03 98880100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Facsimile	: +61 03 98083511	Date Samples Received	: 12-SEP-2012
Project	: 212163 1	Issue Date	: 01-OCT-2012
Order number	: ----	No. of samples received	: 8
C-O-C number	: ----	No. of samples analysed	: 4
Sampler	: MDR		
Site	: Fiskville		
Quote number	: ME/441/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Eric Chau	Metals Team Leader	Melbourne Inorganics
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Organics

Environmental Division Melbourne

Part of the **ALS Laboratory Group**
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A Campbell Brothers Limited Company





Page : 2 of 4
Work Order : EM1210620 Amendment 1
Client : CARDNO LANE PIPER PTY LTD
Project : 212163 1

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

- **This report has been amended to change a number of sample IDs, as requested by Maria De los Reyes of Cardno Lane Piper. No analysis results have been affected. SH 011012.**



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID
			Unit	Unit	
EA055: Moisture Content					
Moisture Content (dried @ 103°C)	----	1.0	%		
EG005T: Total Metals by ICP-AES					
Lead	7439-92-1	5	mg/kg		
EP080/071: Total Petroleum Hydrocarbons					
C6 - C9 Fraction	----	10	mg/kg		
C10 - C14 Fraction	----	50	mg/kg		
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 2010 Draft					
C6 - C10 Fraction	----	10	mg/kg		
C6 - C10 Fraction minus BTEX (F1)	----	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		
EP080: BTEX					
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		
EP080: BTEXN					
Sum of BTEX	----	0.2	mg/kg		
Total Xylenes	1330-20-7	0.5	mg/kg		
Naphthalene	91-20-3	1	mg/kg		
EP080S: TPH(V)/BTEX Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%		
Toluene-D8	2037-26-5	0.1	%		
4-Bromofluorobenzene	460-00-4	0.1	%		



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Work Order : EM1210620 Amendment 1
Client : CARDNO LANE PIPER PTY LTD
Project : 212163 1

Surrogate Control Limits

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	57	129
Toluene-D8	2037-26-5	58	120
4-Bromofluorobenzene	460-00-4	56	126

Environmental Division

QUALITY CONTROL REPORT

Work Order	: EM1210620	Page	: 1 of 6
Amendment	: 1	Laboratory	: Environmental Division Melbourne
Client	: CARDNO LANE PIPER PTY LTD	Contact	: Sarah Hodgson
Contact	: MS MARIA DE LOS REYES	Address	: 4 Westall Rd Springvale VIC Australia 3171
Address	: 154 HIGHBURY ROAD BURWOOD VIC, AUSTRALIA 3125	E-mail	: sarah.hodgson@alsenviro.com
E-mail	: maria.delosreyes@lanepiper.com.au	Telephone	: 03 8549 9652
Telephone	: +61 03 98880100	Facsimile	: 03 8549 9626
Facsimile	: +61 03 98083511	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Project	: 212163 1	Date Samples Received	: 12-SEP-2012
Site	: Fiskville	Issue Date	: 01-OCT-2012
C-O-C number	: ----	No. of samples received	: 8
Sampler	: MDR	No. of samples analysed	: 4
Order number	: ----		
Quote number	: ME/441/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

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



NATA Accredited Laboratory 825
Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Eric Chau	Metals Team Leader	Melbourne Inorganics
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Organics



Page : 2 of 6
Work Order : EM1210620 Amendment 1
Client : CARDNO LANE PIPER PTY LTD
Project : 212163 1

General Comments

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

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

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

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

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EA055: Moisture Content (QC Lot: 2497420)											
EM1210620-002	BH3/2.6	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	29.0	31.3	7.9	0% - 20%		
EM1210635-010	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	15.0	15.0	0.0	0% - 50%		
EG005T: Total Metals by ICP-AES (QC Lot: 2498204)											
EM1210439-003	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	13	14	0.0	No Limit		
EM1210439-033	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	11	14	19.9	No Limit		
EG005T: Total Metals by ICP-AES (QC Lot: 2498205)											
EM1210620-004	BH4/2.3	EG005T: Lead	7439-92-1	5	mg/kg	12	13	8.6	No Limit		
EM1210667-016	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	10	14	31.2	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2496928)											
EM1210519-006	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EM1210635-012	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2498562)											
EM1210519-006	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit		
EM1210519-031	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2496928)											
EM1210519-006	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EM1210635-012	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2498562)											
EM1210519-006	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit		
EM1210519-031	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit		
EP080: BTEXN (QC Lot: 2496928)											
EM1210519-006	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		



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 Work Order : EM1210620 Amendment 1
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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: 2496928) - continued											
EM1210519-006	Anonymous	EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
EM1210635-012	Anonymous										



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 Work Order : EM1210620 Amendment 1
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Method Blank (MB) and Laboratory Control Spike (LCS) Report

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

Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2498204)									
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.9 mg/kg	101	77	125	
EG005T: Total Metals by ICP-AES (QCLot: 2498205)									
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.9 mg/kg	104	77	125	
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2496928)									
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	94.5	70	133	
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2498562)									
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	544 mg/kg	91.3	55	123	
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	1981 mg/kg	107	72	134	
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	818 mg/kg	93.0	71	143	
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----	
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2496928)									
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	45 mg/kg	92.5	70	130	
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2498562)									
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	870 mg/kg	101	69	123	
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	2495 mg/kg	96.2	71	134	
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	263 mg/kg	80.6	63	143	
EP071: >C10 - C40 Fraction (sum)	----	100	mg/kg	<100	----	----	----	----	
EP080: BTEXN (QCLot: 2496928)									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	126	72	126	
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	89.0	73	129	
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	87.6	72	126	
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4 mg/kg	92.6	70	138	
	106-42-3								
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	94.9	73	131	
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	89.9	70	130	



Page : 6 of 6
 Work Order : EM1210620 Amendment 1
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) Report		
					MS	Spike Recovery (%)	Recovery Limits (%)
					Low	High	
EG005T: Total Metals by ICP-AES (QCLot: 2498204)							
EM1210439-007	Anonymous	EG005T: Lead	7439-92-1	50 mg/kg	94.9	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2498205)							
EM1210620-005	BH2/2.0	EG005T: Lead	7439-92-1	50 mg/kg	98.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2496928)							
EM1210519-008	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	78.8	49	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2498562)							
EM1210519-008	Anonymous	EP071: C10 - C14 Fraction	----	544 mg/kg	95.6	54	123
		EP071: C15 - C28 Fraction	----	1981 mg/kg	109	74	134
		EP071: C29 - C36 Fraction	----	818 mg/kg	104	63	143
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2496928)							
EM1210519-008	Anonymous	EP080: C6 - C10 Fraction	----	33 mg/kg	76.5	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2498562)							
EM1210519-008	Anonymous	EP071: >C10 - C16 Fraction	----	870 mg/kg	103	54	123
		EP071: >C16 - C34 Fraction	----	2495 mg/kg	100	74	134
		EP071: >C34 - C40 Fraction	----	263 mg/kg	137	63	143
EP080: BTEXN (QCLot: 2496928)							
EM1210519-008	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	102	58	136
		EP080: Toluene	108-88-3	2 mg/kg	93.5	63	135

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1210620	Page	: 1 of 5
Amendment	: 1	Laboratory	: Environmental Division Melbourne
Client	: CARDNO LANE PIPER PTY LTD	Contact	: Sarah Hodgson
Contact	: MS MARIA DE LOS REYES	Address	: 4 Westall Rd Springvale VIC Australia 3171
Address	: 154 HIGHBURY ROAD BURWOOD VIC, AUSTRALIA 3125	E-mail	: sarah.hodgson@alsenviro.com
E-mail	: maria.delosreyes@lanepiper.com.au	Telephone	: 03 8549 9652
Telephone	: +61 03 98880100	Facsimile	: 03 8549 9626
Facsimile	: +61 03 98083511	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Project	: 212163 1	Date Samples Received	: 12-SEP-2012
Site	: Fiskville	Issue Date	: 01-OCT-2012
C-O-C number	: ----	No. of samples received	: 8
Sampler	: MDR	No. of samples analysed	: 4
Order number	: ----		
Quote number	: ME/441/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Page : 2 of 5
 Work Order : EM12/10620 Amendment 1
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days), Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL

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

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis		
			Date extracted	Due for extraction	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	----	----	13-SEP-2012	25-SEP-2012	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	14-SEP-2012	10-MAR-2013	17-SEP-2012	10-MAR-2013	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	13-SEP-2012	25-SEP-2012	14-SEP-2012	25-SEP-2012	✓
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	17-SEP-2012	25-SEP-2012	17-SEP-2012	27-OCT-2012	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	13-SEP-2012	25-SEP-2012	14-SEP-2012	25-SEP-2012	✓
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	17-SEP-2012	25-SEP-2012	17-SEP-2012	27-OCT-2012	✓
EP080: BTEX							
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	13-SEP-2012	25-SEP-2012	14-SEP-2012	25-SEP-2012	✓
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	17-SEP-2012	25-SEP-2012	17-SEP-2012	27-OCT-2012	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	13-SEP-2012	25-SEP-2012	14-SEP-2012	25-SEP-2012	✓
Soil Glass Jar - Unpreserved	BH1/3.0, BH2/2.0	11-SEP-2012	13-SEP-2012	25-SEP-2012	14-SEP-2012	25-SEP-2012	✓



Page : 3 of 5
 Work Order : EM1210620 Amendment 1
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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 Analytical Methods	Method	Count		Rate (%)		Quality Control Specification	
		QC	Regular	Actual	Expected	Rate (%)	Evaluation
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	20	10.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
Total Metals by ICP-AES	EG005T	4	34	11.8	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
TPH - Semivolatile Fraction	EP071	2	15	13.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
TPH Volatiles/BTEX	EP080	2	15	13.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
Laboratory Control Samples (LCS)							
Total Metals by ICP-AES	EG005T	2	34	5.9	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
TPH Volatiles/BTEX	EP080	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
Method Blanks (MB)							
Total Metals by ICP-AES	EG005T	2	34	5.9	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
TPH Volatiles/BTEX	EP080	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement	✓
Matrix Spikes (MS)							
Total Metals by ICP-AES	EG005T	2	34	5.9	5.0	ALS QCS3 requirement	✓
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	ALS QCS3 requirement	✓
TPH Volatiles/BTEX	EP080	1	15	6.7	5.0	ALS QCS3 requirement	✓



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 Work Order : EM1210620 Amendment 1
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C-10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.



Page : 5 of 5
Work Order : EM1210620 Amendment 1
Client : CARDNO LANE PIPER PTY LTD
Project : 212163 1

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

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

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order : **EM1211193** uaPe a1 : of

Amendment : **2**

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Signatories Position Accreditation Category

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General Comments

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U YeTe bYe 4l A: oa Te: TeH Tesr lbH00eTs 0T v sbai HaTh4l AV0G v at Le Hre b Y0PY v: 0tr Te D i bai bVCsr 0000i bsav , le (TeH DeH we0Ybev, i: t eH): Tv ab00 0beTeTei De-

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Ket g y Sc Nr v Let=y Sc TePS0i r v LeT0T v Habalase v a0beCeHLt y Yev 0ai SLSb00Ds ce Tr00as-3Ye y Yev 0ai SLSb00Ds ce Tr00as 0 a H00S0i : obYe Sv eT00ai y Yev 0ai c: D00t-
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- 8/10/12: This report has been amended as a result of a request to change sample identification numbers (IDs) received by ALS from Maria De los Reyes on 5/10/12. All analysis results are as per the previous report.
- This report has been amended to change a number of sample IDs, as requested by Maria De los Reyes of Cardno Lane Piper. No analysis results have been affected. SH 011012.



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Analytical Results

Compound	CAS Number	LOR	Unit	Client sampling date / time	BH5/2.0 2276 Eu Z2912 1f g99 EM1211193-001	BH5/3.0 2276 Eu Z2912 1f g99 EM1211193-003	BH6/2.0 2276 Eu Z2912 1f g99 EM1211193-004	BH6/2.5 2276 Eu Z2912 1f g99 EM1211193-005	BH7/2.0 2276 Eu Z2912 1f g99 EM1211193-006
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	7777	1-9	%		21.9	20.9	27.9	35.2	36.4
EG005T: Total Metals by ICP-AES									
Lead	pd6070271	f	v P/KP		9	<f	8	20	20
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	7777	19	v P/KP		37	<19	64	288	<19
C10 - C14 Fraction	7777	f 9	v P/KP		940	<f 9	850	2500	<f 9
C15 - C28 Fraction	7777	199	v P/KP		3430	<199	3150	8530	<199
C29 - C36 Fraction	7777	199	v P/KP		<199	<199	<199	<199	<199
C10 - C36 Fraction (sum)	7777	f 9	v P/KP		4370	<f 9	4000	11000	<f 9
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	7777	19	v P/KP		60	<19	94	442	<19
C6 - C10 Fraction minus BTEX (F1)	7777	19	v P/KP		60	<19	94	441	<19
>C10 - C16 Fraction	7777	f 9	v P/KP		2110	<f 9	1950	5410	<f 9
>C16 - C34 Fraction	7777	199	v P/KP		2560	<199	2290	6290	<199
>C34 - C40 Fraction	7777	199	v P/KP		<199	<199	<199	<199	<199
>C10 - C40 Fraction (sum)	7777	f 9	v P/KP		4670	<f 9	4240	11700	<f 9
EP080: BTEX									
Benzene	p17d672	9-2	v P/KP		<9-2	<9-2	<9-2	<9-2	<9-2
Toluene	19878876	9-f	v P/KP		<9-f	<9-f	<9-f	<9-f	<9-f
Ethylbenzene	1997d17d	9-f	v P/KP		<9-f	<9-f	<9-f	0.8	<9-f
meta- & para-Xylene	19876876 19+7d276	9-f	v P/KP		<9-f	<9-f	<9-f	<9-f	<9-f
ortho-Xylene	Of 7dp7+	9-f	v P/KP		<9-f	<9-f	<9-f	<9-f	<9-f
EP080: BTEXN									
Sum of BTEX	7777	9-2	v P/KP		<9-2	<9-2	<9-2	0.8	<9-2
Total Xylenes	16697297b	9-f	v P/KP		<9-f	<9-f	<9-f	<9-f	<9-f
Naphthalene	0172976	1	v P/KP		5	<1	9	37	<1
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	1p9+979p79	9-1	%		89.3	90.1	79.1	96.2	66.8
Toluene-D8	296p72+7	9-1	%		89.5	87.7	88.5	113	70.7
4-Bromofluorobenzene	dt+9797d	9-1	%		95.9	102	97.7	112	81.4



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Analytical Results

Compound	CAS Number	Client sampling date / time		Unit	Client sample ID			
		LOR	Unit		BH8/1.5	BH9/2.4	BH8/0.5	QC21/22092012
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	7777	1-9	%	32.9	13.6	20.8	25.5	25.2
EG005T: Total Metals by ICP-AES								
Lead	pd6070271	f	v P/K/P	12	10	5	6	6
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	7777	19	v P/K/P	<19	<19	<19	<19	<19
C10 - C14 Fraction	7777	f 9	v P/K/P	<f 9	<f 9	<f 9	<f 9	<f 9
C15 - C28 Fraction	7777	199	v P/K/P	<199	<199	<199	<199	<199
C29 - C36 Fraction	7777	199	v P/K/P	<199	<199	<199	<199	<199
C10 - C36 Fraction (sum)	7777	f 9	v P/K/P	<f 9	<f 9	<f 9	<f 9	<f 9
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	7777	19	v P/K/P	<19	<19	<19	<19	<19
C6 - C10 Fraction minus BTEX (F1)	7777	19	v P/K/P	<19	<19	<19	<19	<19
>C10 - C16 Fraction	7777	f 9	v P/K/P	<f 9	<f 9	<f 9	<f 9	<f 9
>C16 - C34 Fraction	7777	199	v P/K/P	<199	<199	<199	<199	<199
>C34 - C40 Fraction	7777	199	v P/K/P	<199	<199	<199	<199	<199
>C10 - C40 Fraction (sum)	7777	f 9	v P/K/P	<f 9	<f 9	<f 9	<f 9	<f 9
EP080: BTEX								
Benzene	p17d672	9-2	v P/K/P	<9-2	<9-2	<9-2	<9-2	<9-2
Toluene	19878876	9-f	v P/K/P	<9-f	<9-f	<9-f	<9-f	<9-f
Ethylbenzene	1997d17d	9-f	v P/K/P	<9-f	<9-f	<9-f	<9-f	<9-f
meta- & para-Xylene	19876876 19+7d276	9-f	v P/K/P	<9-f	<9-f	<9-f	<9-f	<9-f
ortho-Xylene	Of 7dp7+	9-f	v P/K/P	<9-f	<9-f	<9-f	<9-f	<9-f
EP080: BTEXN								
Sum of BTEX	7777	9-2	v P/K/P	<9-2	<9-2	<9-2	<9-2	<9-2
Total Xylenes	16697297b	9-f	v P/K/P	<9-f	<9-f	<9-f	<9-f	<9-f
Naphthalene	0172976	1	v P/K/P	<1	<1	<1	<1	<1
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	1p9+979p79	9-1	%	74.2	66.7	67.9	75.1	76.8
Toluene-D8	296p72+7	9-1	%	80.0	70.6	69.3	79.7	81.8
4-Bromofluorobenzene	dt+9797d	9-1	%	92.7	85.8	87.8	95.6	95.1



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Surrogate Control Limits

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	199-979-79	f p	120
Toluene-D8	29672-7	f 8	129
4-Bromofluorobenzene	108-95-7	f +	12+

Environmental Division

QUALITY CONTROL REPORT

Work Order	: EM1211193	Page	: 1 of 6
Amendment	: 2	Laboratory	: Environmental Division Melbourne
Client	: CARDNO LANE PIPER PTY LTD	Contact	: Sarah Hodgson
Contact	: MS MARIA DE LOS REYES	Address	: 4 Westall Rd Springvale VIC Australia 3171
Address	: 154 HIGHBURY ROAD BURWOOD VIC, AUSTRALIA 3125	E-mail	: sarah.hodgson@alsenviro.com
E-mail	: maria.delosreyes@lanepiper.com.au	Telephone	: 03 8549 9652
Telephone	: +61 03 98880100	Facsimile	: 03 8549 9626
Facsimile	: +61 03 98083511	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Project	: 212163 1	Date Samples Received	: 24-SEP-2012
Site	: Fiskville	Issue Date	: 08-OCT-2012
C-O-C number	: ----	No. of samples received	: 20
Sampler	: MDR	No. of samples analysed	: 10
Order number	: ----		
Quote number	: ME/441/12 V2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

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



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics



Page : 2 of 6
Work Order : EM1211193 Amendment 2
Client : CARDNO LANE PIPER PTY LTD
Project : 212163 1

General Comments

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

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

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

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

Key :

Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC



Page : 3 of 6
 Work Order : EM1211193 Amendment 2
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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: 2517786)											
EM1211193-001	BH5/2.0	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	21.9	22.9	4.7	0% - 20%		
EM1211224-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	0.0	No Limit		
EG005T: Total Metals by ICP-AES (QC Lot: 2519799)											
EM1211084-051	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	24	28	12.2	No Limit		
EM1211184-001	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	166	148	11.4	0% - 20%		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2516746)											
EM1211165-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	17	18	6.1	No Limit		
EM1211193-003	BH5/3.0	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2517582)											
EM1211193-001	BH5/2.0	EP071: C15 - C28 Fraction	----	100	mg/kg	3430	3140	9.0	0% - 20%		
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	110	12.9	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	940	840	11.0	0% - 50%		
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	4370	4090	6.6	0% - 20%		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2516746)											
EM1211165-001	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	29	34	13.4	No Limit		
EM1211193-003	BH5/3.0	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2517582)											
EM1211193-001	BH5/2.0	EP071: >C16 - C34 Fraction	----	100	mg/kg	2560	2400	6.6	0% - 20%		
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	140	32.2	No Limit		
		EP071: >C10 - C16 Fraction	----	50	mg/kg	2110	1900	10.3	0% - 20%		
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	4670	4440	5.0	0% - 20%		
EP080: BTEXN (QC Lot: 2516746)											
EM1211165-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	3.7	3.1	15.2	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	1.1	1.0	15.5	No Limit		
		EP080: ortho-Xylene	106-42-3	0.5	mg/kg	0.7	0.6	0.0	No Limit		
		EP080: Naphthalene	95-47-6	1	mg/kg	<1	<1	0.0	No Limit		
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: ortho-Xylene	106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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 Work Order : EM1211193 Amendment 2
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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 (%)
EM121193-003	BH5/3.0	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



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 Work Order : EM1211193 Amendment 2
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

Method Blank (MB) and Laboratory Control Spike (LCS) Report

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

Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2519799)									
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.9 mg/kg	99.9	77	125	
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2516746)									
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	102	70	133	
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2517582)									
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	602 mg/kg	68.6	55	123	
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	1875 mg/kg	77.7	72	134	
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	738 mg/kg	85.4	71	143	
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----	
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2516746)									
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	45 mg/kg	98.4	70	130	
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2517582)									
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	929 mg/kg	71.7	69	123	
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	2237 mg/kg	82.4	71	134	
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	232 mg/kg	78.4	63	143	
EP071: >C10 - C40 Fraction (sum)	----	100	mg/kg	<100	----	----	----	----	
EP080: BTEXN (QCLot: 2516746)									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	98.5	72	126	
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	102	73	129	
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	95.6	72	126	
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	103	70	138	
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	105	73	131	
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	85.7	70	130	



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 Work Order : EM1211193 Amendment 2
 Client : CARDNO LANE PIPER PTY LTD
 Project : 212163 1

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**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) Report		
					MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2519799)							
EM1211084-052	Anonymous	EG005T: Lead	7439-92-1	50 mg/kg	97.6	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2516746)							
EM1211165-002	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	85.4	49	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2517582)							
EM1211193-003	BH5/3.0	EP071: C10 - C14 Fraction	----	602 mg/kg	73.5	54	123
		EP071: C15 - C28 Fraction	----	1875 mg/kg	78.6	74	134
		EP071: C29 - C36 Fraction	----	738 mg/kg	83.1	63	143
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2516746)							
EM1211165-002	Anonymous	EP080: C6 - C10 Fraction	----	33 mg/kg	83.3	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2517582)							
EM1211193-003	BH5/3.0	EP071: >C10 - C16 Fraction	----	929 mg/kg	74.9	54	123
		EP071: >C16 - C34 Fraction	----	2237 mg/kg	82.9	74	134
		EP071: >C34 - C40 Fraction	----	232 mg/kg	65.8	63	143
EP080: BTEXN (QCLot: 2516746)							
EM1211165-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	80.2	58	136
		EP080: Toluene	108-88-3	2 mg/kg	85.2	63	135

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order : **EM1211106** Page : 1 of 5
Amendment : **2**
Client : CARDNO LANE PIPER PTY LTD
Contact : MS MARIA DE LOS REYES
Address : 14GHIB HUWRY ROAD
 UWRV OOD , IC3AWSTRALIA 21p4
Laboratory : Environmental Division Melbourne
Contact : Sarah Hodgson
Address : GV estall Rd S7ringvale , IC Australia 21-1
E. mail : maria@losreyes+ lane717er@rm@u
Tele7hone : 651 02 98880100
Facsimile : 651 02 98082411
Project : p1p152 1
Site : Fiskville
C.O.C number :
Sam7ler : MDR
Order number :
Quote number : ME/G31/1p , p
E. mail : sarah@odgson+ alsenviro@rm
Tele7hone : 02 84G9 954p
Facsimile : 02 84G9 95p5
QC Level : NEPM 1999 Schedule U(2) and ALS QCS2 requirement
Date Sam7les Received : pGSEP.p01p
Issue Date : 08.OCT.p01p
No@f sam7les received : p0
No@f sam7les analysed : 10

This re7ort su7ersedes any 7revious re7ort(s) with this reference@results a77ly to the sam7le(s) as submitted@All 7ages of this re7ort have been checked and a77roved for release@

This Inter7retive Quality Control Re7ort contains the following information:

- Analysis Holding Time Com7liance
- Quality Control Parameter Frequency Com7liance
- Urif Method Summaries
- Summary of Outliers



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 Work Order : EM1p11192 Amendment p
 Client : CARDNO LANE PIPER PTY LTD
 Project : p1p152 1

Analysis Holding Time Compliance

The following report summarises extraction / retraction and analysis times and compliance with recommended holding times. Dates reported retest first date of extraction or analysis and recludes subsequent dilutions and retests. Information is also provided re the sample container (reservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For sample date is assumed to be that of the oldest sample contributing to the sample date for laboratory produced leachates is assumed as the collection date of the leaching process. Outliers for holding time are based on WSEPA SV 863 APHA3 AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes the holding time compliance assessment compares the leachate date with the shortest analyte holding time for the equivalent soil holding times are: Organics (1G days), Mercury (8 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Due for extraction	Due for analysis	Evaluation	Evaluation	
EA955: Moisture Content								
Soil Glass Jar 3 Unpreserved								
UH4/p	UH4/2	22 SEP 2012	333	....	2 SEP 2012	05.OCT. p01p	✓
UH5/p	UH5/p							
UH8/1	UH8/1							
UH9/p	UH9/p							
QCp1/pp09p01p3	QCp1/pp09p01p							
EG95T: Total Metals by ICP-AES								
Soil Glass Jar 3 Unpreserved								
UH4/p	UH4/2	22 SEP 2012	27 SEP 2012	p1.MAR.p012	28 SEP 2012	p1.MAR.p012	✓	
UH5/p	UH5/p							
UH8/1	UH8/1							
UH9/p	UH9/p							
QCp1/pp09p01p3	QCp1/pp09p01p							
EP989/971: Total Petroleum Hydrocarbons								
Soil Glass Jar 3 Unpreserved								
UH4/p	UH4/2	22 SEP 2012	25 SEP 2012	05.OCT.p01p	28 SEP 2012	05.OCT.p01p	✓	
UH5/p	UH5/p							
UH8/1	UH8/1							
UH9/p	UH9/p							
QCp1/pp09p01p3	QCp1/pp09p01p							
Soil Glass Jar 3 Unpreserved								
UH4/p	UH4/2	22 SEP 2012	27 SEP 2012	05.OCT.p01p	27 SEP 2012	05.OCT.p01p	✓	
UH5/p	UH5/p							
UH8/1	UH8/1							
UH9/p	UH9/p							
QCp1/pp09p01p3	QCp1/pp09p01p							



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 Work Order : EM1p11192 Amendment p
 Client : CARDNO LANE PIPER PTY LTD
 Project : p1p152 1

Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = V within holding time@

Method	Container / Client Sample ID(s)	Sample Date			Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation			
EP989/971: Total Recoverable Hydrocarbons 3NEPM 2919 Draft										
Soil Glass Jar 3 Unpreserved										
UH4/p03	UH4/203	22/SEP/2012	05.OCT.p01p	✓	28/SEP/2012	05.OCT.p01p	✓			
UH5/p03	UH5/p03									
UH-/p03	UH8/103									
UH9/p03	UH8/003									
QCp1/pp09p01p3	QCcp/09p01p									
Soil Glass Jar 3 Unpreserved										
UH4/p03	UH4/203	22/SEP/2012	05.OCT.p01p	✓	27/SEP/2012	05.NO.p01p	✓			
UH5/p03	UH5/p03									
UH-/p03	UH8/103									
UH9/p03	UH8/003									
QCp1/pp09p01p3	QCcp/09p01p									
EP989: BTEX										
Soil Glass Jar 3 Unpreserved										
UH4/p03	UH4/203	22/SEP/2012	05.OCT.p01p	✓	28/SEP/2012	05.OCT.p01p	✓			
UH5/p03	UH5/p03									
UH-/p03	UH8/103									
UH9/p03	UH8/003									
QCp1/pp09p01p3	QCcp/09p01p									
EP989: BTEXN										
Soil Glass Jar 3 Unpreserved										
UH4/p03	UH4/203	22/SEP/2012	05.OCT.p01p	✓	28/SEP/2012	05.OCT.p01p	✓			
UH5/p03	UH5/p03									
UH-/p03	UH8/103									
UH9/p03	UH8/003									
QCp1/pp09p01p3	QCcp/09p01p									



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 Work Order : EM1p11192 Amendment p
 Client : CARDNO LANE PIPER PTY LTD
 Project : p1p152 1

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was (where) processed. Actual rate should be greater than or equal to the expected rate. 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	Analytical Method	Method	Count		Rate (%)		Quality Control Specification
			QC	Regular	Actual	Expected		Evaluation
Laboratory Duplicates (DWP)							
Moisture Content	EA044.102		p	p0	19.9	19.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
Total Metals by ICP-AES	EB004T		p	p0	19.9	19.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
TPH . Semivolatile Fraction	EPO-1		1	10	19.9	19.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
TPH . Volatiles/UTEX	EP080		p	p0	19.9	19.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
Laboratory Control Samples (LCS)							
Total Metals by ICP-AES	EB004T		1	p0	5.9	5.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
TPH . Semivolatile Fraction	EPO-1		1	10	19.9	5.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
TPH . Volatiles/UTEX	EP080		1	p0	5.9	5.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
Method Blanks (MU)							
Total Metals by ICP-AES	EB004T		1	p0	5.9	5.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
TPH . Semivolatile Fraction	EPO-1		1	10	19.9	5.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
TPH . Volatiles/UTEX	EP080		1	p0	5.9	5.9	NEPM 1999 Schedule U(2) and ALS QCS2 requirement
Matrix Spikes (MS)							
Total Metals by ICP-AES	EB004T		1	p0	5.9	5.9	ALS QCS2 requirement
TPH . Semivolatile Fraction	EPO-1		1	10	19.9	5.9	ALS QCS2 requirement
TPH . Volatiles/UTEX	EP080		1	p0	5.9	5.9	ALS QCS2 requirement



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 Work Order : EM1p11192 Amendment p
 Client : CARDNO LANE PIPER PTY LTD
 Project : p1p152 1

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 3045A and NEPM house developed procedures are employed in the absence of documented standards or by client request. The following 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	EA044.102	SOIL	A gravimetric procedure based on weight loss over a 1p hour drying period at 102.104 degrees Celsius. This method is compliant with NEPM (p010 Draft) Schedule U(2) Section - (a) and Table 1 (1G day holding time).
Total Metals by ICP-AES	EB004T	SOIL	(APHA p1st ed) (WSEPA SV 805 . 5010) (ICPAES) Metals are determined following an acid digestion of the soil. The ICP-AES technique ionises samples in a plasma emitting a characteristic spectrum based on metal intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule U(2)
TPH - Semivolatile Fraction	EP0-1	SOIL	(WSEPA SV 805 . 8014A) Samples are analysed by GC/FID and quantified against alkane standards over the range C10 - C25. This method is compliant with NEPM (1999) Schedule U(2) (Method 405)
TPH , volatiles/UTEX	EP080	SOIL	(WSEPA SV 805 . 8p50U) Extracts are analysed by Purge and Trap GC/FID. Quantification is by comparison against an established 4 point calibration curve. This method is compliant with NEPM (1999) Schedule U(2) (Method 401)
Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	ORB15	SOIL	(WSEPA SV 805 . 4020A) 4g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap GC/MS.
Tumbler Extraction of Solids (O7ion U . Non-concentrating)	ORB 1- U	SOIL	In-house mechanical agitation (tumbler) of 10g of sample and surrogate are extracted with 10mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a BC vial for analysis.



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Work Order : EM1p11192 Amendment p
Client : CARDNO LANE PIPER PTY LTD
Project : p1p152 1

Summary of Outliers

Outliers : Quality Control Samples

The following re7ort highlights outliers flagged in the Quality Control (QC) Re7ort@Surrogate recovery limits are static and based on WSEPA SV 805 or ALS.QV I/EN/28 (in the absence of s7ecific WSEPA limits)@This re7ort dis7ays QC Outliers (breaches) only@

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This re7ort dis7ays Holding Time breaches only@only the res7ective Extraction / Pre7aration and/or Analysis com7onent is/are dis7ayed@

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following re7ort highlights breaches in the Frequency of Quality Control Sam7les@

- No Quality Control Sample Frequency Outliers exist.

Sample Receipt Advice

Company name: **Cardno Lane Piper Pty Ltd**
Contact name: **Maria De Los Reyes**
Client job number: **FISKVILLE 212163.1**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Aug 20, 2012 2:08 PM**
mgt-LabMark reference: **348839**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

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

Natalie Krasselt on Phone : (+61) (3) 8564 5000 or by e.mail:
Natalie.Krasselt@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Maria De Los Reyes - maria.delosreyes@lanepiper.com.au.

mgt-LabMark Sample Receipt

Company Name: Cardno Lane Piper Pty Ltd
Address: Building 2, 154 Highbury Road
 Burwood
 VIC 3125
Client Job No.: FISKVILLE 212163.1
Order No.: 348839
Report #: 9888 0100
Phone: 9808 0100
Fax: 9808 3511
Received: Aug 20, 2012 2:08 PM
Due: Aug 27, 2012
Priority: 5 Day
Contact Name: Maria De Los Reyes
mgt-LabMark Client Manager: Natalie Krasselt

Sample Detail			
Sample ID	Sample Date	Sampling Time	LAB ID
C021408201	Aug 14, 2012	Soil	M12-Au18659
Laboratory where analysis is conducted			
Melbourne Laboratory - NATA Site # 1254 & 14271			
Verney Laboratory - NATA Site # 18217			
Brisbane Laboratory - NATA Site # 20794			
External Laboratory			
Total Recoverable Hydrocarbons			
			X
Metals M13			
			X
Volatile Organics			
			X
Semivolatile Organics			
			X
Polychlorinated Biphenyls			
			X
pH (1:5 Aqueous extract)			
			X
% Moisture			
			X

Cardno Lane Piper Pty Ltd
 Building 2, 154 Highbury Road
 Burwood
 VIC 3125



Certificate of Analysis

NATA Accredited
 Accreditation Number 1261
 Site Number 1254

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

Attention: Maria De Los Reyes

Report **348839-S**
 Client Reference FISKVILLE 212163.1
 Received Date Aug 20, 2012

Client Sample ID			QC02/1408201 2
Sample Matrix			Soil
mgt-LabMark Sample No.			M12-Au18659
Date Sampled			Aug 14, 2012
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-36 (Total)	50	mg/kg	< 50
Volatile Organics			
1.1-Dichloroethane	0.05	mg/kg	< 0.05
1.1-Dichloroethene	0.05	mg/kg	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05
1.2-Dibromoethane	0.05	mg/kg	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05
1.2-Dichloroethane	0.05	mg/kg	< 0.05
1.2-Dichloropropane	0.05	mg/kg	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05
1.3-Dichloropropane	0.05	mg/kg	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05
Allyl chloride	0.05	mg/kg	< 0.05
Benzene	0.05	mg/kg	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05
Bromoform	0.05	mg/kg	< 0.05
Bromomethane	0.05	mg/kg	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05

Client Sample ID			QC02/1408201 2
Sample Matrix			Soil
mgt-LabMark Sample No.			M12-Au18659
Date Sampled			Aug 14, 2012
Test/Reference	LOR	Unit	
Chlorobenzene	0.05	mg/kg	< 0.05
Chloroethane	0.05	mg/kg	< 0.05
Chloroform	0.05	mg/kg	< 0.05
Chloromethane	0.05	mg/kg	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05
Iodomethane	0.05	mg/kg	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05
o-Xylene	0.05	mg/kg	< 0.05
Styrene	0.05	mg/kg	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05
Toluene	0.05	mg/kg	< 0.05
Total m+p-Xylenes	0.10	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.05	mg/kg	< 0.05
trans-1.3-Dichloropropene	0.05	mg/kg	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05
Xylenes(ortho.meta and para)	0.15	mg/kg	< 0.15
Fluorobenzene (surr.)	1	%	119
4-Bromofluorobenzene (surr.)	1	%	73
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *			
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB	0.1	mg/kg	< 0.1
Dibutylchloroendate (surr.)	1	%	140
Tetrachloro-m-xylene (surr.)	1	%	128
Semivolatile Organics			
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5



Client Sample ID			QC02/1408201 2
Sample Matrix			Soil
mgt-LabMark Sample No.			M12-Au18659
Date Sampled			Aug 14, 2012
Test/Reference	LOR	Unit	
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1
2-Picoline	0.5	mg/kg	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1.0	mg/kg	< 1
2.4.6-Trichlorophenol	1.0	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
2.6-Dinitrotoluene	0.5	mg/kg	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
4.4'-DDD	0.5	mg/kg	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5
4.4'-DDT	0.5	mg/kg	< 0.5
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5
a-BHC	0.5	mg/kg	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Acetophenone	0.5	mg/kg	< 0.5
Aldrin	0.5	mg/kg	< 0.5
Aniline	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
b-BHC	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5

Client Sample ID			QC02/1408201 2
Sample Matrix			Soil
mgt-LabMark Sample No.			M12-Au18659
Date Sampled			Aug 14, 2012
Test/Reference	LOR	Unit	
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Benzyl chloride	0.5	mg/kg	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
d-BHC	0.5	mg/kg	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5
Dieldrin	0.5	mg/kg	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5
Endrin	0.5	mg/kg	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5
Heptachlor	0.5	mg/kg	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5
Methoxychlor	0.5	mg/kg	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1
Phenanthrene	0.5	mg/kg	< 0.5
Phenol	0.5	mg/kg	< 0.5
Pronamide	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Trifluralin	0.5	mg/kg	< 0.5

Client Sample ID			QC02/1408201
Sample Matrix			2
mgt-LabMark Sample No.			Soil
Date Sampled			M12-Au18659
Test/Reference	LOR	Unit	Aug 14, 2012
Phenol-d6 (surr.)	1	%	111
Nitrobenzene-d5 (surr.)	1	%	107
2-Fluorobiphenyl (surr.)	1	%	102
2.4.6-Tribromophenol (surr.)	1	%	37
pH (1:5 Aqueous extract)			
	0.1	units	8.7
% Moisture			
	0.1	%	18
Heavy Metals			
Arsenic	2	mg/kg	3.1
Barium	10	mg/kg	48
Beryllium	2	mg/kg	< 2
Cadmium	0.4	mg/kg	0.6
Chromium	5	mg/kg	50
Cobalt	5	mg/kg	10
Copper	5	mg/kg	15
Lead	5	mg/kg	23
Manganese	5	mg/kg	190
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	28
Vanadium	10	mg/kg	94
Zinc	5	mg/kg	38

Sample History

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - MGT 100A	Melbourne	Aug 23, 2012	14 Day
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * - Method: LM-LTM-ORG2010	Melbourne	Aug 23, 2012	14 Day
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Aug 23, 2012	14 Day
Polychlorinated Biphenyls - Method: USEPA 8082 Polychlorinated Biphenyls	Melbourne	Aug 23, 2012	14 Day
Semivolatile Organics - Method: USEPA 8270 Semivolatile Organics	Melbourne	Aug 23, 2012	14 Day
pH (1:5 Aqueous extract) - Method: APHA 4500 pH by Direct Measurement	Melbourne	Aug 23, 2012	7 Day
% Moisture - Method: Method 102 - ANZECC - % Moisture	Melbourne	Aug 23, 2012	14 Day
Metals M13 - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Aug 23, 2012	28 Day

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

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

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

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

UNITS

mg/kg: milligrams per Kilogram

µg/L: micrograms per litre

ppb: Parts per billion

org/100mL: Organisms per 100 millilitres

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

mg/L: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

TERMS

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

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

QC DATA GENERAL COMMENTS

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample
- Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by GCMS						
1.1-Dichloroethane	mg/kg	< 0.05		0.05	Pass	
1.1-Dichloroethene	mg/kg	< 0.05		0.05	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05		0.05	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05		0.05	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05		0.05	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05		0.05	Pass	
1.2-Dibromoethane	mg/kg	< 0.05		0.05	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05		0.05	Pass	
1.2-Dichloroethane	mg/kg	< 0.05		0.05	Pass	
1.2-Dichloropropane	mg/kg	< 0.05		0.05	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05		0.05	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05		0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05		0.05	Pass	
1.3-Dichloropropane	mg/kg	< 0.05		0.05	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05		0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05		0.05	Pass	
2-Butanone (MEK)	mg/kg	< 0.05		0.05	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05		0.05	Pass	
4-Chlorotoluene	mg/kg	< 0.05		0.05	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05		0.05	Pass	
Allyl chloride	mg/kg	< 0.05		0.05	Pass	
Benzene	mg/kg	< 0.05		0.05	Pass	
Bromobenzene	mg/kg	< 0.05		0.05	Pass	
Bromochloromethane	mg/kg	< 0.05		0.05	Pass	
Bromodichloromethane	mg/kg	< 0.05		0.05	Pass	
Bromoform	mg/kg	< 0.05		0.05	Pass	
Bromomethane	mg/kg	< 0.05		0.05	Pass	
Carbon disulfide	mg/kg	< 0.05		0.05	Pass	
Carbon Tetrachloride	mg/kg	< 0.05		0.05	Pass	
Chlorobenzene	mg/kg	< 0.05		0.05	Pass	
Chloroethane	mg/kg	< 0.05		0.05	Pass	
Chloroform	mg/kg	< 0.05		0.05	Pass	
Chloromethane	mg/kg	< 0.05		0.05	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05		0.05	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.05		0.05	Pass	
Dibromochloromethane	mg/kg	< 0.05		0.05	Pass	
Dibromomethane	mg/kg	< 0.05		0.05	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05		0.05	Pass	
Ethylbenzene	mg/kg	< 0.05		0.05	Pass	
Iodomethane	mg/kg	< 0.05		0.05	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05		0.05	Pass	
Methylene Chloride	mg/kg	< 0.05		0.05	Pass	
o-Xylene	mg/kg	< 0.05		0.05	Pass	
Styrene	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tetrachloroethene	mg/kg	< 0.05			0.05	Pass	
Toluene	mg/kg	< 0.05			0.05	Pass	
Total m+p-Xylenes	mg/kg	< 0.1			0.10	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.05			0.05	Pass	
Trichloroethene	mg/kg	< 0.05			0.05	Pass	
Trichlorofluoromethane	mg/kg	< 0.05			0.05	Pass	
Vinyl chloride	mg/kg	< 0.05			0.05	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 0.15			0.15	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polychlorinated Biphenyls USEPA 8082 Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Semivolatile Organics USEPA 8270 Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.5-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1.0	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
4,4'-DDD	mg/kg	< 0.5			0.5	Pass	
4,4'-DDE	mg/kg	< 0.5			0.5	Pass	
4,4'-DDT	mg/kg	< 0.5			0.5	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
g-BHC (Lindane)	mg/kg	< 0.5		0.5	Pass	
Heptachlor	mg/kg	< 0.5		0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5		0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5		0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5		0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5		0.5	Pass	
Hexachloroethane	mg/kg	< 0.5		0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Methoxychlor	mg/kg	< 0.5		0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5		0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5		0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Nitrobenzene	mg/kg	< 0.5		0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5		0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5		0.5	Pass	
Pentachlorophenol	mg/kg	< 1		1.0	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Phenol	mg/kg	< 0.5		0.5	Pass	
Pronamide	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Trifluralin	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Metals M13 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury						
Arsenic	mg/kg	< 2		2	Pass	
Barium	mg/kg	< 10		10	Pass	
Beryllium	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Cobalt	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Manganese	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.1		0.1	Pass	
Nickel	mg/kg	< 5		5	Pass	
Vanadium	mg/kg	< 10		10	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A						
TRH C6-C9	%	111		70-130	Pass	
TRH C10-C14	%	87		70-130	Pass	
LCS - % Recovery						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by GCMS						
1.1-Dichloroethene	%	116		70-130	Pass	
1.1.1-Trichloroethane	%	88		70-130	Pass	
1.2-Dichloroethane	%	87		70-130	Pass	
Benzene	%	122		70-130	Pass	
Carbon Tetrachloride	%	83		70-130	Pass	
Ethylbenzene	%	85		70-130	Pass	
Toluene	%	92		70-130	Pass	
Total m+p-Xylenes	%	87		70-130	Pass	
Trichloroethene	%	118		70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Xylenes(ortho.meta and para)	%	85	70-130	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010					
TRH C6-C10	%	111	70-130	Pass	
TRH >C10-C16	%	88	70-130	Pass	
LCS - % Recovery					
Polychlorinated Biphenyls USEPA 8082 Polychlorinated Biphenyls					
Aroclor-1260	%	112	70-130	Pass	
LCS - % Recovery					
Semivolatile Organics USEPA 8270 Semivolatile Organics					
1,2,4-Trichlorobenzene	%	93	70-130	Pass	
2-Chlorophenol	%	93	30-130	Pass	
4-Chloro-3-methylphenol	%	88	30-130	Pass	
4-Nitrophenol	%	35	30-130	Pass	
Acenaphthene	%	83	70-130	Pass	
Pentachlorophenol	%	59	30-130	Pass	
Phenol	%	104	30-130	Pass	
Pyrene	%	85	70-130	Pass	
LCS - % Recovery					
Metals M13 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury					
Arsenic	%	92	80-120	Pass	
Barium	%	112	80-120	Pass	
Beryllium	%	111	80-120	Pass	
Cadmium	%	102	80-120	Pass	
Chromium	%	107	80-120	Pass	
Cobalt	%	106	80-120	Pass	
Copper	%	110	80-120	Pass	
Lead	%	106	80-120	Pass	
Manganese	%	109	80-120	Pass	
Mercury	%	96	75-125	Pass	
Nickel	%	106	80-120	Pass	
Vanadium	%	105	80-120	Pass	
Zinc	%	116	80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	M12-Au21456	NCP	%	108	70-130	Pass	
TRH C10-C14	M12-Au18587	NCP	%	89	70-130	Pass	
Spike - % Recovery							
Volatile Organics				Result 1			
1,1-Dichloroethene	M12-Au21456	NCP	%	119	70-130	Pass	
1,1,1-Trichloroethane	M12-Au21456	NCP	%	82	70-130	Pass	
1,2-Dichlorobenzene	M12-Au21456	NCP	%	83	70-130	Pass	
1,2-Dichloroethane	M12-Au21456	NCP	%	83	70-130	Pass	
Benzene	M12-Au21456	NCP	%	119	70-130	Pass	
Carbon Tetrachloride	M12-Au21456	NCP	%	78	70-130	Pass	
Ethylbenzene	M12-Au21456	NCP	%	82	70-130	Pass	
o-Xylene	M12-Au21456	NCP	%	79	70-130	Pass	
Toluene	M12-Au21456	NCP	%	89	70-130	Pass	
Total m+p-Xylenes	M12-Au21456	NCP	%	84	70-130	Pass	
Trichloroethene	M12-Au21456	NCP	%	115	70-130	Pass	
Xylenes(ortho.meta and para)	M12-Au21456	NCP	%	83	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH C6-C10	M12-Au21456	NCP	%	108			70-130	Pass	
TRH >C10-C16	M12-Au18587	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M12-Au17426	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
1,2,4-Trichlorobenzene	M12-Au18620	NCP	%	89			70-130	Pass	
1,4-Dichlorobenzene	M12-Au18620	NCP	%	90			70-130	Pass	
2-Chlorophenol	M12-Au18620	NCP	%	109			30-130	Pass	
2-Methylnaphthalene	M12-Au18620	NCP	%	89			70-130	Pass	
2,4-Dinitrotoluene	M12-Au18620	NCP	%	108			70-130	Pass	
4-Chloro-3-methylphenol	M12-Au18620	NCP	%	83			30-130	Pass	
4-Nitrophenol	M12-Au18620	NCP	%	42			30-130	Pass	
Acenaphthene	M12-Au18620	NCP	%	86			70-130	Pass	
N-Nitrosodipropylamine	M12-Au18620	NCP	%	91			70-130	Pass	
Pentachlorophenol	M12-Au18620	NCP	%	51			30-130	Pass	
Phenol	M12-Au18620	NCP	%	103			30-130	Pass	
Pyrene	M12-Au18620	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Metals M13				Result 1					
Arsenic	M12-Au18279	NCP	%	83			75-125	Pass	
Barium	M12-Au21300	NCP	%	90			75-125	Pass	
Beryllium	M12-Au21300	NCP	%	83			75-125	Pass	
Cadmium	M12-Au21300	NCP	%	83			75-125	Pass	
Chromium	M12-Au21300	NCP	%	75			75-125	Pass	
Cobalt	M12-Au18279	NCP	%	97			75-125	Pass	
Copper	M12-Au21300	NCP	%	95			75-125	Pass	
Lead	M12-Au18279	NCP	%	95			75-125	Pass	
Manganese	M12-Au18279	NCP	%	114			75-125	Pass	
Mercury	M12-Au18276	NCP	%	86			70-130	Pass	
Nickel	M12-Au18279	NCP	%	97			75-125	Pass	
Vanadium	M12-Au21300	NCP	%	76			75-125	Pass	
Zinc	M12-Au21300	NCP	%	94			75-125	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M12-Au17387	NCP	mg/kg	970	1200	22	30%	Pass	
TRH C10-C14	M12-Au18587	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M12-Au18587	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M12-Au18587	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1,1-Dichloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1-Dichloroethene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,1-Trichloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,1,2-Tetrachloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,2-Trichloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,2,2-Tetrachloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dibromoethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dichlorobenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dichloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dichloropropane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2.3-Trichloropropane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4-Trimethylbenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichlorobenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichloropropane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3.5-Trimethylbenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Butanone (MEK)	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Propanone (Acetone)	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Chlorotoluene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Allyl chloride	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromobenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromochloromethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromodichloromethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromoform	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromomethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon disulfide	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon Tetrachloride	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlorobenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroform	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloromethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.2-Dichloroethene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.3-Dichloropropene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromochloromethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromomethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dichlorodifluoromethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Ethylbenzene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Iodomethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Isopropyl benzene (Cumene)	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methylene Chloride	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
o-Xylene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Styrene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Tetrachloroethene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toluene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Total m+p-Xylenes	M12-Au17387	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1.3-Dichloropropene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichloroethene	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichlorofluoromethane	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Vinyl chloride	M12-Au17387	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Xylenes(ortho.meta and para)	M12-Au17387	NCP	mg/kg	< 0.15	< 0.15	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	M12-Au17387	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M12-Au17387	NCP	mg/kg	3500	3900	10	30%	Pass	
TRH >C10-C16	M12-Au18587	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M12-Au18587	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M12-Au18587	NCP	mg/kg	< 100	< 100	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB	M12-Au19978	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4,6-dinitrophenol	M12-Au18620	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2-Dichlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3-Trichlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3,4-Tetrachlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3,5-Tetrachlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,4-Trichlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,4,5-Tetrachlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3-Dichlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3,5-Trichlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,4-Dichlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M12-Au18620	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	M12-Au18620	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,3,4,6-Tetrachlorophenol	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dichlorophenol	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dimethylphenol	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dinitrophenol	M12-Au18620	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2,4-Dinitrotoluene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4,5-Trichlorophenol	M12-Au18620	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2,4,6-Trichlorophenol	M12-Au18620	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2,6-Dichlorophenol	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,6-Dinitrotoluene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M12-Au18620	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3,3'-Dichlorobenzidine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M12-Au18620	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrophenol	M12-Au18620	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
4,4'-DDD	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4,4'-DDE	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4,4'-DDT	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7,12-Dimethylbenz(a)anthracene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Acenaphthene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,j)acridine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	8.0	30%	Pass	
Pentachlorobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Pentachloronitrobenzene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	M12-Au18620	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenol	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	M12-Au18620	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Metals M13				Result 1	Result 2	RPD			
Arsenic	M12-Au21300	NCP	mg/kg	6.8	7.1	4.0	30%	Pass	
Barium	M12-Au21300	NCP	mg/kg	62	67	9.0	30%	Pass	
Beryllium	M12-Au21300	NCP	mg/kg	< 2	< 2	3.0	30%	Pass	
Cadmium	M12-Au21300	NCP	mg/kg	< 0.4	< 0.4	29	30%	Pass	
Chromium	M12-Au21300	NCP	mg/kg	21	23	11	30%	Pass	
Cobalt	M12-Au21300	NCP	mg/kg	5.2	5.7	9.0	30%	Pass	
Copper	M12-Au21300	NCP	mg/kg	12	14	11	30%	Pass	
Lead	M12-Au21300	NCP	mg/kg	23	23	1.0	30%	Pass	
Manganese	M12-Au21300	NCP	mg/kg	200	220	10	30%	Pass	
Mercury	M12-Au18276	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M12-Au21300	NCP	mg/kg	8.8	9.4	7.0	30%	Pass	
Vanadium	M12-Au21300	NCP	mg/kg	34	38	9.0	30%	Pass	
Zinc	M12-Au21300	NCP	mg/kg	30	32	6.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Natalie Krasselt	Client Services
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Mary Makarios	Senior Analyst-Inorganic (VIC)
Stacey Jenkins	Senior Analyst-Organic (VIC)



Glenn Jackson

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Sample Receipt Advice

Company name: **Cardno Lane Piper Pty Ltd**
Contact name: **Maria De Los Reyes**
Client job number: **FISKVILLE 212163.1**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Aug 21, 2012 3:28 PM**
mgt-LabMark reference: **349009**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - All samples have been received as described on the above COC.
 - COC has been completed correctly.
 - Attempt to chill was evident.
 - Appropriately preserved sample containers have been used.
 - All samples were received in good condition.
 - Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - Organic samples had Teflon liners.
 - Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

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

Natalie Krasselt on Phone : (+61) (3) 8564 5000 or by e.mail:
Natalie.Krasselt@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Maria De Los Reyes - maria.delosreyes@lanepiper.com.au.

mgt-LabMark Sample Receipt

Cardno Lane Piper Pty Ltd
 Building 2, 154 Highbury Road
 Burwood
 VIC 3125



Certificate of Analysis

NATA Accredited
 Accreditation Number 1261
 Site Number 1254

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

Attention: Maria De Los Reyes

Report **349009-S**
 Client Reference FISKVILLE 212163.1
 Received Date Aug 21, 2012

Client Sample ID			QC11/1608201 2	QC13/1608201 2
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au19732	M12-Au19733
Date Sampled			Aug 16, 2012	Aug 16, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	58	< 50
TRH C10-36 (Total)	50	mg/kg	58	< 50
Volatile Organics				
1.1-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05
1.1-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05
1.1.1-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05
1.1.1.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05
1.1.2-Trichloroethane	0.05	mg/kg	< 0.05	< 0.05
1.1.2.2-Tetrachloroethane	0.05	mg/kg	< 0.05	< 0.05
1.2-Dibromoethane	0.05	mg/kg	< 0.05	< 0.05
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05
1.2-Dichloroethane	0.05	mg/kg	< 0.05	< 0.05
1.2-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05
1.2.3-Trichloropropane	0.05	mg/kg	< 0.05	< 0.05
1.2.4-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05
1.3-Dichloropropane	0.05	mg/kg	< 0.05	< 0.05
1.3.5-Trimethylbenzene	0.05	mg/kg	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05
2-Butanone (MEK)	0.05	mg/kg	< 0.05	< 0.05
2-Propanone (Acetone)	0.05	mg/kg	< 0.05	< 0.05
4-Chlorotoluene	0.05	mg/kg	< 0.05	< 0.05
4-Methyl-2-pentanone (MIBK)	0.05	mg/kg	< 0.05	< 0.05
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05
Benzene	0.05	mg/kg	< 0.05	< 0.05
Bromobenzene	0.05	mg/kg	< 0.05	< 0.05
Bromochloromethane	0.05	mg/kg	< 0.05	< 0.05
Bromodichloromethane	0.05	mg/kg	< 0.05	< 0.05
Bromoform	0.05	mg/kg	< 0.05	< 0.05
Bromomethane	0.05	mg/kg	< 0.05	< 0.05
Carbon disulfide	0.05	mg/kg	< 0.05	< 0.05
Carbon Tetrachloride	0.05	mg/kg	< 0.05	< 0.05

Client Sample ID			QC11/1608201 2	QC13/1608201 2
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au19732	M12-Au19733
Date Sampled			Aug 16, 2012	Aug 16, 2012
Test/Reference	LOR	Unit		
Chlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Chloroethane	0.05	mg/kg	< 0.05	< 0.05
Chloroform	0.05	mg/kg	< 0.05	< 0.05
Chloromethane	0.05	mg/kg	< 0.05	< 0.05
cis-1.2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05
cis-1.3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05
Dibromochloromethane	0.05	mg/kg	< 0.05	< 0.05
Dibromomethane	0.05	mg/kg	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	mg/kg	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05
Iodomethane	0.05	mg/kg	< 0.05	< 0.05
Isopropyl benzene (Cumene)	0.05	mg/kg	< 0.05	< 0.05
Methylene Chloride	0.05	mg/kg	< 0.05	< 0.05
o-Xylene	0.05	mg/kg	< 0.05	< 0.05
Styrene	0.05	mg/kg	< 0.05	< 0.05
Tetrachloroethene	0.05	mg/kg	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05
Total m+p-Xylenes	0.10	mg/kg	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.05	mg/kg	< 0.05	< 0.05
trans-1.3-Dichloropropene	0.05	mg/kg	< 0.05	< 0.05
Trichloroethene	0.05	mg/kg	< 0.05	< 0.05
Trichlorofluoromethane	0.05	mg/kg	< 0.05	< 0.05
Vinyl chloride	0.05	mg/kg	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.15	mg/kg	< 0.15	< 0.15
Fluorobenzene (surr.)	1	%	74	81
4-Bromofluorobenzene (surr.)	1	%	75	78
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB	0.1	mg/kg	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	138	141
Tetrachloro-m-xylene (surr.)	1	%	132	130
Semivolatile Organics				
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5



Client Sample ID			QC11/1608201 2	QC13/1608201 2
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au19732	M12-Au19733
Date Sampled			Aug 16, 2012	Aug 16, 2012
Test/Reference	LOR	Unit		
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1.0	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1.0	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1.0	mg/kg	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5
4.4'-DDT	0.5	mg/kg	< 0.5	< 0.5
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Acetophenone	0.5	mg/kg	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
b-BHC	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b)fluoranthene	0.5	mg/kg	< 0.5	< 0.5



Client Sample ID			QC11/1608201 2	QC13/1608201 2
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au19732	M12-Au19733
Date Sampled			Aug 16, 2012	Aug 16, 2012
Test/Reference	LOR	Unit		
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,j)acridine	0.5	mg/kg	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachlorophenol	1.0	mg/kg	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			QC11/1608201 2	QC13/1608201 2
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			M12-Au19732	M12-Au19733
Date Sampled			Aug 16, 2012	Aug 16, 2012
Test/Reference	LOR	Unit		
Phenol-d6 (surr.)	1	%	115	85
Nitrobenzene-d5 (surr.)	1	%	101	98
2-Fluorobiphenyl (surr.)	1	%	103	92
2.4.6-Tribromophenol (surr.)	1	%	85	48
pH (1:5 Aqueous extract)				
	0.1	units	6.4	7.3
% Moisture				
	0.1	%	19	28
Heavy Metals				
Arsenic	2	mg/kg	< 2	< 2
Barium	10	mg/kg	14	45
Beryllium	2	mg/kg	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	0.5
Chromium	5	mg/kg	32	53
Cobalt	5	mg/kg	< 5	6.9
Copper	5	mg/kg	5.6	9.9
Lead	5	mg/kg	12	20
Manganese	5	mg/kg	28	93
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	5.7	16
Vanadium	10	mg/kg	61	83
Zinc	5	mg/kg	6.9	30

Sample History

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - MGT 100A	Melbourne	Aug 23, 2012	14 Day
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * - Method: LM-LTM-ORG2010	Melbourne	Aug 23, 2012	14 Day
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Aug 23, 2012	14 Day
Polychlorinated Biphenyls - Method: USEPA 8082 Polychlorinated Biphenyls	Melbourne	Aug 23, 2012	14 Day
Semivolatile Organics - Method: USEPA 8270 Semivolatile Organics	Melbourne	Aug 23, 2012	14 Day
pH (1:5 Aqueous extract) - Method: APHA 4500 pH by Direct Measurement	Melbourne	Aug 23, 2012	7 Day
% Moisture - Method: Method 102 - ANZECC - % Moisture	Melbourne	Aug 23, 2012	14 Day
Metals M13 - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Aug 23, 2012	28 Day

General

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

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

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

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

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

UNITS

mg/kg: milligrams per Kilogram

µg/L: micrograms per litre

ppb: Parts per billion

org/100mL: Organisms per 100 millilitres

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

mg/L: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

TERMS

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

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

QC DATA GENERAL COMMENTS

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample
- Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Method Blank						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by GCMS						
1.1-Dichloroethane	mg/kg	< 0.05		0.05	Pass	
1.1-Dichloroethene	mg/kg	< 0.05		0.05	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.05		0.05	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.05		0.05	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.05		0.05	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.05		0.05	Pass	
1.2-Dibromoethane	mg/kg	< 0.05		0.05	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.05		0.05	Pass	
1.2-Dichloroethane	mg/kg	< 0.05		0.05	Pass	
1.2-Dichloropropane	mg/kg	< 0.05		0.05	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.05		0.05	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.05		0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.05		0.05	Pass	
1.3-Dichloropropane	mg/kg	< 0.05		0.05	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.05		0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.05		0.05	Pass	
2-Butanone (MEK)	mg/kg	< 0.05		0.05	Pass	
2-Propanone (Acetone)	mg/kg	< 0.05		0.05	Pass	
4-Chlorotoluene	mg/kg	< 0.05		0.05	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.05		0.05	Pass	
Allyl chloride	mg/kg	< 0.05		0.05	Pass	
Benzene	mg/kg	< 0.05		0.05	Pass	
Bromobenzene	mg/kg	< 0.05		0.05	Pass	
Bromochloromethane	mg/kg	< 0.05		0.05	Pass	
Bromodichloromethane	mg/kg	< 0.05		0.05	Pass	
Bromoform	mg/kg	< 0.05		0.05	Pass	
Bromomethane	mg/kg	< 0.05		0.05	Pass	
Carbon disulfide	mg/kg	< 0.05		0.05	Pass	
Carbon Tetrachloride	mg/kg	< 0.05		0.05	Pass	
Chlorobenzene	mg/kg	< 0.05		0.05	Pass	
Chloroethane	mg/kg	< 0.05		0.05	Pass	
Chloroform	mg/kg	< 0.05		0.05	Pass	
Chloromethane	mg/kg	< 0.05		0.05	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.05		0.05	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.05		0.05	Pass	
Dibromochloromethane	mg/kg	< 0.05		0.05	Pass	
Dibromomethane	mg/kg	< 0.05		0.05	Pass	
Dichlorodifluoromethane	mg/kg	< 0.05		0.05	Pass	
Ethylbenzene	mg/kg	< 0.05		0.05	Pass	
Iodomethane	mg/kg	< 0.05		0.05	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.05		0.05	Pass	
Methylene Chloride	mg/kg	< 0.05		0.05	Pass	
o-Xylene	mg/kg	< 0.05		0.05	Pass	
Styrene	mg/kg	< 0.05		0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tetrachloroethene	mg/kg	< 0.05			0.05	Pass	
Toluene	mg/kg	< 0.05			0.05	Pass	
Total m+p-Xylenes	mg/kg	< 0.1			0.10	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.05			0.05	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.05			0.05	Pass	
Trichloroethene	mg/kg	< 0.05			0.05	Pass	
Trichlorofluoromethane	mg/kg	< 0.05			0.05	Pass	
Vinyl chloride	mg/kg	< 0.05			0.05	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 0.15			0.15	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polychlorinated Biphenyls USEPA 8082 Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Semivolatile Organics USEPA 8270 Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.5-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1.0	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1.0	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
4,4'-DDD	mg/kg	< 0.5			0.5	Pass	
4,4'-DDE	mg/kg	< 0.5			0.5	Pass	
4,4'-DDT	mg/kg	< 0.5			0.5	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
g-BHC (Lindane)	mg/kg	< 0.5		0.5	Pass	
Heptachlor	mg/kg	< 0.5		0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5		0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5		0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5		0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5		0.5	Pass	
Hexachloroethane	mg/kg	< 0.5		0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5		0.5	Pass	
Methoxychlor	mg/kg	< 0.5		0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5		0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5		0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5		0.5	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
Nitrobenzene	mg/kg	< 0.5		0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5		0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5		0.5	Pass	
Pentachlorophenol	mg/kg	< 1		1.0	Pass	
Phenanthrene	mg/kg	< 0.5		0.5	Pass	
Phenol	mg/kg	< 0.5		0.5	Pass	
Pronamide	mg/kg	< 0.5		0.5	Pass	
Pyrene	mg/kg	< 0.5		0.5	Pass	
Trifluralin	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Metals M13 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury						
Arsenic	mg/kg	< 2		2	Pass	
Barium	mg/kg	< 10		10	Pass	
Beryllium	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Cobalt	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Manganese	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.1		0.1	Pass	
Nickel	mg/kg	< 5		5	Pass	
Vanadium	mg/kg	< 10		10	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions TRH C6-C36 - MGT 100A						
TRH C6-C9	%	101		70-130	Pass	
TRH C10-C14	%	78		70-130	Pass	
LCS - % Recovery						
Volatile Organics USEPA 8260 - MGT 350A Volatile Organics by GCMS						
1.1-Dichloroethene	%	89		70-130	Pass	
1.1.1-Trichloroethane	%	83		70-130	Pass	
1.2-Dichloroethane	%	90		70-130	Pass	
Benzene	%	96		70-130	Pass	
Carbon Tetrachloride	%	75		70-130	Pass	
Ethylbenzene	%	84		70-130	Pass	
Toluene	%	87		70-130	Pass	
Total m+p-Xylenes	%	75		70-130	Pass	
Trichloroethene	%	94		70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Xylenes(ortho.meta and para)	%	77	70-130	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010					
TRH C6-C10	%	99	70-130	Pass	
TRH >C10-C16	%	75	70-130	Pass	
LCS - % Recovery					
Polychlorinated Biphenyls USEPA 8082 Polychlorinated Biphenyls					
Aroclor-1260	%	84	70-130	Pass	
LCS - % Recovery					
Semivolatile Organics USEPA 8270 Semivolatile Organics					
1,2,4-Trichlorobenzene	%	83	70-130	Pass	
2-Chlorophenol	%	88	30-130	Pass	
4-Chloro-3-methylphenol	%	69	30-130	Pass	
4-Nitrophenol	%	48	30-130	Pass	
Acenaphthene	%	75	70-130	Pass	
Pentachlorophenol	%	60	30-130	Pass	
Phenol	%	84	30-130	Pass	
Pyrene	%	86	70-130	Pass	
LCS - % Recovery					
Metals M13 USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury					
Arsenic	%	107	80-120	Pass	
Barium	%	120	80-120	Pass	
Beryllium	%	118	80-120	Pass	
Cadmium	%	109	80-120	Pass	
Chromium	%	115	80-120	Pass	
Cobalt	%	114	80-120	Pass	
Copper	%	115	80-120	Pass	
Lead	%	116	80-120	Pass	
Manganese	%	117	80-120	Pass	
Mercury	%	98	75-125	Pass	
Nickel	%	115	80-120	Pass	
Vanadium	%	113	80-120	Pass	
Zinc	%	114	80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	M12-Au18173	NCP	%	107	70-130	Pass	
TRH C10-C14	M12-Au19711	NCP	%	130	70-130	Pass	
Spike - % Recovery							
Volatile Organics				Result 1			
1,1-Dichloroethene	M12-Au18173	NCP	%	80	70-130	Pass	
1,1,1-Trichloroethane	M12-Au18173	NCP	%	82	70-130	Pass	
1,2-Dichlorobenzene	M12-Au18173	NCP	%	100	70-130	Pass	
1,2-Dichloroethane	M12-Au18173	NCP	%	97	70-130	Pass	
Benzene	M12-Au18173	NCP	%	90	70-130	Pass	
Ethylbenzene	M12-Au18173	NCP	%	94	70-130	Pass	
o-Xylene	M12-Au18173	NCP	%	83	70-130	Pass	
Toluene	M12-Au18173	NCP	%	93	70-130	Pass	
Total m+p-Xylenes	M12-Au18173	NCP	%	86	70-130	Pass	
Trichloroethene	M12-Au18173	NCP	%	90	70-130	Pass	
Xylenes(ortho.meta and para)	M12-Au18173	NCP	%	85	70-130	Pass	
Spike - % Recovery							

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH C6-C10	M12-Au18173	NCP	%	107			70-130	Pass	
TRH >C10-C16	M12-Au19711	NCP	%	126			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M12-Au25639	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Metals M13				Result 1					
Arsenic	M12-Au17399	NCP	%	85			75-125	Pass	
Barium	M12-Au17399	NCP	%	123			75-125	Pass	
Beryllium	M12-Au17399	NCP	%	107			75-125	Pass	
Cadmium	M12-Au17399	NCP	%	105			75-125	Pass	
Chromium	M12-Au22045	NCP	%	100			75-125	Pass	
Cobalt	M12-Au17399	NCP	%	94			75-125	Pass	
Copper	M12-Au22045	NCP	%	119			75-125	Pass	
Lead	M12-Au17399	NCP	%	113			75-125	Pass	
Manganese	M12-Au22045	NCP	%	104			75-125	Pass	
Mercury	M12-Au17399	NCP	%	91			70-130	Pass	
Nickel	M12-Au17399	NCP	%	87			75-125	Pass	
Vanadium	M12-Au17399	NCP	%	102			75-125	Pass	
Zinc	M12-Au22045	NCP	%	125			75-125	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
1,2,4-Trichlorobenzene	M12-Au19733	CP	%	88			70-130	Pass	
1,4-Dichlorobenzene	M12-Au19733	CP	%	70			70-130	Pass	
2-Chlorophenol	M12-Au19733	CP	%	94			30-130	Pass	
2,4-Dinitrotoluene	M12-Au19733	CP	%	78			70-130	Pass	
4-Chloro-3-methylphenol	M12-Au19733	CP	%	46			30-130	Pass	
4-Nitrophenol	M12-Au19733	CP	%	72			30-130	Pass	
Acenaphthene	M12-Au19733	CP	%	92			70-130	Pass	
N-Nitrosodipropylamine	M12-Au19733	CP	%	99			70-130	Pass	
Pentachlorophenol	M12-Au19733	CP	%	73			30-130	Pass	
Phenol	M12-Au19733	CP	%	88			30-130	Pass	
Pyrene	M12-Au19733	CP	%	87			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M12-Au23014	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M12-Au24748	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M12-Au24748	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M12-Au24748	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1,1-Dichloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1-Dichloroethene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,1-Trichloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,1,2-Tetrachloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,2-Trichloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,1,2,2-Tetrachloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dibromoethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dichlorobenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dichloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2-Dichloropropane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2,3-Trichloropropane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1,2,4-Trimethylbenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.3-Dichlorobenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichloropropane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3.5-Trimethylbenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Butanone (MEK)	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
2-Propanone (Acetone)	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Chlorotoluene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Allyl chloride	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromobenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromochloromethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromodichloromethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromoform	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Bromomethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon disulfide	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Carbon Tetrachloride	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlorobenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloroform	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chloromethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.2-Dichloroethene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
cis-1.3-Dichloropropene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromochloromethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dibromomethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dichlorodifluoromethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Ethylbenzene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Iodomethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Isopropyl benzene (Cumene)	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methylene Chloride	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
o-Xylene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Styrene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Tetrachloroethene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toluene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Total m+p-Xylenes	M12-Au23014	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
trans-1.3-Dichloropropene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichloroethene	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Trichlorofluoromethane	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Vinyl chloride	M12-Au23014	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Xylenes(ortho.meta and para)	M12-Au23014	NCP	mg/kg	< 0.15	< 0.15	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	M12-Au23014	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M12-Au23014	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M12-Au24748	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M12-Au24748	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M12-Au24748	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1232	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB	M12-Au21845	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Metals M13				Result 1	Result 2	RPD			
Arsenic	M12-Au22045	NCP	mg/kg	4.4	5.3	18	30%	Pass	
Barium	M12-Au22045	NCP	mg/kg	34	39	13	30%	Pass	
Beryllium	M12-Au22045	NCP	mg/kg	< 2	< 2	6.0	30%	Pass	
Cadmium	M12-Au22045	NCP	mg/kg	< 0.4	< 0.4	5.0	30%	Pass	
Chromium	M12-Au22045	NCP	mg/kg	8.2	9.2	12	30%	Pass	
Cobalt	M12-Au22045	NCP	mg/kg	< 5	< 5	2.0	30%	Pass	
Copper	M12-Au22045	NCP	mg/kg	8.0	7.1	11	30%	Pass	
Lead	M12-Au22045	NCP	mg/kg	13	11	11	30%	Pass	
Manganese	M12-Au22045	NCP	mg/kg	130	110	13	30%	Pass	
Mercury	M12-Au17399	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M12-Au22045	NCP	mg/kg	< 5	< 5	3.0	30%	Pass	
Vanadium	M12-Au22045	NCP	mg/kg	< 10	10	9.0	30%	Pass	
Zinc	M12-Au22045	NCP	mg/kg	34	32	6.0	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4,6-dinitrophenol	M12-Au19733	CP	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2-Dichlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3-Trichlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3,4-Tetrachlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,3,5-Tetrachlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,4-Trichlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,2,4,5-Tetrachlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3-Dichlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,3,5-Trichlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1,4-Dichlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M12-Au19733	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	M12-Au19733	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,3,4,6-Tetrachlorophenol	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dichlorophenol	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dimethylphenol	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dinitrophenol	M12-Au19733	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2,4-Dinitrotoluene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4,5-Trichlorophenol	M12-Au19733	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2,4,6-Trichlorophenol	M12-Au19733	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2,6-Dichlorophenol	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,6-Dinitrotoluene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
3&4-Methylphenol (m&p-Cresol)	M12-Au19733	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3,3'-Dichlorobenzidine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M12-Au19733	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrophenol	M12-Au19733	CP	mg/kg	< 5	< 5	<1	30%	Pass	
4,4'-DDD	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4,4'-DDE	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4,4'-DDT	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7,12-Dimethylbenz(a)anthracene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,j)acridine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Heptachlor epoxide	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	M12-Au19733	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenol	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	M12-Au19733	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Natalie Krasselt	Client Services
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Mary Makarios	Senior Analyst-Inorganic (VIC)
Stacey Jenkins	Senior Analyst-Organic (VIC)



Glenn Jackson

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Appendix E Data Quality Review 4549 Geelong-Ballan Rd, Fiskville, Vic

This appendix validates the analytical data for the Quality Assurance (QA) and Quality Control (QC) documentation. Quality assurance encompasses the actions, procedures, checks and decisions undertaken to ensure sample integrity and representativeness, and the reliability and accuracy of analysis results. The QA documentation should also include an indication of the Data Quality Objectives sought in relation to each significant action, test or process involved in the assessment.

QC activities measure the effectiveness of the QA procedures by undertaking testing, and then comparing results to previously established objectives. QC work will include the internal laboratory testing as well as results of QC samples submitted such as trip blanks and duplicates. The quality of the information and/or data is deemed satisfactory when the QC results demonstrate that agreed objectives have been met.

A summary of the QA QC review is provided in the following table:

QA/QC Aspects	Evidence & Evaluation
QA Documentation	
Project Quality Plan/Work Plan and Data Quality Objectives	<p>Cardno Lane Piper was engaged by Ashurst (“the Client”) in May 2012, to provide specialist advice on the management of chemical contamination issues at the CFA Fiskville Training facility (“the Site”).</p> <p>Cardno Lane Piper prepared work plans during the course of the assessment. A quality control program was implemented during the assessment and the quality assurance procedures have been reiterated in the report. In addition, a health and safety plan was also prepared for the assessment.</p> <p>The Data Quality Objectives were expressed in terms of the purpose of the assessment and the relevant assessment criteria.</p>
Data Representativeness	
Use of Composites	No composite samples were recovered by Cardno Lane Piper.
Holding Times	<p>Soil: Chain of custody and laboratory reports provide evidence of holding times. Holding time exceedances were identified for some VOCs and several SVOCs for the majority of analysed samples recovered from sample locations SB01 to SB28. The exceedances were minor. Samples were preserved in an ice box and laboratory refrigerators prior to extraction, so the exceedance is unlikely to have impacted the analysis results.</p> <p>Additionally, boreholes BH1 to BH10 targeted the fuel storage areas where VOCs and SVOCs were of most concern, and these samples were all within the relevant holding times.</p>
Background samples	No offsite soil samples were collected.
Verification of field procedures	<p>The methodology conducted during the soil investigation were generally in conformance with the work plan and the requirements of the field work standard practice.</p> <p>Appropriate OH&S and site controls were adopted on the site. Non-</p>

QA/QC Aspects	Evidence & Evaluation
	<p>disposable equipment was decontaminated between soil samples recovery with decon 90 and deionised water. A new pair of nitrile rubber gloves was worn for each sample and during equipment cleaning, further reducing the possibility of cross contamination.</p> <p>Samples were stored in glass jars provided by a NATA accredited laboratory, and placed in an ice box during transit.</p>
Data Precision & Accuracy	
QC Testing – Blind Replicates (Primary Lab)	<p style="text-align: center;">Soil</p> <ul style="list-style-type: none"> ● Acceptance Criteria: RPD < 50% ● Soil Samples Analysed: 72 ● Blind Replicate Samples Analysed: 5 ● Blind Replicate Analyte Pairs: 657 ● Number of Analyte Pairs Exceeding Criteria: 6 ● Percentage of Analyte Pairs Exceeding Criteria: 0.91% <p>The RPD exceedances are confined to metals (chromium, copper, nickel and vanadium). The variability between of metals concentrations in QC sample pairs was similar to the variability of metals concentrations across the site, indicating that the elevated RPDs could be due to the varying concentrations in the soils.</p> <p>RPD calculations are presented in Appendix B.</p>
QC Testing – Field Splits (Secondary Lab)	<p style="text-align: center;">Soil</p> <ul style="list-style-type: none"> ● Acceptance Criteria: RPD < 50% ● Soil Samples Analysed: 72 ● Field Split Samples Analysed: 3 ● Field Split Analyte Pairs: 579 ● Number of Analyte Pairs Exceeding Criteria: 9 ● Percentage of Analyte Pairs Exceeding Criteria: 1.55% <p>The RPD exceedances are confined to metals (chromium, cobalt, copper, manganese, nickel vanadium and zinc). As with the blind replicates, results were generally similar to the concentrations recorded across the site, and the elevated RPDs are probably due to the variability in the soil concentrations.</p> <p>RPD calculations are presented in Appendix B.</p>
Trip Blanks	Nine trip blank samples were analysed for TPH (C ₆ – C ₁₀). All results were below the laboratory reporting limit.
Laboratory Internal QC	<p>Evidence of the laboratories internal QC testing is present and complete in laboratory reports. Some QA criteria were exceeded for surrogate samples, matrix spikes, laboratory control samples and laboratory duplicates. The criteria exceedances were typically for metals, VOCs and SVOCs.</p> <p>However, the majority of results were within the laboratories QA criteria and are therefore considered acceptable.</p>
Laboratory Method Detection Limit	Laboratory reports indicate the method detection limits were appropriate and lower than the respective assessment criteria.
NATA endorsement of laboratory reports	MGT - LabMark and ALS Laboratories are both NATA accredited for analyses performed. Laboratory reports were stamped with the NATA

QA/QC Aspects	Evidence & Evaluation
	endorsement stamp and signature.
Calibration of Field Equipment	Equipment used during the soil investigation was calibrated by the supplier prior to use. The equipment calibration certificate are provided in Appendix F.
Decontamination and Equipment Blanks	Five rinsate blanks were collected and analysed for metals, BTEX and TPH. No analytes were detected above the laboratory reporting limit.
Data Comparability	
Standard Procedures	Fieldwork procedures are detailed in the report and were comparable for each phase of assessment.
Qualified Personnel	The staff involved in managing and reviewing the project and those involved in fieldwork are qualified personnel.
Volatile Losses	Samples were preserved and SVOCs were detected in several samples, indicating that volatile losses have not occurred.
Sample Integrity	Field Chain of Custody/Laboratory request forms can be found in the Appendix F of this report.
Data Completeness	
Completeness of test program	The scope of work undertaken was generally consistent with that required to characterise the site as set out in the Work Plan.
Validity of Data Set	<p>Some exceedances of QA criteria were observed in field and laboratory QC samples. However, these exceedances were relatively rare and do not appear to be representative of sampling or analysis errors.</p> <p>There were several holding time exceedances, however these were only minor exceedances, and were not observed at locations that were of most concern for the relevant compounds exceeding holding times. Additionally, the samples were preserved in accordance with the QA plan, reducing the likelihood of impact from increased holding times.</p> <p>The data set used as the basis for the soil assessment is therefore considered valid and complete.</p>

Appendix F

13 Pages

Field Records

Calibration Certificates

Waste Transport Certificates

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EQUIPMENT QUALITY REPORT MiniRae 3000 PID:

The following equipment has been issued as follows:

- Equipment is clean and filters replaced
- Pump, lamp and battery voltage check

Calibration Results			Alarm Settings		Cal Gas Expiry Date
Parameter	Standard	Result			
Fresh Air	0ppm	0 ppm	Hi Alarm	100ppm	
Isobutylene	100ppm*	101 ppm	Lo Alarm	25ppm	AUG 2014
Correction	1.0				

Date: 10/8/12
 Calibrated by: JM

*For quality control purposes HydroTerra can supply gas calibration data

Please check that the following items are received and all items are returned. Please clean equipment before returning. A minimum \$20 service/repair charge applies to any unclean or damaged items.

Item	HT Id/No.	Sent	Returned
MiniRae 3000 PID (plus yellow rubber boot)	194	✓	
Quick guide sheet	N/A	✓	
Manual	N/A	✓	
Inlet probe	N/A	✓	
Spare water trap filter(s) Qty <u>2</u>	N/A	✓	
Charger 240/110V to 12V 500mA	N/A	✓	
Spare alkaline battery compartment with batteries <u>5.7V's</u>	N/A	✓	
Carry case	N/A	✓	
Test and tag requested			

- Equipment voltage
- Pre-delivery Calibration test Complete

Date: 10/8/12
 Checked by: [Signature]

HT JOB NO: 6528 CLIENTS REF: P/O No: 212163.1

RETURN DATE: / / CONDITION ON RETURN: _____
 TIME: _____
 NOTES: _____

HydroTerra



EQUIPMENT QUALITY REPORT

MiniRae 3000 PID:

The following equipment has been issued as follows:

- Equipment is clean and filters replaced
 Pump, lamp and battery voltage check

Calibration Results			Alarm Settings	Cal Gas Expiry Date
Parameter	Standard	Result		
Fresh Air	0ppm	0 ppm	Hi Alarm 100ppm	
Isobutylene	100ppm*	100.1 ppm	Lo Alarm 25ppm	AUG 2014
Correction	1.0			

Date: 10/8/12
 Calibrated by: DM

*For quality control purposes HydroTerra can supply gas calibration data

Please check that the following items are received and all items are returned. Please clean equipment before returning. A minimum \$20 service/repair charge applies to any unclean or damaged items.

Item	HT Id No.	Sent	Returned
MiniRae 3000 PID (plus yellow rubber boot)	280	✓	
Quick guide sheet	N/A	✓	
Manual	N/A	✓	
Inlet probe	N/A	✓	
Spare water trap filter(s) Qty 2	N/A	✓	
Charger 240/110V to 12V 500mA	N/A	✓	
Spare alkaline battery compartment with batteries 5.6 V's	N/A	✓	
Carry case	N/A	✓	
Test and tag requested			

- Equipment voltage
 Pre-delivery Calibration test Complete

Date: 10/8/12

Checked by:

HT JOB NO: 6528

CLIENTS REF: P/O No: 212163.1

RETURN DATE: / /

CONDITION ON RETURN: _____

TIME: _____

NOTES: _____

HydroTerra



EQUIPMENT QUALITY REPORT

MiniRae 3000 PID: **373**

The following equipment has been issued as follows:

Equipment is clean and filters replaced

Pump, lamp and battery voltage check

Calibration Results		Result	Alarm Settings	Cal Gas Expiry Date
Parameter	Standard			
Fresh Air	0ppm	60 ppm	Hi Alarm 100ppm	
Isobutylene	100ppm*	100 ppm	Lo Alarm 25ppm	August 2014
Correction				

Date: 03-09-2013
 Calibrated by: [Signature]

*For quality control purposes HydroTerra can supply gas calibration data

Please check that the following items are received and all items are returned. Please clean equipment before returning. A minimum \$20 service/repair charge applies to any unclean or damaged items.

Item	HT Id No.	Sent	Returned
MiniRae 3000 PID (plus yellow rubber boot)	373	✓	
Quick guide sheet	N/A	✓	
Manual	N/A	✓	
Inlet probe	N/A	✓	
Spare water trap filter(s) Qty <u>2</u>	N/A	✓	
Charger 240/110V to 12V 500mA	N/A	✓	
Spare alkaline battery compartment with batteries <u>56V's</u>	N/A	✓	
Carry case	N/A	✓	
Test and tag requested		—	

Equipment voltage

Pre-delivery Calibration test Complete

Date: 03-09-2012
 Checked by: [Signature]

HT JOB NO: 6646

CLIENTS REF: P/O No: 212163.1

RETURN DATE: / /

CONDITION ON RETURN: _____

TIME: _____

NOTES: _____

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HydroTerra



EQUIPMENT QUALITY REPORT MiniRae 3000 PID:

The following equipment has been issued as follows:

Equipment is clean and filters replaced

Pump, lamp and battery voltage check

Calibration Results			Alarm Settings	Cal Gas Expiry Date
Parameter	Standard	Result		
Fresh Air	0ppm	0 ppm	Hi Alarm 100ppm	
Isobutylene	100ppm*	101 ppm	Lo Alarm 25ppm	AUG 2014
Correction	1.0			

Date: 10/8/12
Calibrated by: JM

*For quality control purposes HydroTerra can supply gas calibration data

Please check that the following items are received and all items are returned. Please clean equipment before returning. A minimum \$20 service/repair charge applies to any unclean or damaged items.

Item	HT Id No.	Sent	Returned
MiniRae 3000 PID (plus yellow rubber boot)	194	✓	
Quick guide sheet	N/A	✓	
Manual	N/A	✓	
Inlet probe	N/A	✓	
Spare water trap filter(s) Qty <u>2</u>	N/A	✓	
Charger 240/110V to 12V 500mA	N/A	✓	
Spare alkaline battery compartment with batteries <u>5.7V's</u>	N/A	✓	
Carry case	N/A	✓	
Test and tag requested			

Equipment voltage

Pre-delivery Calibration test Complete

Date: 10/8/12
Checked by: [Signature]

HT JOB NO: 6528

CLIENTS REF: P/O No: 212163.1

RETURN DATE: / /

CONDITION ON RETURN: _____

TIME:

NOTES: _____



EQUIPMENT QUALITY REPORT

MiniRae 3000 PID: **373**

The following equipment has been issued as follows:

Equipment is clean and filters replaced

Pump, lamp and battery voltage check

Calibration Results			Alarm Settings	Cal Gas Expiry Date
Parameter	Standard	Result		
Fresh Air	0ppm	60 ppm	Hi Alarm 100ppm	August 2014
Isobutylene	100ppm*	100 ppm	Lo Alarm 25ppm	
Correction				

Date: 03-09-2013
 Calibrated by: [Signature]

*For quality control purposes HydroTerra can supply gas calibration data

Please check that the following items are received and all items are returned. Please clean equipment before retuning. A minimum \$20 service/repair charge applies to any unclean or damaged items.

Item	HT ID No.	Sent	Returned
MiniRae 3000 PID (plus yellow rubber boot)	373	✓	
Quick guide sheet	N/A	✓	
Manual	N/A	✓	
Inlet probe	N/A	✓	
Spare water trap filter(s) Qty <u>2</u>	N/A	✓	
Charger 240/110V to 12V 500mA	N/A	✓	
Spare alkaline battery compartment with batteries <u>56V's</u>	N/A	✓	
Carry case	N/A	✓	
Test and tag requested		—	

Equipment voltage

Pre-delivery Calibration test Complete

Date: 03-09-2012

Checked by: [Signature]

HT JOB NO: 6646

CLIENTS REF: P/O No: 212163.1

RETURN DATE: / /

CONDITION ON RETURN: _____

TIME: _____

NOTES: _____



Air-Met Scientific Pty Ltd
1300 137 067

Gas Calibration Certificate

Instrument **MX6**
Serial No. **12041QS-006**
Sensors **OFCH**

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	Oxygen	✓	Low	High	TWA	STEL
	LEL	✓	19.50%	23.50%	N/A	N/A
	CO	✓	5.00%	10.00%	N/A	N/A
	H2S	✓	90ppm	400ppm	30ppm	60ppm
		✓	30ppm	50ppm	10ppm	15ppm
Alarms	Beeper	✓				
	Settings	✓				
Software	Version					
Datalogger	Operation					
Download	Operation					
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.90%	NATA	Fresh Air	20.90%
LEL		50% LEL Methane	NATA	1026ME	50% LEL Methane
CO		96 ppm	NATA	1026ME	96 ppm
H2S		26 ppm	NATA	1026ME	26 ppm

Calibrated by: _____

Gillian Cromie

Calibration date:

31/07/2012

Next calibration due:

27/01/2013

Gas Calibration Certificate



Instrument MX6
Serial No. 12041QS-002
Sensors O₂, LEL, H₂S, CO,

Air-Met Scientific Pty Ltd
 1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation					
	Filter					
	Flow					
	Valves, Diaphragm					
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	H2S	✓	Low	High	TWA	STEL
			30ppm	50ppm	10ppm	15ppm
			19.5%	23.5%	N/A	N/A
			5% LEL	10% LEL	N/A	N/A
			90ppm	400ppm	30ppm	60ppm
Alarms	Beeper	✓				
	Settings	✓				
Software	Version					
Datalogger	Operation					
Download	Operation					
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
H2S		26 ppm	NATA	1026 ME	26 ppm
O2		Fresh Air			20.9%
LEL		50% Methane	NATA	1026 ME	50% Methane
CO		96 ppm	NATA	1026 ME	96 ppm

Calibrated by: _____ **Gillian Cromie**

Calibration date: 13-Aug-12

Next calibration due: 09-Feb-13

CHEMICAL
 Division of DoloMatrix Australia Ltd.
 Please Remit to:
 PO BOX 240,
 ALTONA NORTH,
 VICTORIA .. 3025

Enquiries: NICOLE MAMONE
 83 DOHERTYS RD, LAVERTON NORTH
 VICTORIA .. 3026 .. AUSTRALIA
 Phone: (03) 9369 4222 Fax: (03) 9369 4380
 Mobile:

ACN: 741291340920
 ABN: 741291340920
 WASTE COLLECTION
 DOCKET

SOLD TO: LAUREN RYAN
 CARDNO LANEPIPER
 JOB AT CFA TRAINING GROUND
 4549 GEELONG-BALLAN RD
 FISKVILLE
 VIC 3342

Waste Origin 7829
 CUSTOMER NUMBER 28788
 ORDER NUMBER LAUREN RYAN
 *ORDER DATE Required 12/11/2012
 YOUR ABN

DATE 07/11/2012
 INT. REMIT/NM/282111
 PAGE No. of 1

CLIENT FAX: 0398083511 TEL#: 0398316155 MOB#: 0448485323 03:20:32:PM 07/11/2012 WST RECD INV

CODE	ITEM DESCRIPTION	CLASS	POISON	HATCHER	UN#	PACK	GRF.	RISK	ACTUAL QTY	QUANTITY	UNIT	DISP.	LOCATION	EPA	EPA DKT#	COLLECTED
MANIFEST FOR WASTE DISPOSAL OF THE FOLLOWING PRODUCTS -																
H 79899	COLLECTION FEE-DEPOT TO DEPOT	9			3077	III			1.000	3.000	HOURLY	08FR				
H 29247	CONTAMINATED WASTE	nh			30XY	III			1.000	1.000	200 LT/KG	08LP	2-LFS	N100		
H 61177	CONTAMINATED WATER	9			3077	III			1.000	1.000	200 LT/KG	08SW	2-T19	L150		
H 29513	DRILLING MUD	nh		2X					1.000	1.000	200 LT/KG	08LP	2-LFS	N210		
H 22341	DRUM 200LT CLEAN	na	NA	NA					1.000	1.000	COLLECT	00MT	1-WEST			
H 69189	EPA TRANSPORT CERTIFICATE CHARGE	na	NA	NA					1.000	1.000	EACH	00EP	1			
H 79505	LEVY FUEL	nh							0.875	0.875	LEVY	08FL	NA			
A 22758	ZZ NOTE :-								1.000	1.000	EACH	00EN	2			
* COMBINATION OF 35 DRUMS TO BE COLLECTED - EMPTY & FULL																
This area is for additional Items not Manifested																

##COLLECTION AUTHORISED
 QUALITY AUDIT
 Authorisation: *[Signature]*

ORIGINATOR (NM) DATE 7 / 11 / 12
 OPERATIONS (INIT) DATE 11 / 11 / 12
 TRANSPORT (INIT) DATE 12 / 11 / 12
 TIME IN OUT
 ** ADDITIONAL ITEMS NOT ORIGINALLY MANIFESTED
 WILL ATTRACT EXTRA CHARGES.

##REMIT INSTRUCTIONS:
 SITE CONTACT: LAUREN RYAN
 0448 485 323
 DIRECTORY REF - PAGE 0

ENVIRONMENT PROTECTION AUTHORITY WASTE TRANSPORT CERTIFICATE

956979



**EPA
VICTORIA**
Environmental
Performance Unit
GPO BOX 4395
MELBOURNE 3001

PART A

To be completed by the Producer of the Waste.

1. Name of Waste Producer

 Address of Site of Waste Source

 Postcode
 Name of Emergency Contact
 Phone

2. Proposed Disposal/Treatment/Storage Site
 State

3. Intended Disposal Route – Recycling Landfill Energy Recovery Chem/Phys Treatment
 Storage Incineration Immobilisation Biodegradation Other

4. Description of Waste

5. Waste Code No. (List 1) Hazard Category (List 2) Contaminants (List 3) Waste Origin (List 4)
 U.N. Number Class Packing Group Bulk/No. of Packages
 Amount of Waste kilograms or cubic metres or litres

I declare that to the best of my knowledge and belief the above information is true and correct.

Name and Position
 Signature LAUREN RYAN Date

PART B

To be completed by the Waste Transporter.

6. Name of Transporter
 Address
 Vehicle No. 1 Registration Transport Permit No. Vehicle No. 2 Registration Transport Permit No.

I acknowledge receipt of the waste described in part A.

Name (in block letters)
 Signature Date

PART C

To be completed by the Depot Receiving Waste.

7. Name of Disposal/Treatment/Storage Facility Licence No.
 Address Type of Treatment (List 5)

8. Amount of Waste kilograms or cubic metres or litres

9. Are there any discrepancies between the wastes described above and the waste received?
 YES NO Briefly note discrepancy:

10. Name and address of any other waste receiver to which the waste receiver intends that the waste be transported

11. I hereby acknowledge acceptance of the waste described in part A.
 Name
 Signature..... Date

PLEASE USE BLOCK LETTERS

COPY 1 — TO BE FORWARDED TO EPA WITHIN SEVEN (7) DAYS WITH PART A & B
COMPLETE BY THE PERSON/COMPANY WHO COMPLETED PART A

EPA-F012

ENVIRONMENT PROTECTION AUTHORITY WASTE TRANSPORT CERTIFICATE

956978



**EPA
VICTORIA**
Environmental
Performance Unit
GPO BOX 4395
MELBOURNE 3001

PART A
To be completed by the Producer of the Waste.

1. Name of Waste Producer
 CFA
 Address of Site of Waste Source
 4593A Geelong - Ballan rd
 Name of Emergency Contact
 FISHERIE
 Postcode 3342
 Name of Emergency Contact
 LAUREN RYAN
 Phone 0448485323

2. Proposed Disposal/Treatment/Storage Site
 DISPOSAL
 State
 VIC

3. Intended Disposal Route -
 Recycling Landfill Energy Recovery Chem/Phys Treatment
 Storage Incineration Immobilisation Biodegradation Other

4. Description of Waste
 Groundwater

5. Waste Code No. (List 1) **LL100** Hazard Category (List 2) Contaminants (List 3) Waste Origin (List 4) **7829**
 U.N. Number **30X9** Class **N.H** Packing Group **III** Bulk/No. of Packages **1**
 Amount of Waste kilograms or cubic metres or **200** litres
 I declare that to the best of my knowledge and belief the above information is true and correct.
 Name and Position
 Signature **LAUREN RYAN** Date **12/11/12**

PLEASE USE BLOCK LETTERS

PART B
To be completed by the Waste Transporter.

6. Name of Transporter **CHEMSAL**
 Address **83 DOHERTY'S RD LACERTON VIC**
 Vehicle No. 1 Registration **25Q407** Transport Permit No. **EP 71481** Vehicle No. 2 Registration **EP** Transport Permit No. **EP**
 I acknowledge receipt of the waste described in part A.
 Name (in block letters) **MATTHEW BEZZINA**
 Signature **M. Bezzina** Date **12/11/12**

PART C
To be completed by the Depot Receiving Waste.

7. Name of Disposal/Treatment/Storage Facility
 Address
 Licence No.
 Type of Treatment (List 5)

8. Amount of Waste kilograms or cubic metres or litres

9. Are there any discrepancies between the wastes described above and the waste received?
 YES NO Briefly note discrepancy:

10. Name and address of any other waste receiver to which the waste receiver intends that the waste be transported

11. I hereby acknowledge acceptance of the waste described in part A.
 Name
 Signature
 Date

COPY 1 - TO BE FORWARDED TO EPA WITHIN SEVEN (7) DAYS WITH PART A & B
COMPLETE BY THE PERSON/COMPANY WHO COMPLETED PART A

ENVIRONMENT PROTECTION AUTHORITY WASTE TRANSPORT CERTIFICATE

956977



**EPA
VICTORIA**
Environmental
Performance Unit
GPO BOX 4395
MELBOURNE 3001

PART A

To be completed by the Producer of the Waste.

1. Name of Waste Producer

 Address of Site of Waste Source

 Postcode
 Name of Emergency Contact
 Phone

2. Proposed Disposal/Treatment/Storage Site State

3. Intended Disposal Route – Recycling Landfill Energy Recovery Chem/Phys Treatment
 Storage Incineration Immobilisation Biodegradation Other

4. Description of Waste

5. Waste Code No. (List 1) Hazard Category (List 2) Contaminants (List 3) Waste Origin (List 4)
 U.N. Number Class Packing Group Bulk/No. of Packages
 Amount of Waste kilograms or cubic metres or litres

I declare that to the best of my knowledge and belief the above information is true and correct.
 Name and Position
 Signature LAUREN RYAN Date

PART B

To be completed by the Waste Transporter.

6. Name of Transporter
 Address
 Vehicle No. 1 Registration Transport Permit No. Vehicle No. 2 Registration Transport Permit No.
 I acknowledge receipt of the waste described in part A.
 Name (in block letters)
 Signature Date

PART C

To be completed by the Depot Receiving Waste.

7. Name of Disposal/Treatment/Storage Facility Licence No.
 Address Type of Treatment (List 5)

8. Amount of Waste kilograms or cubic metres or litres

9. Are there any discrepancies between the wastes described above and the waste received?
 YES NO Briefly note discrepancy:

10. Name and address of any other waste receiver to which the waste receiver intends that the waste be transported

11. I hereby acknowledge acceptance of the waste described in part A.
 Name
 Signature Date

PLEASE USE BLOCK LETTERS

COPY 1 – TO BE FORWARDED TO EPA WITHIN SEVEN (7) DAYS WITH PART A & B
COMPLETE BY THE PERSON/COMPANY WHO COMPLETED PART A

EPA-F012

ENVIRONMENT PROTECTION AUTHORITY WASTE TRANSPORT CERTIFICATE

949368



**EPA
VICTORIA**
Environmental
Performance Unit
GPO BOX 4395
MELBOURNE 3001

PART A

To be completed by the Producer of the Waste.

1. Name of Waste Producer
CARDINO, LAR-PIPER C/9, CFA
 Address of Site of Waste Source
4549 GERZANG, BALM RD, FISKVILLE
VIC Postcode 3347
 Name of Emergency Contact
BRATCHEL SITG Phone 0398880100

2. Proposed Disposal/Treatment/Storage Site
CHESSA State VIC

3. Intended Disposal Route - Recycling Landfill Energy Recovery Chem/Phys Treatment
 Storage Incineration Immobilisation Biodegradation Other

4. Description of Waste
DRILLING MUD

5. Waste Code No. (List 1) S 12.10 Hazard Category (List 2) Contaminants (List 3) Waste Origin (List 4) 7839
 U.N. Number 3077 Class 9 Packing Group III Bulk/No. of Packages 18
 Amount of Waste 4600 kilograms or cubic metres or litres
 I declare that to the best of my knowledge and belief the above information is true and correct.
 Name and Position MARCUS BOND - ENV. ENG.
 Signature [Signature] Date 20/09/12

PLEASE USE BLOCK LETTERS

PART B

To be completed by the Waste Transporter.

6. Name of Transporter CHESSA
 Address 83, DOHERTY RD, LAKE MURLEIGHA
 Vehicle No. 1 Registration W 69774 Transport Permit No. EP 65074 Vehicle No. 2 Registration Transport Permit No. EP
 I acknowledge receipt of the waste described in part A.
 Name (in block letters) KERRY WAIF
 Signature [Signature] Date 20/09/12

COPY 2 - TO BE RETAINED BY THE PERSON/COMPANY WHO COMPLETED PART A

PART C

To be completed by the Depot Receiving Waste.

7. Name of Disposal/Treatment/Storage Facility
 Address
 Licence No.
 Type of Treatment (List 5)

8. Amount of Waste
 kilograms or cubic metres or litres

9. Are there any discrepancies between the wastes described above and the waste received?
 YES NO Briefly note discrepancy:

10. Name and address of any other waste receiver to which the waste receiver intends that the waste be transported

11. I hereby acknowledge acceptance of the waste described in part A.
 Name
 Signature..... Date

EPA-F012

Appendix G

9 Pages

Title Information

Basic Property Report

Planning Property Report

Certificate of Title

Title Plan

Property Report

from www.land.vic.gov.au on 10 July 2012 01:55 PM

Address: 4549 GEELONG-BALLAN ROAD FISKVILLE 3342

Lot and Plan Number: This site has 4 parcels. See table below.

Standard Parcel Identifier (SPI): See table below.

Local Government (Council): MOORABOOL **Council Property Number:** 124720

Directory Reference: VicRoads 77 E4

This property is in a designated bushfire prone area. Special bushfire construction requirements apply.

Further information about the building control system and building in bushfire prone areas can be found on the Building Commission website www.buildingcommission.com.au

Parcel Details

Lot/Plan or Crown Description	SPI
Lot 1 TP845669	1\TP845669
Lot 2 TP845669	2\TP845669
Lot 3 TP845669	3\TP845669
Lot 4 TP845669	4\TP845669

State Electorates

Legislative Council: WESTERN VICTORIA (2005)

Legislative Assembly: BALLARAT EAST (2001)

Utilities

Regional Urban Water Business: Central Highlands Water

Rural Water Business: Southern Rural Water

Melbourne Water: inside drainage boundary

Power Distributor: POWERCOR (Information about [choosing an electricity retailer](#))

Planning Zone Summary

Planning Zone: FARMING ZONE (FZ)
SCHEDULE TO THE FARMING ZONE

Planning Overlays: DESIGN AND DEVELOPMENT OVERLAY (DDO)
DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 2 (DDO2)
ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)
ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 1 (ESO1)

Heritage Register: VHR H2277 - AUSTRALIAN BEAM WIRELESS TRANSMITTING STATION

Planning scheme data last updated on 6 July 2012.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the [local council](#) or by visiting [Planning Schemes Online](#)

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987. It does not include information about exhibited planning scheme amendments, or zonings that may affect the land. To obtain a Planning Certificate go to [Titles and Property Certificates](#)

For details of surrounding properties, use this service to get the Reports for properties of interest

To view planning zones, overlay and heritage information in an interactive format visit [Planning Maps Online](#)

For other information about planning in Victoria visit www.dpcd.vic.gov.au/planning

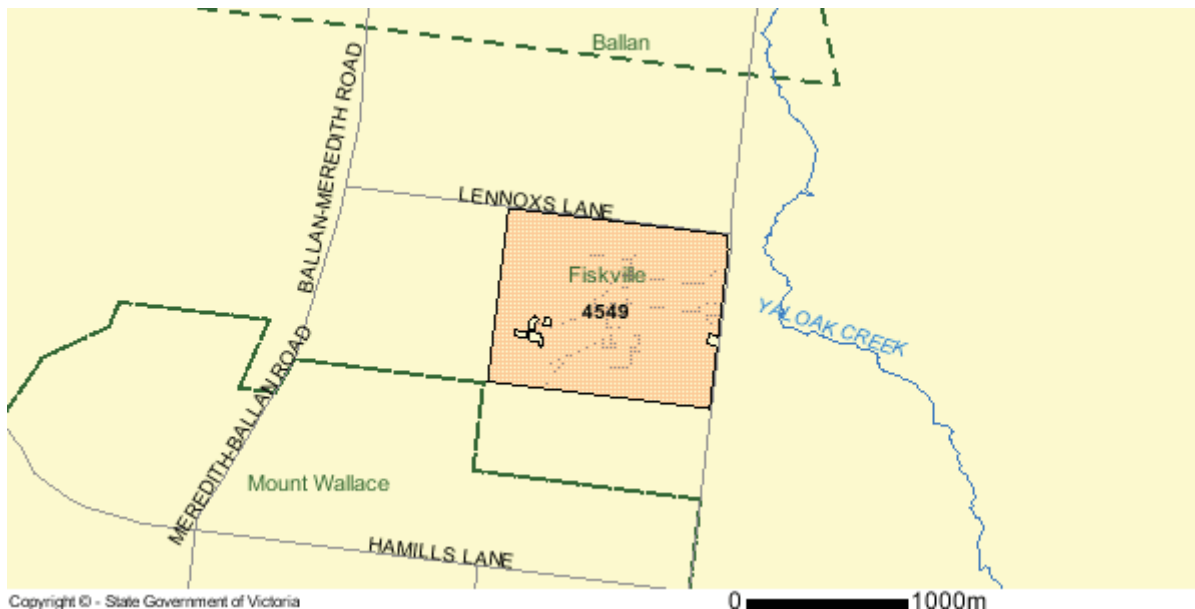
Heritage Register data last updated on 29 June 2012.

This report is NOT a **Heritage Certificate** issued pursuant to Section 50 of the Heritage Act 1995. It does not show places which may be under consideration for inclusion in the Victorian Heritage Register.

For more information on the **Victorian Heritage Register** go to [Victorian Heritage Database](#)

Other information about the heritage status of this property, how to obtain a Heritage Certificate, and any heritage approvals that may be required, may be obtained from [Heritage Victoria](#)

Area Map



Planning Property Report

From www.dpcd.vic.gov.au/planning on 16 November 2012 03:16 PM

Address: 4549 GEELONG-BALLAN ROAD FISKVILLE 3342

Lot and Plan Number: Lot 1 TP845669

This property has a total of 4 parcels.

For full parcel details get the free Basic Property report at [Property Reports](#)

Local Government (Council): MOORABOOL **Council Property Number:** 124720

Directory Reference: VicRoads 77 E4

Planning Zone

[FARMING ZONE \(FZ\)](#)

[SCHEDULE TO THE FARMING ZONE](#)



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Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

Zones Legend

ACZ - Activity Centre	IN1Z - Industrial 1	R1Z - Residential 1
B1Z - Business 1	IN2Z - Industrial 2	R2Z - Residential 2
B2Z - Business 2	IN3Z - Industrial 3	R3Z - Residential 3
B3Z - Business 3	LDRZ - Low Density Residential	RAZ - Rural Activity
B4Z - Business 4	MUZ - Mixed Use	RCZ - Rural Conservation
B5Z - Business 5	PCRZ - Public Conservation & Resource	RDZ1 - Road - Category 1
CA - Commonwealth Land	PDZ - Priority Development	RDZ2 - Road - Category 2
CCZ - Capital City	PPRZ - Public Park & Recreation	RLZ - Rural Living
CDZ - Comprehensive Development	PUZ1 - Public Use - Service & Utility	RUZ - Rural
DZ - Dockland	PUZ2 - Public Use - Education	SUZ - Special Use
ERZ - Environmental Rural	PUZ3 - Public Use - Health Community	TZ - Township
FZ - Farming	PUZ4 - Public Use - Transport	UFZ - Urban Floodway
GWAZ - Green Wedge A	PUZ5 - Public Use - Cemetery/Crematorium	UGZ - Urban Growth
GWZ - Green Wedge	PUZ6 - Public Use - Local Government	Urban Growth Boundary
	PUZ7 - Public Use - Other Public Use	

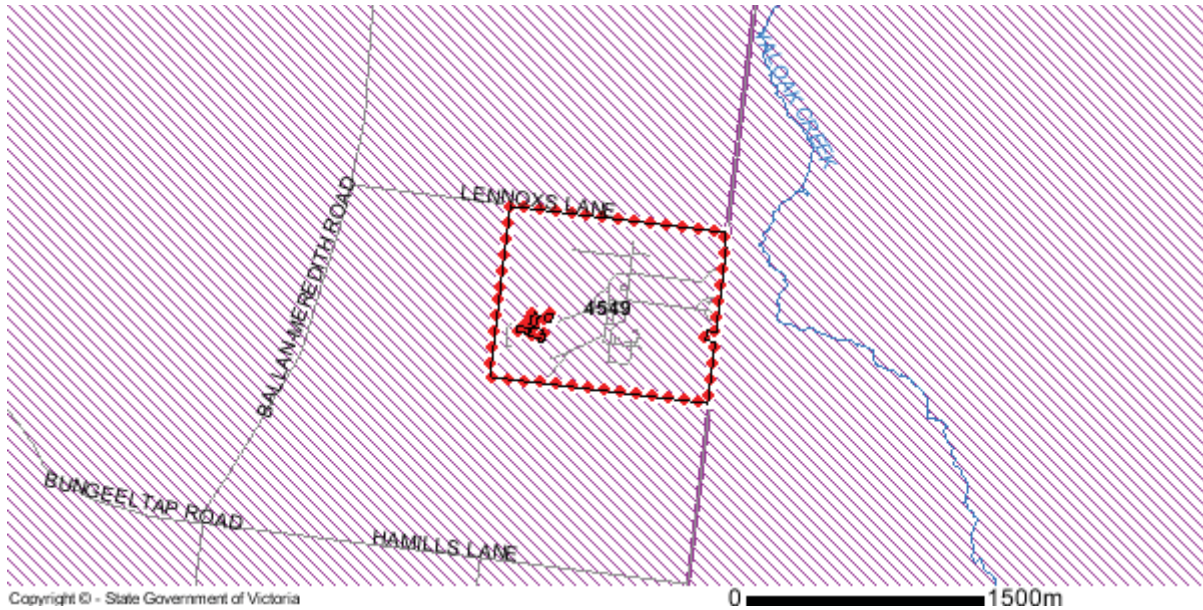
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Planning Overlays

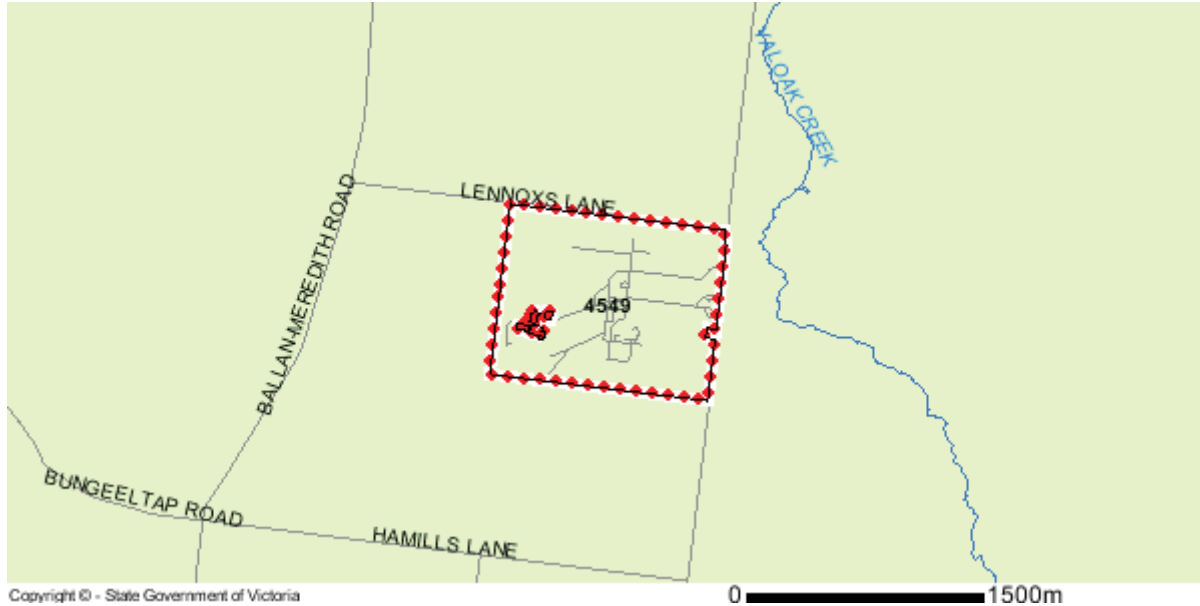
DESIGN AND DEVELOPMENT OVERLAY (DDO)

DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 2 (DDO2)



ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)

ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 1 (ESO1)




























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Planning Overlays Legend

Overlays Legend

 Airport Environs	 Erosion Management	 Public Acquisition
 City Link Project	 Environmental Significance	 Restructure
 Development Contributions Plan	 Floodway	 Road Closure
 Design & Development	 Heritage	 Special Building
 Design & Development Part	 Incorporated Plan	 Significant Landscape
 Development Plan	 Land Subject to Inundation & Floodway	 Salinity Management
 Environmental Audit	 Melbourne Airport Environs 1	 State Resource
	 Melbourne Airport Environs 2	 Vegetation Protection
	 Neighbourhood Character	 Bushfire Management - Wildfire Management

Note: due to overlaps some colours on the maps may not match those in the legend.

Heritage Register

This property is affected by an entry on the Victorian Heritage Register.

View information about [VHR Number H2277](#) - AUSTRALIAN BEAM WIRELESS TRANSMITTING STATION

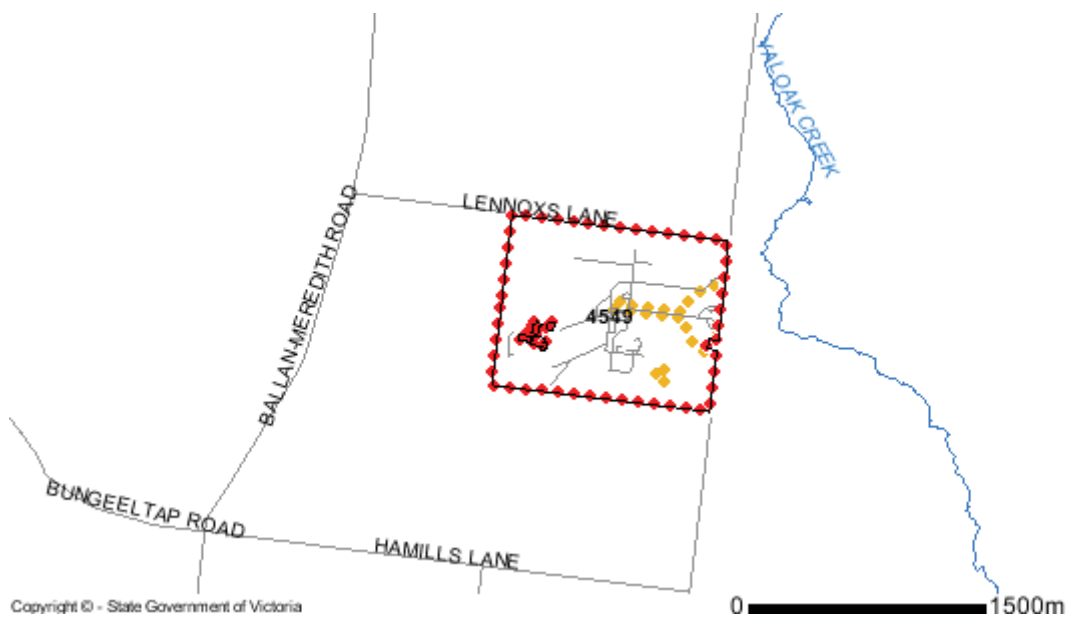
Heritage Register data last updated on 15 November 2012.

This report is NOT a **Heritage Certificate** issued pursuant to Section 50 of the Heritage Act 1995.

It does not show places which may be under consideration for inclusion in the Victorian Heritage Register.

For more information on the **Victorian Heritage Register** go to [Victorian Heritage Database](#)

Other information about the heritage status of this property, how to obtain a Heritage Certificate, and any heritage approvals that may be required, may be obtained from [Heritage Victoria](#)



Heritage Legend



Heritage Register



Selected Land

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Further Planning Information

Planning scheme data last updated on 15 November 2012.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting [Planning Schemes Online](#)

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987. It does not include information about exhibited planning scheme amendments, or zonings that may affect the land. To obtain a Planning Certificate go to [Titles and Property Certificates](#)

For details of surrounding properties, use this service to get the Reports for properties of interest

To view planning zones, overlay and heritage information in an interactive format visit [Planning Maps Online](#)

For other information about planning in Victoria visit www.dpcd.vic.gov.au/planning

VOLUME 09503 FOLIO 693

Security no : 124042757743V
Produced 09/08/2012 12:55 pm

LAND DESCRIPTION

Lots 1,2,3 and 4 on Title Plan 845669K (formerly known as part of Crown Allotment 2 Section 16, Crown Allotments 3 and 8 Section 16, part of Crown Allotment 9 Section 16 Parish of Yaloak).
PARENT TITLE Volume 03538 Folio 516
Created by instrument K206778 21/12/1982

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
COUNTRY FIRE AUTHORITY
K206778 21/12/1982

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP845669K FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

DOCUMENT END

Imaged Document Cover Sheet

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Document Type	plan
Document Identification	TP845669K
Number of Pages (excluding this cover sheet)	1
Document Assembled	09/08/2012 13:00

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Appendix H

22 Pages

Criteria for Petroleum Hydrocarbons, PFC and Dioxins

APPENDIX H – CRITERIA FOR PETROLEUM HYDROCARBONS, PFC AND DIOXINS.

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APPENDIX H

CRITERIA FOR PETROLEUM HYDROCARBONS, PFC AND DIOXINS.

1 INTRODUCTION

Criteria suitable for screening risks relevant to human health and ecological impacts are not currently available from Australian authorities for large number of chemical compounds. This includes many of the compounds included in the analytical suite as part of Cardno Lane Piper's (CLP) investigation at Fiskville Training College ('the Site'). This appendix provides a summary and justification of the criteria selected for certain compounds for which there is no local guidance. Compounds considered in this appendix are those potentially related to hot fire training activities; i.e. dioxins, petroleum hydrocarbons and perfluorinated compounds (PFC).

This appendix provides a summary of the following:

- Considerations in selecting human health screening criteria (Section 2).
- Considerations in selecting ecological screening criteria (Section 3).
- A summary of adopted criteria for dioxins, petroleum hydrocarbons and PFC is provided in Sections 4 to 6. Note that a limited review of available ecological criteria for PFC available from overseas agencies is also provided.

Criteria adopted for water (Table 1-1) and soil (Table 1-2) that are relevant to commercial/industrial land use and fine grained soil are provided below. For other land uses (agriculture) and soil types (coarse grained soil), the relevant sections for the specific compounds should be consulted in order to select appropriate criteria. Exceedance of these criteria does not necessarily indicate a potential risk, but should be a trigger for more detailed investigation.

Table 1-1: Adopted Criteria for Water (µg/L).

Compound	EIL Water	Source (EIL)	Human Health Drinking Water	Source (Human Health)
Dioxins	No value	-	7.9x10 ⁻⁶ or 7.9 pg/L	Derived in house
Benzene	300	NEPC (1999)	1	NHMRC (2011)
Toluene	300	NEPC (1999)	800	NHMRC (2011)
Xylene	No value	NEPC (1999)	600	NHMRC (2011)
Ethyl Benzene	90	CCME (1999c)	300	NHMRC (2011)
F1 (C ₆ to C ₁₀)	No value	-	15,000	WHO (2008)
F2 (C _{>10} to C ₁₆)	No value	-	90	WHO (2008)
F3 (C _{>16} to C ₃₄)	No value	-	90	WHO (2008)
F4 (C _{>34} to C ₄₀)	No value	-	No value	-
PFOS	5.1	Geisy (2009)	0.2	US EPA (2009a)
PFOA	1,700	MPCA (2007a)	0.4	US EPA (2009a)
6:2 FTS	5.1	Adopted PFOS	0.2	Adopted PFOS

Table 1-2: Adopted Criteria for Soils (mg/kg).

Compound	EIL Soil (Sediment)	Human Health Direct Contact	Sources
Dioxins	0.85x10 ⁻⁶ or 0.85ng/kg	4x10 ⁻⁶ or 4ng/kg	CCME (2001 & 2002)
Benzene	310	11	CCME (2004a)
Toluene	330	82,000	CCME (2004b)
Xylene	230	560,000	CCME (2004c)
Ethyl Benzene	430	36,000	CCME (2004d)
F1 (C ₆ to C ₁₀)	217	-	Warne (10010)
	-	19,000	CCME 2008
F2 (C _{>10} to C ₁₆)	172	-	Warne (2010)
	-	10,000	CCME 2008
F3 (C _{>16} to C ₃₄)	2500	-	CCME 2008
	-	28,000	NEPC (1999)
F4 (C _{>34} to C ₄₀)	6600	-	CCME 2008
	-	Res	NEPC (1999)
PFOS	0.37 (0.067)	-	EA 2004
	-	6	US EPA (2009b)
PFOA	-	16	US EPA (2009b)
6:2 FTS	0.37 (0.067)	6	Adopted from PFOS values

EILs for sediments are provided in brackets for PFOS and 6:2FTS.

2 ASSUMPTIONS - HUMAN HEALTH SCREENING CRITERIA

The screening criteria adopted for dioxins, petroleum hydrocarbons and PFC in investigations at the Site are based on the following assumptions:

- **Land Use:** Criteria for human health are based on land use at the Site being commercial/industrial. Where agricultural use is relevant, the section for the relevant compound (below) should be consulted in order to select appropriate criteria.
- **Soil Type:** The predominant soil type on-site is silty clay. However, there are areas on-site which include coarse-grained soils (e.g. around Dams 1 and 2). Criteria for fine-grained soils are provided in the summary in Section 1. Where coarse-grained soils are identified, the section for the relevant compound (below) should be consulted in order to select appropriate criteria.

The following provides a summary of the approach adopted for screening criteria in the assessment of human health impacts:

- **Water:** Drinking water guidelines are generally adopted as conservative criteria for an initial screen of human health impacts from surface waters.
- **Soils:** The criteria considered are based on direct contact with soil¹. Criteria relevant to soil vapour are not considered here for volatile fractions of petroleum hydrocarbons (F1 and F2). For the soil-vapour criteria please refer to CRC (2011).
- **Sediments:** In general, soil quality guidelines are adopted as criteria for sediment where no suitable criteria are available.

¹ Direct contact with soil refers to ingestion of soils and/or dermal contact with soils

3 CONSIDERATIONS FOR SELECTING ECOLOGICAL SCREENING CRITERIA

The selection of suitable ecological screening criteria is dependent on a number of factors including consideration of the management goal (e.g. protection of aquatic ecosystems), the type of water body and the ecotoxicological information considered in their derivation and an appropriate level of protection to be afforded. In order to ensure appropriate consideration was given to selecting an appropriate criterion from overseas agencies this review was conducted in accordance with the following steps as outlined in ANZECC (2000):

- **Define the Management Aims:** This requires knowledge of an ecosystem, potential impacts to the ecosystem and an understanding of the approach used to select (and/or derive) appropriate criteria for use in Australia based on Australian and New Zealand Water Quality Guidelines (ANZECC 2000). Criteria are used in Australia based on an appropriate level of protection afforded an aquatic ecosystem, i.e. selecting a percentage of species in an ecosystem that require protection. The steps used in the process are as follows:
 1. Describe the water body to be protected.
 2. Determine Environmental values to be protected.
 3. Determine the level of protection.
 4. Identify environmental concerns.
 5. Determine major natural and anthropogenic factors affecting the ecosystem:
 6. Determine management goals:
- **Determine appropriate screening criteria or trigger values:** A review of available criteria is provided.

The six steps required for defining the management aims of downstream waterways are discussed below.

3.1 Describe the water body to be protected

The surface water bodies considered are Lake Fiskville (located on the Site) and waterways downstream of the Site, which have previously been described (Cardno, 2014). A summary of these water bodies and the degree of modification is outlined below:

- **Lake Fiskville:** The Lake is a man-made feature created by damming the Beremboke Creek, before CFA occupied the Site. It is occasionally used by CFA as an emergency water source (perhaps once annually in drought). The lake is a highly modified ecosystem which now supports extensive growth of macrophytes (including emergent rushes and submerged/floating plants) and numerous water birds including black swans, cormorants, moorhens and black ducks. The lake also supports a population of introduced fish (redfin, mosquitofish) as well as eels and yabbies.
- **The Beremboke Creek:** A small, shallow, stream which leaves the Site at its southern boundary and runs through pasture on adjacent land. Dams are also located along or adjacent to the creek downstream of the Site. These dams are believed to be used for stock water. Limited flora is evident in this section of the creek. The creek is considered a highly modified and ephemeral water body.
- **The former marsh swamp area:** The swamp (which starts approximately 6km downstream of the Site and extends to 9.5km from the Site) has been drained for agricultural use and

currently includes at least one drainage channel. The swamp is also considered a highly modified ecosystem.

- *The Eclipse Creek*: This creek is the continuation of Beremboke Creek, downstream of the swamp. The creek runs through pasture and is also considered highly modified and ephemeral. A shallow water hole near the site of inspection was observed to be choked with emergent rushes.
- *The Moorabool River*: Eclipse Creek flows into the Moorabool River approximately 20 km downstream of Lake Fiskville. The river has extensive riparian habitat with minimal disturbance which supports native flora and fauna including various fish species. However, there are various barriers that prevent fish movement. Environmental releases from Lal Lal Reservoir were made to improve salinity, conductivity, and reduce impact on fish by allowing improved movement between ponds (CCMA 2009). Releases were considered necessary as an assessment of in-stream river health rated the river as being in poor to very poor condition due to competing demands which “*has led to severe alteration of the river’s natural flow regime*”. Competing demands include; impact from farm dams, extraction of groundwater and possibly climate change (CCMA 2009). The Moorabool River is considered moderately modified.

Note that the Beremboke Creek, the Swamp drainage channel and the Eclipse Creek are ephemeral in nature. The Moorabool River is considered ephemeral in in some years with extreme seasonal fluctuations.

3.2 Identify Environmental values to be protected

Relevant ecological receptors to be considered include biota supporting ecological processes (e.g. microorganisms), wildlife (e.g. piscatorial birds) and flora (native and introduced).

Lake Fiskville and the Moorabool River both support fauna and flora. Hence, ecological considerations include potentially undesirable impacts to aquatic life and secondary exposures² to wildlife (birds, mammals). The ephemeral nature of the Beremboke Creek, a drainage channel and Eclipse Creek suggests there is limited opportunity for ecological receptors to be present in this ecosystem.

3.3 Determine the level of protection

The ANZECC (2000) guidelines outline three different levels of protection depending on the state of the ecosystem. The levels of protection for the different surface water bodies are as follows:

- *Pristine and/or high conservation value ecosystems*: These ecosystems are afforded **99%** protection in Australian aquatic ecosystems. Surface water bodies downstream of the Site do not fit this description.
- *Slightly to moderately disturbed ecosystems*: The level of protection afforded these ecosystems is **95%**. The Moorabool River is considered to be moderately modified. Should water flows in the River increase above levels in 2008 and the impacts from farming reduce, then the river may return to a slightly modified state. Other barriers preventing this River from being considered pristine include barriers that prevent fish movement.
- *Highly disturbed ecosystems*: The default level of protection for these ecosystems is **90% or 80%** depending on state jurisdiction. Choosing a higher level of protection (e.g. 95%) might be applied in circumstances when an aim is to improve quality of water in the system

² Secondary exposures refer to exposure pathways where the receiving organism is not directly exposed to a contaminant in water or soil, e.g. animals higher in the food chain which eat smaller animals.

(ANZECC 2000). Lake Fiskville, the Beremboke Creek, the drainage channel and the Eclipse Creek are considered to be highly modified surface water bodies. Flora and Fauna are abundant around Lake Fiskville, limited in the creeks and assumed to be limited in the drainage channel.

Note that the level of protection refers to the percentage of species that should be protected by a selected screening criterion. As an example, a protection level of 95% is meant to protect 95% of all aquatic species in a surface water body. For highly disturbed ecosystems a higher level of protection is ideal where the long-term aim is to improve water quality, particularly where a management goal is that there is no change in biodiversity in the impacted ecosystem. For highly disturbed ecosystems this means that “*the same guidelines as for slight-moderate disturbed systems*” might be applied (ANZECC 2000).

3.4 Identify environmental concerns

PFCs and petroleum hydrocarbons have been identified in Lake Fiskville and creeks downstream of the site as a result of on-site activities, i.e. hot-fire training. Petroleum hydrocarbons have widespread use. The use of PFCs is becoming increasingly widespread, as is the presence of PFCs in the environment. PFCs are used in various consumer products including carpets, pots, pans, paper, etc.). Dioxins are also considered here as they may be present as a result of the combustion that occurs during hot-fire training.

PFCs are fluorosurfactants that have been identified as compounds of environmental concern as they have been detected in water and sediment of various water bodies including Lake Fiskville and in the downstream. Some PFCs have also been identified in samples from fish, crustaceans, and aquatic plants. The PFCs of most interest are Perfluorooctane Sulfonic Acid (PFOS), Perfluorooctane Carboxylic Acid (PFOA) and 6:2 Fluorotelomer Sulphonic Acid (6:2 FTS). There is the potential for PFC to bioaccumulate in the environment. Therefore, in some cases it may be considered necessary to increase the level of protection (e.g. 98% instead of 95% and 85% instead of 80%).

3.5 Major natural and anthropogenic factors affecting the ecosystem

PFCs and petroleum hydrocarbons have been identified in Lake Fiskville and creeks downstream of the Site associated with on-site activities, i.e. hot-fire training. Dioxins are also considered as a result of combustion that occurs during training. PFCs in particular are becoming more widespread in the environment as a result of their use in various consumer products (carpets, pots, pan, paper, etc.).

3.6 Determine management goals

The primary management goal is the protection of aquatic ecosystems downstream of the Site. Consideration is also given to the protection of wildlife dependent on these ecosystems such as water birds (secondary exposures) and primary industries (mammals, stock drinking water). Therefore, consideration is given to identify criteria that protect the following:

- Aquatic Ecosystems (including water and sediment)
- Mammalian Species and Birds
- Biota and organisms (in the soil compartment)

3.7 Determine Appropriate Screening Criteria or Trigger Values

Criteria for dioxins and petroleum hydrocarbons are mainly adopted from Australian guidance (limited) or Canada, specifically from Canadian Council of Ministers of the Environment (CCME). Limited guidance is available for criteria for PFC. Therefore, screening criteria for PFC are adopted with consideration given to:

- How these sorts of criteria are derived in Australia (Section 3.8)
- The criteria adopted for protection of management goals (Section 6)
- The relevant criteria identified in available literature (Section 6).

3.8 Summary of How Ecological Criteria are Derived in Australia

This section provides a short summary of how criteria should be applied/derived in Australia. ANZECC (2000) should be consulted for a detailed description. Three grades of criteria are outlined by ANZECC (2000) that are defined by the amount of ecotoxicological data available and hence the level of confidence that can be afforded them. They are classified as either high, moderate or low reliability criteria and are broadly summarised as follows:

- *High reliability criteria:* A statistical distribution approach is used based on chronic data from multiple species.
- *Moderate reliability criteria:* Similar to approach for the high reliability criteria above except that acute toxicity data is used in statistical distribution and then converted to a chronic value.
- *Low reliability criteria:* An assessment factor (AF) approach is utilised. These criteria are screening in nature and should be as interim values, due to uncertainties in their derivation. According to ANZECC (2000), "*there is no reliable way to predict what changes in ecosystem protection are provided by an arbitrary reduction in the factor*".

The majority of ecological criteria identified in the following sections have been derived using one of the approaches outlined above.

4 DIOXINS

Criteria for dioxins are typically derived for soils and sediments but not for water. Dioxins (and furans) have very low water solubility. Therefore, they are most likely to partition to soils and sediments. For this reason, neither the WHO (2010) nor the CCME (2002) have derived water quality guidelines for these substances and analysis of water was not included as part of the National Dioxin Program (DEH 2005). This indicates that soils and sediments are of primary concern for human health and ecological impacts. A summary of criteria available for dioxins is provided in Table 4-1, including a human health-based criterion for water derived in-house by CLP.

Table 4-1: Adopted Criteria for Dioxins.

Criteria	Water (pg/L)	Source	Soil (ng/kg)	Source
Human Health	7.9	Derived in-house ^a	4 ^b	CCME (2002)
Ecological	nv	-	0.85 ^c	CCME (2001)

nr = not relevant, nv = no suitable value identified in literature.

a. Based on a Tolerable Monthly Intake from NHMRC (2002) for Dioxins & Furans (70pg/kg.bw/month), a 70kg person drinking 2L water per day and only 10% is permitted to come from this pathway. (i.e. 70pg/kg.bw/month ÷ 31 days x 0.1 x 70kg.bw ÷ 2L/day = 7.9pg/L)

b. The adopted screening value for dioxins is set for various land uses with the most sensitive population identified as a toddler. A provisional screening value of 175ng/kg for an adult, also derived by CCME 2002), should be given consideration for commercial/industrial sites where access to soils, by the general public (especially children) is restricted

c. A probable effect level of 21.5ng/kg was also noted in CCME (2001).

Detection levels for dioxins are likely to result in a toxic equivalency (TEQ) value that is greater than this provisional screening criterion. Therefore, consideration will be required of dioxin results to the conservatism in the derivation of this criterion:

- That only 10% of dioxins are permitted via this pathway (ingestion). Dioxins from other sources are assumed to be low therefore the amount of dioxins permitted from this pathway could be higher, e.g. 50% which would result in a criterion of 39.5 pg/L.
- The assumption that dioxins are present at half the limit of reporting should be tested. An assessment of the dioxins that have contributed to the TEQ calculation should be made, i.e. are they all at non-detect levels.
- Whether the water being assessed is used for drinking water at the relevant location.

5 PETROLEUM HYDROCARBONS

Petroleum hydrocarbons include benzene, toluene, xylene, ethylbenzene and four Total Petroleum Hydrocarbons (TPH) fractions (F1, F2, F3 and F4). There are criteria available for some of these compounds in Australia (e.g. ecological criteria for benzene in NEPC (1999)). These are supplemented by criteria available from the CCME and the World Health Organisation (WHO). Where criteria are available from both sources, the NEPC (1999) takes precedence.

5.1 Human Health criteria for petroleum hydrocarbons

Human health screening criteria for petroleum hydrocarbons in water are based on drinking water guidelines. Soil criteria are also available for these hydrocarbons and have been derived for specific land uses. A summary of these criteria is provided in Table 5-1 and 5-2 below.

Table 5-1: Human Health criteria for petroleum hydrocarbons in water (µg/L).

Compound	Aromatics	Aliphatic	Source
Benzene (10 ⁻⁶ risk)	1 (10)	nr	NHMRC (2011) (WHO 2008 criteria in brackets)
Toluene ^a	800 (700)	nr	
Xylene ^a	600 (500)	nr	
Ethyl Benzene ^a	300 (300)	nr	
F1 (C ₆ to C ₁₀)	See BTEX	15,000	WHO (2008)
F2 (C _{>10} to C ₁₆)	90	300	
F3 (C _{>16} to C ₃₄)	90	nv	
F4 (C _{>34} to C ₄₀)	nv	nv	
Bolded criteria are adopted for investigations at the Site as land used is considered commercial/industrial targeted areas. nr = not relevant, nv = no suitable value identified in literature. a. Aesthetic criteria (not considered here) are lower than health based criteria provided for these compounds			

Table 5-2: Human Health Criteria for Petroleum Hydrocarbons in Soil (mg/kg).

Compound	Commercial	Agriculture	Source
Benzene (10 ⁻⁶ risk)	11	11	CCME (2004a)
Toluene	82,000	22,000	CCME (2004b)
Xylene	560,000	150,000	CCME (2004c)
Ethyl Benzene	36,000	10,000	CCME (2004d)
F1 (C ₆ to C ₁₀)	19,000	12,000	CCME (2008)
F2 (C _{>10} to C ₁₆)	10,000	6,800	
F3 (C _{>16} to C ₃₄)	450 ^a or 28,000^b (23000)	nv (15,000)	NEPC (1999) (CCME 2008 criteria in brackets)
F4 (C _{>34} to C ₄₀)	280,000^b (Res)	nv (21,000)	
Bolded criteria are adopted for investigations at the Site as land used is considered commercial/industrial targeted areas. a. Health investigation level for aromatic fraction b. Health investigation level for aliphatic fraction			

5.2 Review of Ecological Criteria for Petroleum Hydrocarbons

Limited ecological criteria are available for petroleum hydrocarbons in water. Criteria for xylene, and the petroleum hydrocarbon fraction F1 to F4 are not available. Ecological criteria for water are shown in Table 5-3 below. Ecological criteria for soils, shown in Table 5-4, are based on criteria derived by the CCME. A review of these ecological guidelines, reported in Warne (2010), concluded that the protocols used in their derivation were suitable for Australia. It is noted, however, that for 2 fractions (F1 and F2) lower criteria were calculated by Warne (2010). Therefore the values from Warne (2010) take precedent over the criteria from CCME.

Table 5-3: Summary of ecological criteria for petroleum hydrocarbons in water (µg/L).

Compound	Aquatic Ecosystems - Fresh water	Source
Benzene	300 (370)	NEPC (1999) (CCME 1999a, b, in brackets)
Toluene	300 (2)	
Xylene	nv	-
Ethyl Benzene	90	CCME (1999c)
F1 (C ₆ to C ₁₀)	nv	-
F2 (C _{>10} to C ₁₆)	nv	
F3 (C _{>16} to C ₃₄)	nv	
F4 (C _{>34} to C ₄₀)	nv	
Bolded criteria are adopted for investigations at the Site as land used is considered commercial/industrial in targeted areas and soils are predominantly silty clay, i.e. a fine grain soil. nv = no suitable value identified in literature.		

Table 5-4: Summary of ecological criteria for petroleum hydrocarbons in soil (mg/kg).

Compound	Commercial	Agriculture	Source
<i>Fine-grained soils</i>			
Benzene	310	25	CCME (2004a)
Toluene	330	110	CCME (2004b)
Xylene	230	65	CCME (2004c)
Ethyl Benzene	430	120	CCME (2004d)
F1 (C ₆ to C ₁₀)	320 (217)	210	CCME (2008) (Warne (2010) criteria in brackets)
F2 (C _{>10} to C ₁₆)	260 (172)	150	
F3 (C _{>16} to C ₃₄)	2,500	1,300	
F4 (C _{>34} to C ₄₀)	6,600	5,600	
<i>Coarse-grained soils</i>			
Benzene	180	25	CCME (2004a)
Toluene	250	75	CCME (2004b)
Xylene	350	95	CCME (2004c)
Ethyl Benzene	300	55	CCME (2004d)
F1 (C ₆ to C ₁₀)	320	210	CCME (2008)
F2 (C _{>10} to C ₁₆)	260	150	
F3 (C _{>16} to C ₃₄)	1,700	300	
F4 (C _{>34} to C ₄₀)	3,300	2,800	
Bolded criteria are adopted for investigations at the Site as land used is considered commercial/industrial in targeted areas and soils are predominantly silty clay, i.e. a fine grain soil.			

6 PERFLUORINATED COMPOUNDS

6.1 Human Health Criteria for Perfluorinated Compounds

A summary of criteria suitable for screening the PFCs relevant to the current investigation is provided below in Table 6-1. Drinking water criteria from USEPA (2009) are primarily used for screening human health impacts. In the absence of a specific value for 6:2 FTS, the value for PFOS is substituted as a conservative approach for screening risks associated with 6:2 FTS. Included in the table below are criteria derived by RIVM (2010) for secondary exposure pathways (e.g. consumption of fish). Before applying the secondary exposure criteria, a range of factors need to be considered and readers are referred to RIVM (2010) for specific guidance.

Table 6-1: Summary of human health criteria for PFC

Compound	Criteria Name	Criterion Value	Source	Media
<i>Drinking Water</i>				
PFOS, 6:2 FTS	PHA	0.2 µg/L	USEPA (2009a)	Water
PFOA	PHA	0.4 µg/L		
PFOS	MPC _{DW,Water}	0.53 µg/L	RIVM (2010)	
PFOS and PFOA	GV	0.3 µg/L	DWC (2006), DWI (2009)	
<i>Recreational Guidelines (Water)</i>				
A factor of 10x can be applied to drinking water guidelines for primary contact recreation as dermal exposure to PFC is considered an incomplete/insignificant exposure pathway compared to the oral pathway (NHMRC 2008). This is because PFCs in general have low rates of dermal absorption. (e.g. PFOS criterion = 0.2 x 10 = 2 µg/L)				Water
<i>Direct Contact With Soil</i>				
PFOS,	SSL	6 mg/kg	USEPA (2009b)	Soil
PFOA	SSL	16 mg/kg		
6:FtS		6 mg/kg	Assumes same as PFOS ^a	Soil
<i>Secondary Exposure Pathways</i>				
PFOS	MPC _{Eco, hh,food}	0.00065 µg/L	RIVM (2010)	Water
PFOS	MPC _{HH,food}	9.1 ng/g		Food (Fish)
PHA = Provisional Health Advisory, GV = guideline value, SSL = Soil Screening Level, MPC _{DW,Water} = Maximum Permissible Concentration in drinking water, MPC _{Eco, hhfood} = Minimum Permissible Concentration in water with fish to be consumed by humans, MPC _{Eco, hhfood} = Minimum Permissible Concentration in food (fish) to be consumed by humans a. Note no criteria was identified for 6:2FtS, as result Cardno Lane Piper adopted PFOS criteria value as a screening level only.				

Criteria for the secondary exposure pathway criteria as provided in Table 7-1 are provisional guideline values that are based on PFOS levels in edible fish (9.1 ng/g, MPC_{HH,food}) or PFOS levels in water that edible fish live in. These criteria are not considered “a product safety standard” (RIVM 2010). As an example, the MPC_{HH,food} was calculated using a tolerable daily intake (TDI) of 0.15µg/kg/day and based on assumptions that:

- The daily human consumption fish products per day is 115g

- Only 10% of the tolerable daily intake is attributed to this exposure route.

The MPC_{HH, food} can be adjusted to a value of 348ng/g³ by:

- Substituting a fish consumption consistent with what is typical in Australia, i.e. less than 30g of fish products per day (enHealth 2012).
- Attributing 100% to this route of exposure as the contribution of PFC from background sources is assumed to be very low.

6.2 Review of ecological criteria for perfluorinated compounds

Relevant screening criteria selected from a review of available literature on PFC are provided in Table 7-2 below. A short summary of the key studies used by various agencies to derive criteria is provided in the following section. A criterion for Alcohol Ethoxylates (AE) has also been included as it is likely that fluorosurfactants will be replaced by hydrocarbon surfactants in fire-fighting foam products. A review of criteria for hydrocarbon surfactants has not been performed.

Table 6-2: Summary of ecological criteria adopted for PFCs

CoPC	Criteria Name	Criterion Value	Source	Media
Aquatic Ecosystems				
AE	FTV	140 µg/L	ANZECC (2000)	Water
PFOS (6:2FTS)	CCC	5.1 µg/L	Giesy (2010)	
PFOA	CC	1,700 µg/L	MPCA (2007a)	
PFBS	CCC	1,938,000 µg/L	Giesy (2010)	
Biota and Organisms (Soil and Sediment Compartments)				
PFOS	PNEC _{Soil}	373 µg/kg	EA (2004)	Soil
PFOS	SQG	67 µg/kg	EA (2004)	Sediment
Mammalian Wildlife				
PFOS	MPC _{Oral}	37 µg/kg	RIVM (2010)	Diet (food)
PFOS	MPC _{Eco,sp}	0.0026 µg/L	RIVM (2010)	Water
PFOS	ENEV	408 ng/g	EC (2006)	Liver
Birds				
PFOS	MPC _{Oral}	330 µg/kg	RIVM (2010)	Diet (food)
PFOS	CCC	0.047 µg/L	Giesy (2010)	Water
Notes: FTV = Freshwater Trigger Value, PNEC _{Soil} = Practical No Effect Concentration in soil, CCC = Criteria Continuous Concentration, CC = Chronic Criteria, MPC _{Oral} = Maximum Permissible Concentration Oral Pathway, ENEV = Estimated No Effect Value, SQG = Sediment Quality Guideline.				

6.2.1 Criteria for Aquatic Ecosystems

Criteria are available for AE (ANZECC 2000); they are 50 µg/L, 140 µg/L and 360 µg/L for 99%, 95% and 80% levels of protection respectively. These criteria are only suitable for AE and do not apply to other types of hydrocarbon surfactants or fluorosurfactants. Criteria for other hydrocarbon surfactants are not discussed further.

Ecological criteria have been derived by various agencies overseas⁴ for a limited number of PFC including PFOS, PFOA and Perfluorobutane Sulfonic Acid (PFBS). The criteria derived

³ Provisional guideline value = $9.1 \times 115 \div 30 \times 100\% + 10\% = 348\text{ng/g}$

span multiple orders of magnitude as shown in Table 6-3 below. This range is as a result of the methodology used by regulatory agencies to derive their criteria, the departure point selected (e.g. LC₅₀, NOEC etc.) and/or the assessment factor (AF) that was applied.

Ecological criteria shown in Table 6-3 were derived using either:

- *Acute and Chronic Toxicity Studies*: A departure point is selected based on an acute effect (e.g. LC₅₀ data), i.e. a Final Acute Value (FAV). An acute to chronic ratio (ACR) is then derived by making a comparison of effects from acute and chronic studies in the same species. If studies are insufficient to derive an ACR then a default value of 18 may be applied. The final chronic criteria is derived by multiplying the FAV by the ACR, i.e. Chronic Criteria = FAV × ACR. Note that the criteria derived by Giesy (2010) used statistical methods to determine a FAV and is considered a moderate reliability criterion; or
- *Chronic Toxicity Studies Only*: A departure point is selected based on effects that impact a global population (e.g. 10d-NOEC for growth and survivability). An assessment factor is applied which is dependent on the number of studies available. These are considered low-reliability criteria and are suitable as screening criteria.

⁴ Regulatory agencies include United States Environment Protection Agency (USEPA), Dutch Environment Agency (RIVM) and Environment Canada (EC).

Table 6-3: Summary of PFC criteria derived for the protection of aquatic ecosystems (µg/L)

Criteria Name	Species	Critical Effect	Departure Point	Assessment Factor	Value	Source
PFOS						
PNEC	<i>Pimephales promelas</i> (Fathead minnow)	Growth (42-d NOEC)	300 (250)	10	30	EA (2004)
CC	<i>Chironomus tentans</i> (Midge)	FAV based on L(E) C ₅₀ (GMAV)	170	9.1 (ACR)	19	MPCA (2007a)
CCC	Various species	FAV ^a based on L(E)C ₅₀ (GMAV)	42	8.3 (ACR)	5.1	Giesy (2010)
ENEV	<i>Chironomus tentans</i> (Midge)	Growth and Survival (10-d NOEC)	49.1	100	0.49	EC (2006)
MPC _{Eco}	<i>Chironomus tentans</i> (Midge)	Total Emergence (36d- LOEC)	2.3	100	0.023	RIVM (2010)
PFOA						
CCC	<i>Daphnia magna</i> (Water flea)	48-hour EC ₅₀	297,000	6.1 (Dataset) 17 (ACR)	2,900	Giesy (2010)
CC	<i>Daphnia magna</i> (Water flea)	FAV based on L(E) C ₅₀ (GMAV)	31,000	18 ^b (ACR)	1,700	MPCA (2007b)
PNEC	<i>Gobiocypris rarus</i> (Rare minnows)	Hormonal changes (28-d NOEC)	3,000	100	30	EC (2010)
PFBS						
CCC	<i>Pimephales promelas</i> (Fathead minnow)	96-hr LC ₅₀	1,938,000	8 (Dataset) 10 (ACR)	24,000	Giesy (2010)
<p>Notes: PNEC = Practical No Effect Concentration, CCC = Criteria Continuous Concentration, CC = Chronic Criterion, MPC_{Eco} = Maximum Permissible Concentration Ecological, ACR = Acute to Chronic Ratio, ENEV = Estimated No Effect Value, FAV = Final Acute Value, SAV = Secondary Acute Value.</p> <p>a. FAV and SAV modelled using 5th percentile from four lowest acute values to give a 95th percentile value.</p> <p>b. Default value as no chronic data identified</p>						

The criteria shown in Table 6-3 are predominantly screening criteria that have been derived to protect the most sensitive species identified. As discussed earlier (Section 3.3), the relevant criterion for the protection of waterways in Victoria is dependent on the level of protection afforded a waterway, the location of the waterway and the amount of modification that has occurred to the waterway.

Giesy (2010) derived chemical concentrations intended to ensure the protection of 95% of aquatic species. These (known as the Criteria Continuous Concentration, or CCC) are derived to “provide reasonable protection to ecologically and commercially important species under most circumstances such that overprotection or under-protection of aquatic species is avoided”. The CCC of 5.1 µg/L for PFOS was derived using a FAV of 42 µg/L (Giesy 2010) and by using an ACR of 8.3 determined from studies in 3 different species. The FAV was derived using statistical analysis (5th percentile) considering acute toxicity data from multiple studies and species and selecting the four lowest values for statistical analysis. This included data from a study (MacDonald 2004) which identified the most sensitive species (*Chironomus tentans*). It was noted by Giesy (2010) that *C tentans* is approximately 40 times more sensitive to PFOS compared to the next most sensitive species.

The CCC derived is considered to be skewed low due to the reliance of the statistical method on the four lowest toxicity values rather than the whole dataset available. It is noted that the LOEC of 2.3 µg/L determined by MacDonald (2004) and used by RIVM (2010) to derive the MPC_{Eco} was not selected as a departure point by Giesy (2010) for use in the statistical analysis. This is not specifically addressed by the author however EC (2006) have commented on the lack of confidence in longer exposures from the study by MacDonald (2004), i.e. “there is high confidence in the 10-day exposure values while the 60-day exposures should be treated with caution”. It is noted that the 10-day NOEC was selected by EC (2006) for derivation of their Estimated No Effect Value (ENEV) instead of the 36-day LOEC. The CCC derived by Giesy (2010) for PFOS is suitable for use as a screening criterion that offers a suitable level of protection for slightly to highly modified ecosystems, i.e. the waterways downstream of the Site. Giesy (2010) notes that “chronic water concentrations less than or equal to 0.46 mg PFOS/L should not pose a significant adverse risk to aquatic organisms”. Consideration should be given to this where the CCC is exceeded and further assessment is being considered.

A criterion derived by Giesy (2010) for PFOA (CCC = 2,900 µg/L) is three orders of magnitude higher than derived for PFOS (CCC = 5.1 µg/L). The CCC for PFOA is considered a low reliability criterion due to a lack of data. The CCC for PFOA included consideration of data from a study by MacDonald (2004) discussed above for PFOS including the most sensitive species, *C tentans*. This species was not as sensitive to PFOA as it was for PFOS. This suggests that the functional group impacts on the sensitivity of *C tentans* to PFC. An assessment factor (AF) of 6.1 was applied to the lowest acute value (EC₅₀ of 297,000 µg/L in *Daphnia magna*).

A much lower criterion for PFOA (PNEC = 30 µg/L) was derived by the EC (2012) from a chronic study in the Rare Minnow. It is not clear whether the effects noted (e.g. liver hypertrophy) are indicative of a toxicological endpoint for population dynamics and may not be predictive of population level effects. A requirement for deriving a PNEC is that population effects are noted. The PNEC is adopted here as a screening criterion for PFOA as conservative measure.

No criteria are available for 6:2 FTS. The only publically available ecotoxicological information identified for 6:2 FTS is from the supplier (Du Pont 2012), which is summarised below in Table 6-4. This data was compared with information for PFOS, which included a 90-d fish

NOEC of 290 µg/L. The data suggests that 6:2FTS is less than PFOS toxic to aquatic species, however the data source is considered of low reliability as no information on how these ecotoxicological values were determined was provided. A criteria similar to a PNEC of 2.9µg/L could be calculated using an AF approach (AF = 100). This is lower than the criterion adopted for PFOS to protect 95% of species in a water body. The criterion selected for PFOS of 5.1 µg/L is adopted in this case for 6:2FTS to protect 95% of species. There is low confidence in adopting this value based on the information provided.

Table 6-4: Summary of ecotoxicological data for 6:2FTS

Property	6:2 FTS	PFOS
Acidity	2 to 3	<1
Fish LD ₅₀	>107 mg/L	78 mg/L
Invertebrate LC ₅₀	> 109 mg/L	58 mg/L
Algae EC ₅₀	> 96 mg/L	48 mg/L
Fish 90-day NOEC	2.62 mg/L	0.29 mg/L
Bioaccumulative	No	Yes

A single criterion of 24,000 µg/L was derived for one other PFC with a sulfonic acid functional group, i.e. PFBS. This is also a low reliability criterion derived by Giesy (2010) in a similar manner to PFOA due to a lack of data. An AF of 8 (database deficiencies) and 10 (ACR) were applied to the lowest acute value (LC₅₀ of 1,938,000 µg/L in Fathead Minnow). PFBS appears to have much lower toxicity than PFOS spanning multiple orders of magnitude.

Bioaccumulation and toxicity of PFC appears to increase with chain length for compounds with both sulfonic acid and carboxylic acid functional groups. Further review is required for selecting screening criteria for PFC other than those considered here (PFOS, PFOA, PFBS and 6:2FTS).

6.2.2 Summary of selected screening criteria for aquatic ecosystems

The criteria adopted by Cardno Lane Piper for various compounds to protect aquatic ecosystems are:

- *PFOS*: The CCC of 5.1 µg/L is adopted as a 95% protection level for PFOS.
- *6:2 FTS*: The CCC for PFOS (5.1 µg/L) is conservatively adopted as a screening value for 6:2FTS.
- *PFOA*: The CCC of 1,700 µg/L is adopted as a screening value for PFOA
- *AE*: The FTV of 140 µg/L is adopted as a 95% protection level for AE.

6.2.3 Criteria for Sediment

A criterion for sediment of 67 µg/kg (PNEC_{Sediment}) was derived in EA (2004). This criterion is a Sediment Quality Guideline (SQG) that was calculated using the equilibrium partitioning method. This method is outlined in ANZECC (2000) to calculate SQGs for non-ionic organic compounds. The method requires that a partitioning coefficient for PFOS from water to sediment (K_d) be calculated. A K_d cannot be calculated for ionic compounds such as PFOS, however a measured value of 8.71 L/kg is available (EA 2004). A SQG is calculated by multiplying a Water Quality Guideline (WQG) by the partitioning coefficient for PFOS (SQG = WQG × K_d). It is not clear how the PNEC_{Sediment} of 67 µg/kg was calculated as PNEC for water is 25µg/L therefore a SQC = 25 × 8.7 = 217 µg/Kg.

Using this same approach a SQG can be calculated using the 95% criterion of 5.1 µg/L (aquatic ecosystems) for PFOS in water derived by Giesy (2010). A SQG of 44 µg/kg (SQG = 5.1 µg/L × 8.7) was calculated, which is similar to the value derived by EA (2004). It should be noted that K_d for ionic compounds such as PFOS is most likely related to surface chemistry of sediments (rather than organic content). The K_d for clays for example is closer to 33 L/kg (EA 2004). A SQG of 170 µg/kg would be calculated using the K_d for clay. As the SQG for PFOS is influenced by surface chemistry of soils then it should be calculated using a site specific value. Therefore, the SQG of 44 µg/kg is considered a screening criterion only.

Conclusion on relevant criteria for sediment: The PNEC_{Sediment} of 67 µg/kg is adopted by Cardno Lane Piper as a screening criterion for PFOS in sediment.

6.2.4 Criteria for Soils

A PNEC_{Soil} of 373 µg/kg was calculated (EA 2004) based on a short term toxicity result in an earthworm. This criteria was derived by applying an AF of 1000 to the LC₅₀ value of 373,000 µg/kg. A lower PNEC_{Soil} was calculated for lettuce of <39 µg/kg however lettuce is not likely to be grown in the Fiskville region. It is noted that this criterion could be up to 16 times higher based on a complete set of toxicity data that is available for biota (Exponent 2005).

Conclusion on relevant criteria for soil compartment: The PNEC_{Soil} of 373 µg/kg for PFOS in soil is adopted as the screening criterion for soil.

6.2.5 Criteria for Mammalian Wildlife

Toxicity data from different 2 year studies in rats exposed to PFOS were used to derive the criteria of 17µg/kg in food (PNEC_{Oral}, EA 2004) and 408 ng/g in liver of mammalian species (ENEV, EC 2006)⁵. An AF approach was used to determine both these criteria. The PNEC_{Oral} of 17µg/kg in food derived by EA (2004) was based on the lowest NOAEL identified in various mammalian studies of 500µg/kg. This NOAEL is based on liver hypertrophy and an AF of 30 was applied (note that the makeup of this AF used was not defined). A review by Exponent (2005) indicates that this PNEC_{Oral} was not calculated appropriately as:

- Liver Hypertrophy is not indicative of population-based effects as required for deriving PNEC. Instead a NOAEL of 400 µg/kg/day from a reproductive rat study was selected as an appropriate departure point and converted to a NOEC of 8,000 µg/kg.
- The AF included a factor of 10 (assumed to be applied to account for apparent differences in body weight to daily food ingestion ratio). However, this ratio was incorrectly calculated by EA (2004).

This PNEC_{Oral} was recalculated to be 270 µg/kg based on a NOEC of 8,000 µg/kg and AF of 30. The AF of 30 was used as it represented a policy decision (Exponent 2005). RIVM (2010) derived a PFOS criterion (MPC_{Oral}) of 37 µg/kg_{biota w/w} for rabbit. The MPC_{Oral} is based on a NOAEL of 100 µg/kg/d (maternal weight gain) identified in a teratogenic study in New Zealand White Rabbit. It was converted to a NOEC by applying a ratio of 33.3 for body weight to daily food intake and an AF of 90 applied. Note that this is the lowest MPC_{Oral} derived by RIVM (2010) from multiple studies, multiple endpoints, 7 species and 26 different departure points (NOAEL range from 100 µg/kg/d to 5,000 µg/kg/d).

The ENEV of 408 ng/g (ENEV) in liver was based on histopathological effects in the liver at the lowest exposure concentrations (ranging from 0.06 to 0.023 mg/kg/day), which corresponded to an LOAEL of 41,000 ng/g in the liver. An AF of 100 was applied to the

⁵ The toxicological studies referred to by EA (2004) and EC (2006) have not been consulted.

LOAEL (10x for laboratory to field extrapolation and 10x for intraspecies variability). Both these criteria are considered screening criteria only.

Conclusion on relevant criteria for mammalian wildlife: The ENEV of 408 ng/g in liver (EC 2006) and the MPC_{Oral} of 37 µg/kg in biota (food) (RIVM 2010) are adopted as screening criteria for mammalian species.

6.2.6 Criteria for Birds

Criteria have been derived based on toxicity studies available for two bird species exposed to PFOS in their diet; the mallard (*Anas platyrhynchos*) and the bobwhite quail (*Colinus virginianus*) (RIVM 2010, Giesy 2010). The criteria include values for PFOS levels in water, biota, bird serum and bird liver and are considered screening values as they were derived using the AF approach.

An MPC_{Oral} of 330 µg/kg_{Biota} was derived for both the mallard and the bobwhite quail using a NOEC (1,490 µg/kg and 770 µg/kg respectively), converted using a body weight to dry food intake ratio (6.7 and 13 respectively) and an AF of 30 (See Appendix 3, Table A3.1 of RIVM 2010). A Wildlife Value (WV) of 0.047 µg/L was derived for PFOS based on the LOAEL of 770 µg/kg in the quail, an uncertainty factor of 24 and bioaccumulation factor of 9,970 for level IV avian predators (Giesy 2010). Note that these criteria are based on the same study however the departure point is identified as a NOEC by RIVM (2010) and a LOAEL by Giesy (2010).

ENEVs were derived based on PFOS concentrations in serum and liver of birds by EC (2006) using the same species (the mallard and the bobwhite quail). Effects were noted at the lowest exposure concentration of 10ppm in male birds (increased testes size) and female Quails (increased liver weight). Survivability of hatchlings was also reduced but not statistically relevant for Quails exposed to 10ppm. Both the mallards and quail exhibited overt signs of toxicity at higher concentrations (50 ppm and 150ppm) and were euthanized early. An AF of 100 was applied (10x for laboratory to field extrapolation and 10x for intraspecies variability) to the level of PFOS in serum (87,000 µg/L) and liver (6,100 ng/g) of quails in the 10ppm exposure group to give an ENEV of 870 µg/L for serum and 610 ng/g for liver. It was noted that PFOS levels in liver and serum of piscatorial water birds are amongst the highest reported values (EC 2006). A Screening Tissue Threshold of 885 ng/g was derived by Exponent (2005) using the same studies and AF approach. No data is available in this study for PFOS levels in liver or serum of birds.

Conclusion on relevant criteria for birds: The CCC of 0.047 µg/L in water derived for piscatorial birds (Giesy 2010) and the MPC_{Oral} of 330 µg/kg in biota (food) derived for birds (RIVM 2010) are adopted as screening criteria for birds.

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**Cardno Lane Piper
March 2014**

Appendix I

3 Pages

About Site Environmental Assessment Reports

About Site Environmental Assessment Reports

1. Introduction

This document explains the Environmental Site Assessment (ESA) process and the context that applies to the use of Environmental Reports issued by Cardno Lane Piper.

2. What is an ESA?

Environmental Site Assessments (ESA) are undertaken for a range of purposes, specific to the brief issued by the client in each case. The scope may include one or a combination of any of the following:

- A factual report of the condition of a portion of the site or one aspect of an entire site.
- Assessment of the contamination levels in soil to be removed from a site – a waste classification assessment.
- Validation of the success of remediation of a site or a portion of a site.
- Provision of a professional opinion about the suitability of a site for one or more uses, in terms of its contamination status.

The scope of any ESA needs to be defined at the outset.

An ESA is not an Environmental Audit. Such audits are undertaken in accordance with the provisions of regulations enacted in various states of Australia, and are referred to as Site Audits in some jurisdictions. Statutory audits provide certification by EPA accredited auditors that a site is suitable for one or more uses. An ESA may provide similar advice but cannot be used in place of an audit if the latter is required by regulation in any instance. However in some circumstances and jurisdictions an ESA is sufficient to provide “environmental sign-off” of a site.

An ESA may be undertaken for due diligence purposes, to establish whether the site has been impacted to the extent that some beneficial uses of the site may be precluded. Due diligence audits in many cases may be completed as non-statutory Audits, although in some jurisdictions they can also be statutory audits, if defined as such at the outset.

3. The ESA Process

The Client generally initiates the ESA process by specifying a brief which identifies the specific objectives of the assessment. If not, it is the consultants’ duty to so specify the ESA

In the case of an ESA to provide an opinion about the suitability of the site for use, it would be conducted in accordance with NEPM (Site Assessment). Such ESA would not commence until a thorough site history assessment (Phase 1 Assessment: to identify the potential for significant contamination at a site) is conducted. However, where the history is unclear, a broad screening of chemical parameters can be used to test environmental media. This normally includes a broad range of organic and inorganic compounds and elements, often referred to as an Environmental Screen.

(In the case of an ESA for a purpose other than to provide an opinion about the suitability of the site for use, it is not always necessary to undertake a Phase 1 assessment.)

The ESA requires sampling of soil at representative locations across the site. A NATA accredited laboratory performs the analysis of soil. It is impractical for all of the soil to be assessed. The ESA is often based on a statistical method of grid or random sampling, augmented by targeted sampling at locations known or suspected to be contaminated. Guidance on sampling strategy and density is provided in Australian Standard AS4482.1–2005. However, some considerable degree of judgement is still required in the application of any sampling and testing strategy. For example the blanket application of the “hot spot” method presented in this standard is often inappropriate given its limitations.

The field program also investigates the likelihood of contamination below the site surface. Field investigations must sample and test fill as well as the natural soils. If contamination is found then it is common for further work to be undertaken to characterise, to the extent practical, its vertical and horizontal extent. However, where fill is encountered and testing shows it to be uncontaminated, it must be realised that the heterogeneous nature of the material might mean that not all pockets of contaminated material can be detected using normal sampling regimes.

EPA guidelines for auditors, that may be relevant for an ESA, indicate the need in all cases to consider the potential for groundwater contamination in any site. This does not mean all sites need to be drilled to sample groundwater, but it is most often the case. Most hydrogeological settings and groundwater conditions are complex and vary in space and time. The condition of groundwater is investigated to identify if any beneficial use or environmental value of groundwater is precluded due to contamination.

As previously stated for soil, all groundwater at the site cannot be tested. The environmental investigations are conducted in accordance with industry standards and guidelines (e.g. EPA Vic Pub 668). This provides a level of confidence that a sufficiently comprehensive assessment of the groundwater at the site is achieved.

Where an investigation shows that groundwater is polluted, consideration should be given to assessing the risks and the need for and practicality of any clean up.

4. Environmental Assessment Report

The ESA Report details the findings of the ESA. It provides summary information on the site definition, the reasons for the assessment and other relevant facts. It reviews the scope and quality of the site investigations, laboratory testing and data analyses undertaken. These reports also present a review of the contamination status of the site, the need for any further clean up, and an opinion on the suitability of the site for a range of beneficial uses and land uses such as “residential – low density”, “commercial” etc, as appropriate.

However, as noted above, some ESA have a narrow scope such as for classification of waste soil for removal from site, and do not make conclusions on suitability of site for use.

The ESA Report generally includes copies of other documents and reports, necessary to support the assessment findings, presented as appendices. These can contain more detailed information than the body of the ESA Report. Care should be taken to also read the appended documents and the ESA report in full.

Cardno Lane Piper generally issues reports in electronic form (e-Report) on CD ROM. ESA Reports are issued in this format as Adobe Acrobat™ PDF files. However, a paper copy of the executive summary of the ESA Report is generally issued to the client, and others as required by the brief or by regulation.

5. Limitations of Environmental Assessment Report

The ESA Report is prepared in a manner that can be easily read by a lay person with a legitimate interest in the contamination status of the site, such as the site owner or occupier, EPA and Local Planning Authority. The ESA report is not intended for use by other parties or for other purposes. Anyone who uses the assessment report for purposes other than specified in the report, does so at their own risk.

The site should only be used for one or more of the beneficial uses and land uses identified in the ESA as suitable.

The conditions and qualifications may apply to the suitability of the site for use, and it is the responsibility of the Client to be cognizant of and accept these in accepting the report. Cardno Lane Piper are only responsible for the issuing of the ESA report but accepts no liability for the costs incurred in the implementation of ESA findings.

The ESA provides a “snapshot” of the site conditions at the time of the site investigation. Consequently, the report may not be valid at a later time if there has been any change to the contamination status of the site in that time. Verification of the status of the site may be required in cases where a significant time has elapsed, or site conditions have changed since the assessment and audit.

The ESA is necessarily limited by constraints such as time, cost and available information; although normal professional practice at the time has been applied with all due care to prepare the report. A necessary requirement of this process is the horizontal and vertical interpolation of data from discrete locations. However, site conditions are generally not homogenous and some discrepancies will occur between the actual and predicted results at locations not directly sampled. There is a risk that contamination may occur at the site and not be identified by a competent investigation and assessment. The approach adopted in sampling (a combination of statistically based grid and judgmental sampling) seeks to reduce, but cannot eliminate, this risk.

Where unexpected occurrences of contamination arise, subsequent to the issue of the ESA Report, Cardno Lane Piper should be permitted to make an interpretation of these facts in relation to the ESA Report findings. Consequently, the Client should inform Cardno Lane Piper and seek their opinion. Cardno Lane Piper accepts no liability for costs incurred due to such unexpected

occurrences, given the inherent uncertainties in the assessment process.

Cardno Lane Piper uses information provided by other parties as the basis for the ESA, and reliance on this information is at the discretion of Cardno Lane Piper. However, however Cardno Lane Piper cannot guarantee any of the facts, findings or conclusions presented by other parties. Cardno Lane piper will not be liable for the use of information, provided by others that is subsequently found to be intentionally misleading.

The ESA Report is not and does not purport to be anything other than a contaminated land ESA. It is not a geotechnical report and bore logs reproduced are for interpretation of the likely distribution of contamination. They are not intended for geotechnical interpretations and may not be adequate for this purpose.

The ESA Report is not intended to be a comprehensive analysis of the presence and associated risk of asbestos in buildings and services. Where asbestos in buildings and services is known or likely, the report may only caution that an appropriately qualified person be engaged to undertake demolition to avoid contamination of the site.

Cardno Lane Piper Pty Ltd

1 July 2011