

Information Notice

Environmental Protection Act 1994

Notice of decision to grant a soil disposal permit with conditions

This information notice is issued by the administering authority in accordance with section 424(5) of the Environmental Protection Act 1994 (EP Act) to advise you of a decision for your application for a soil disposal permit, and your review and appeal rights.

Our Reference: 379808 – BNE46110

Butler Partners Pty Ltd
PO Box 2267
Fortitude Valley BC 4006

Attn: [sch4p4(6) P] Project Manager (e-mail – [sch4p4(6)@butlerpartners.com.au])

Re: Application to remove and dispose of contaminated soil from Brisbane RNA Showgrounds, 11 Symes Street, Bowen Hills (Lot 103-104 on SP219236)

Decision

The administering authority has considered your application received on 5 July 2013 and has decided to grant the extension application, but to impose conditions on the permit.

Reasons for the decision

The granting of the permit subject to the conditions imposed is consistent with the standard criteria defined in schedule 4 of the *Environmental Protection Act 1994* (EP Act).

Assessment criteria used in making the decision

In accordance with section 424(4) of the EP Act in making its decision whether to grant or refuse the application for a disposal permit the administering authority has considered the standard criteria listed in Schedule 4 of the EP Act including:

- best practice environmental management for removal, treatment and disposal of contaminated soil
- any applicable environmental protection policy
- any applicable site investigation report or validation report or site management plan
- any applicable Commonwealth, State or local government plans, standards, agreements or requirements.

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Findings as a result of the administering authority's assessment of the application

The information provided in the disposal permit application is sufficient to justify the granting an extension to the previous soil disposal approval.

Information considered by the administering authority in making its determination

Information provided in the application submitted by Butler Partners Pty Ltd on the 05 July 2013 including:

- Part A and B application forms.
- Analysis Results.
- Letters of acceptances dated 17 May 2012 provided by Veolia Environmental Services which states that they are willing to accept:
- **(Lined Landfill) 6,800** cubic metres of contaminated soil is to be disposed in accordance with the disposal facility correspondence dated 17 May 2012 "Veolia Environmental Services at the Ti Tree Bioenergy Landfill Facility, Champions Way, WILLOWBANK, QLD 4306. As per the extension request, it is advised that under the previous approval 1250m3 was disposed to lined landfill, therefore the remaining balance of **5550m3** can now be removed by this additional grant of permit
- **(Unlined Landfill) 6,000** cubic metres of contaminated soil is to be disposed in accordance with the disposal facility correspondence dated 17 May 2012 "Veolia Pty Ltd, Wattle Glen Landfill Facility at Halletts Road / Patrick Street and Greenwood Village Road, REDBANK PLAINS, QLD 4031 (Lot 288 on S31235 and Lot 1 on RP885033)". As per the extension request, it is advised that under the previous approval 2000m3 was disposed to lined landfill, therefore the remaining balance of **4000m3** can now be removed by this additional grant of permit
- **(Soil Treatment) 110** cubic metres of contaminated soil is to be disposed in accordance with the disposal facility correspondence dated 17 May 2012 by 'Veolia Environmental Services' at Ti Tree Bioenergy landfill, Champions Way, WILLOWBANK, QLD 4306".

Review and appeal details

You may apply for an internal review of this decision under Chapter 11, Part 3 Division 2 of the EP Act in accordance with section 521 of the EP Act the application must be:

1. Made to the administering authority within 10 business days after receipt of this notice and be supported by enough information for the administering authority to decide the application;
2. Made to the administering authority in the approved form 'Application for internal review of an original decision' (EM219), which is available www.ehp.qld.gov.au using the publication number EM219 as a search term. The completed form must be sent to the address on the form; and
3. be supported by enough information to enable the authority to decide the application.

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For more information see the Information sheet: Internal review and appeal to Planning and Environment Court.

An application to review a decision does not stay the original decision. If you apply for an internal review of this decision you can also apply to the chief executive (using the same form) or the Queensland Civil and Administrative Tribunal (using form 44: Application to stay a decision, available at www.qcat.qld.gov.au for a stay of the original decision.

Sections 519-522 of the *Environmental Protection Act 1994* cover the internal review process.

Sections 531-539 of the *Environmental Protection Act 1994* cover the appeal to Court process.

Should you have any questions in relation to this matter, please contact Waste and Contamination Assessment at WLCA@ehp.qld.gov.au

sch4p4(6) Personal information

Signature

10/2/13

Date

Allen Johns
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:

Ben Willey – Ph (07) 3181 2429

Waste and Land Contamination Assessments
Department of Environment and Heritage
Protection

Level 9, 400 George Street

GPO Box 2454

Brisbane QLD 4001

Phone 13 QGOV (13 74 68)

Email ben.willey@ehp.qld.gov.au

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Extracts from the *Environmental Protection Act 1994* regarding reviews and appeals

Procedure for review

s. 521

1. A dissatisfied person may apply for a review of an original decision.
2. The application must—
 - a) be made in the approved form to the administering authority within—
 - I. 14 days after the day on which the person receives notice of the original decision or the administering authority is taken to have made the decision (the "review date"); or
 - II. the longer period the authority in special circumstances allows not later than the review date; and
 - b) be supported by enough information to enable the authority to decide the application.
3. On or before making the application, the applicant must send the following documents to the other persons who were given notice of the original decision—
 - a) notice of the application (the "review notice");
 - b) a copy of the application and supporting documents.
4. The review notice must inform the recipient that submission on the application may be made to the administering authority within seven days after the application is made to the authority.
5. If the administering authority is satisfied the applicant has complied with subsection (2) and (3), the authority must, within 14 days after receiving the application—
 - a) review the original decision;
 - b) consider any submissions properly made by a recipient of the review notice; and
 - c) make a decision (the "review decision") to—
 - I. confirm or revoke the original decision; or
 - II. vary the original decision in a way the administering authority considers appropriate.
6. The application does not stay the original decision.
7. The application must not be dealt with by—
 - a) the person who made the original decision; or
 - b) a person in a less senior office than the person who made the original decision.
8. Within 14 days after making the decision, the administering authority must give written notice of the decision to the applicant and persons who were given notice of the original decision.
9. The notice must—
 - a) include the reasons for the review decision; and
 - b) inform the person of their right of appeal against the decision.

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10. If the administering authority does not comply with subsections (5) or (8), the authority is taken to have made a decision confirming the original decision.
11. Subsection (7) applies despite section *Acts Interpretation Act 1954*, section 27A.
12. This section does not apply to an original decision made by—
 - a) for a matter, the administration and enforcement of which has been devolved to a local government, the local government itself or the chief executive officer of the local government personally; or
 - b) for another matter—the chief executive personally.

Stay of operation of original decisions

s. 522

1. If an application is made for review of an original decision, the applicant may immediately apply for a stay of the decision to—
 - a) for an original decision mentioned in schedule 1, part 1 - the tribunal; or
 - b) for an original decision mentioned in schedule 1, part 2 - the Court.
2. The tribunal or Court may stay the decision to secure the effectiveness of the review and any later appeal to the tribunal or Court.
3. A stay may be given on conditions the tribunal or the Court considers appropriate and has effect for the period stated by the tribunal or Court.
4. The period of a stay must not extend past the time when the administering authority reviews the decision and any later period the tribunal or the Court allows the applicant to appeal against the review decision.

Who may appeal

s. 531

1. A dissatisfied person who is dissatisfied with a review decision, other than a review decision to which subdivision 1 applies, may appeal against the decision to the Court.
2. The chief executive may appeal against another administering authority's decision (whether an original or review decision) to the Court.
3. A dissatisfied person who is dissatisfied with an original decision to which section 202 does not apply may appeal against the decision to the Court.

SOIL DISPOSAL PERMIT
Environmental Protection Act 1994 (EP Act)

Disposal permit number: CLEB04054013

Commencement date: 10 July 2013

Expiry Date: 10 July 2014

Permit holder: Butler Partners Pty Ltd

Authorised activity: Removal and disposal of approximately 5550m3 of contaminated soil from Brisbane RNA Showgrounds, 11 Symes Street, Bowen Hills (Lots 103-104 on SP219236) to Lined Landfill, 'Veolia Environmental Services', Ti Tree Bioenergy Facility at Champions Way, Willowbank Qld 4306.

Removal and disposal of approximately 4000m3 of contaminated soil from Brisbane RNA Showgrounds, 11 Symes Street, Bowen Hills (Lots 103-104 on SP219236) to Unlined Landfill, 'Veolia Environmental Services', Wattle Glen Facility at Hallets Road, Patrick Street & Greenwood Village Road, Redbank Plains.

Removal and disposal of approximately 110m3 of treated contaminated soil from 'The Green' development site located at the Brisbane RNA Showgrounds, 11 Symes Street, Bowen Hills (Lots 103-104 on SP219236) to lined landfill, 'Veolia Environmental Services' at the Ti Tree Bioenergy Facility, Champions Way, WILLOWBANK, QLD 4306".

Maximum volume: 5550m3 of contaminated soil to Lined Landfill; 4000m3 of contaminated soil to Unlined Landfill; and 110m3 of treated contaminated soil.

This disposal permit is subject to the attached conditions in Schedule A.

The administering authority provides further information about the removal treatment and disposal of contaminated soil under section 424 of the EP Act on the EHP website at www.ehp.qld.gov.au. This document must be read in conjunction with any permit conditions found in Schedule A.

	sch4p4(6) Person	
Signature		

Allen Johns
Delegate of the administering authority
Environmental Protection Act 1994

19/7/13
Date

Enquiries:

Ben Willey – Ph 3181 2429

Waste and Land Contamination Assessments
Department of Environment and Heritage
Protection

Level 9, 400 George Street

GPO Box 2454

Brisbane QLD 4001

Phone 13 QGOV (13 74 68)

Email ben.willey@ehp.qld.gov.au

Published on DES Disclosure Log
RTI Act 2009

Schedule A - Conditions

1. Records of soil removal, treatment and disposal authorised under this permit must be kept for a period of no less than seven years and be available to the administering authority by request. The information to be kept in the records must include:
 - a. the quantity of material disposed; and
 - b. acceptance receipts from the waste disposal/treatment facility.
2. The permit holder must provide a copy of the permit to any person acting under the permit.
3. Contaminated soil must not be released to air, land or water during excavation, loading, storage, treatment and transport of the soil in a manner that causes environmental harm.

Published on DES Disclosure Log
RTI Act 2009

An application has been received and requires assessment.

General Application Details	
Client Name:	Butler Partners Pty Ltd
Lot/Plan:	103 and 104 SP219236
Project reference:	379808
Address:	11 Symes St, Bowen Hills
Application Type	Soil Disposal Permit
PaLM Contact:	Tom Laycock
Department of Environment and Heritage Protection (EHP)	
Jurisdictions:	Contaminated Land
Ecotrack Application No:	533929
Permit reference:	CLEB04054013
Date Properly made/referred:	05/07/2013
Project Director:	Allen Johns
DATE DUE:	19/07/2013
APPLICATION	PO return to EMR/CLR Registry for Action:
EMR/CLR ID: 91843 and 92051	Date to EMR/CLR Registry / Admin:
PRINT COVER SHEET & SAVE EMAIL TO FOLDER**	Officer initials:
PRINT PART 1 & 2**	RESPONSE
SAVE ALL PARTS TO FOLDER*	PRINT COPY OF RESPONSE (STAMP "COPY"), ADD TO FILE
ORDERED FILE No: BNE46110	SCAN COPY OF RESPONSE, SAVE TO FILE
UPDATE EMR (WITH FILE #)	EMAIL (if Email address provided on application) PERMIT TO CLIENT
UPDATE ECOTRACK (WITH FILE #)	UPDATE EMR WITH DATE & SUMMARY OF RESPONSE
UPDATE WLCA Register and/or EMR/CLR Register	UPDATE ECOTRACK (Decision, Permit Eff. Date, Officer Responsible, Delegate and File ref. no.)
UPDATE CARMS (FILE LOCATION TO PO)	UPLOAD RESPONSE (scanned copy) TO ECOTRACK
FORWARD FILE TO OFFICER	UPDATE WLCA Register and/or EMR/CLR Register
Officer: HB KC SD BG AJ SC	UPDATE CARMS FILE LOCATION
IR DUE DATE: XXXX	DATE CLOSED:

*Print to the 'Bypass Tray' onto yellow paper

*Save to: "\\chqfile2\group\dir\Environmental Services\Contaminated Land\DISPOSAL PERMITS AND SITE ASSESSMENTS" under the corresponding year and month as "Ecotrack Permit Reference #"

**Print only when hard copy is not received to WLCA or EMR/CLR Registry

AR045143

Butler Partners Pty Ltd
ABN 14 816 574 868
79 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au

Project No. 011-165C

24 June 2013

Department of Environment and Heritage Protection
Waste and Land Contamination Assessments
GPO Box 2454
BRISBANE QLD 4000

Email: wica@ehp.qld.gov.au

Attention: Mr A Johns

Dear Allan

RE: REQUEST FOR TIME EXTENSION TO SOIL DISPOSAL PERMIT
SOIL DISPOSAL PERMIT CLEB03023212
LOT 103 & 104 SP219236, BOWEN HILLS

We are writing to apply for a time extension to the Soil Disposal Permit CLEB03023212 issued on 6 June 2012 for the disposal of 6,000m³ to unlined landfill at Veolia Environmental Services' Wattle Glen landfill facility and 6,800m³ to lined landfill and 110m³ for treatment (PAH) prior to lined landfill disposal at Veolia's Ti-Tree landfill facility from 'The Green' development site located within the RNA Showgrounds, Bowen Hills (Lot 103 and 104 on SP219236).

Remediation works commenced at the site in October 2012, however, due to construction delays incurred at the site, remediation work at the site ceased in November 2012. At the conclusion of the current phase of remediation, approximately half the site (south- western portion) had been remediated, represented by rows 1 through 5 on Drawing No. 4 Rev A attached. As part of these works, approximately 2000m³ was disposed to unlined landfill and approximately 1,250m³ to lined landfill.

Soil Disposal Permit CLEB03023212 expired on 6 June 2013 and it is requested that this permit be extended for the period of an additional year so that it is valid up to 6 June 2014. It is proposed that the remaining remediation works will commence during July 2013.

On the basis that the current Soil Disposal Permit (CLEB03023212) has expired, it is understood that a new Soil Disposal Permit will be required to be issued and therefore the following disposal quantities are requested as part of the new Soil Disposal Permit, taking into consideration the previously disposed quantities:

Soil Disposal Permit CLEB03023212
 Lot 103 & 104 SP219236, Bowen Hills
 Project No.: 011-165C
 24 June 2013

Disposal Destination	Original Disposal Permit Volume (CLEB03023212) (m ³)	Volume Disposed under CLEB03023212 (m ³)	Required Volume for New/Extended Disposal Permit (m ³)
Unlined Landfill Disposal (Wattle Glenn)	6,000	2,000	4,000
Lined Landfill Disposal (Ti-Tree)	6,800	1,250	5,550
Treatment (heavy metals) (Ti-Tree)	110	0	110
Total	12,910	3,250	9,660

On this basis, a Soil Disposal Permit for the disposal of 9,660m³ (bulk) is required (4,000m³ unlined, 5,550m³ lined and 110 m³ treatment).

The classification of the proposed disposal destinations are identified on Drawing No. 4 Rev A (attached), with depths of contamination indicated. It should be noted that supporting documentation including test pit logs and laboratory documentation has previously been provided and reviewed as part of Soil Disposal Permit CLEB03023212.

If you require any additional information, please don't hesitate to contact the undersigned.

Yours faithfully
BUTLER PARTNERS PTY LTD
 sch4p4(6) Personal in
 Associate

Enc: Soil Disposal Permit CLEB03023212
 EHP Application forms A and B
 Landfill Acceptance Letters
 Current Land Titles
 Table 2 - Analytical Results for Soils
 Table 3 - TCLP Results for Soils
 Drawing No. 2 Rev A
 Drawing No. 4 Rev A



Enquiries to: Allen Johns
Telephone: (07) 3330 5694
Our reference: File Ref: BNE46110/ Project Ref. 379808/ Permit No. CLEB03023212

Permit to Remove and Dispose of Contaminated Soil

Pursuant to Section 424 of the *Environment Protection Act 1994* (EP Act) permission is given to the applicant;

Butler Partners Pty Ltd
PO Box 2267
FORTITUDE VALLEY BC QLD 4006

Attention: sch4p4(6) Personal in butlerpartners.com.au

to remove and dispose of soil contaminated from Lot(s) 103 & 104 on SP219236 and described in the following correspondence:

"Application for Contaminated Soil Disposal Permit" dated 18 May 2012 and received 31 May 2012.

The permit holder is responsible for ensuring that all personnel involved in the excavation, removal and disposal comply with the specific and standard conditions in Schedules 1 and 2 of this permit.

Signed

sch4p4(6) Personal infor

Delegate

Environmental Protection Act 1994

6.6.12

Notice to Applicant

The conditions on this permit have been decided after consideration of the standard criteria (EP Act) and for the purpose of preventing environmental harm. The applicant may apply for a review or appeal against the decision within 10 business days of receipt of this notice (s521 and s531).

400 George Street
GPO Box 2454
BRISBANE QLD 4001
Telephone (07) 3330 5695
Website www.derm.qld.gov.au
ABN 46 640 294 485

Schedule 1 of 2 – Specific Conditions

The volume or mass of the contaminated soil shall not exceed 12,610 m3.

- **(Lined Landfill) 6,800** cubic metres of contaminated soil is to be disposed in accordance with the disposal facility correspondence dated 17 May 2012 "Veolia Pty Ltd, Ti Tree Bioenergy landfill at Champions Way, WILLOWBANK, QLD 4306".
- **(Unlined Landfill) 6,000** cubic metres of contaminated soil is to be disposed in accordance with the disposal facility correspondence dated 17 May 2012 "Veolia Pty Ltd, Wattle Glen Landfill Facility at Hallets Road / Patrick Street and Greenwood Village Road, REDBANK PLAINS, QLD 4031 (Lot 288 on S31235 and Lot 1 on RP885033)".
- **(Soil Treatment) 110** cubic metres of contaminated soil is to be disposed in accordance with the disposal facility correspondence dated 17 May 2012 "Veolia Pty Ltd, Ti Tree Bioenergy landfill at Champions Way, WILLOWBANK, QLD 4306".

This permit is valid from 6 June 2012 until 6 June 2013.

Schedule 2 of 2 – Standard Conditions

1. Volume / mass of contaminated soil

This permit applies to the specified volume or mass only. Any increases to the specified quantity will require a new disposal permit.

2. Disposal time period

Disposal must occur within the dates specified or a new disposal permit must be sought.

3. Excavation and loading

The holder of this disposal permit must take all reasonable precautions necessary to prevent the spillage of contaminated soil during loading and prevent contaminated soil being transported from the site of origin on vehicle tyres and plant and equipment.

4. Transportation

(a) Transporter to be advised of permit conditions

Prior to the removal of contaminated soil, the permit holder must provide a copy of the permit and conditions to the transporter.

(b) Load to be secured

The contaminated soil must be covered in the transportation vehicle to ensure that the contaminated soil or offensive or noxious gases are not released during transport.

(c) Cleaning of vehicles and plant equipment

An effective system must be employed for cleaning of vehicles and plant and equipment which are used to transport or handle contaminated soil which prevents release of contaminants onto any roadway or to any waters or stormwater drainage system.

(d) Spillage

Any spillage of contaminants must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise releasing such contaminants or material to any stormwater drainage system, roadside gutter or waters.

5. Receival and disposal

(a) Licence conditions

The acceptance and disposal of the contaminated soil must comply with the licence conditions and the specific requirements of the disposal facility.

(b) Disposal receipts

Copies of disposal acceptance receipts are to be submitted to the Administering Authority within 10 business days of the date of disposal. The holder of, or person acting under a disposal permit, must comply with the conditions of the permit (s425 of the *Environmental Protection Act 1994*). Maximum penalty - 100 penalty units.

6. Interim storage

Contaminated soil which is temporarily stored at the site of origin or approved for storage at a separate property must be stockpiled and securely covered and/or managed to ensure that:

- rainwater is drained away from the stockpiles;
- contaminated soil is not transported from the stockpile by wind or rainwater;
- offensive odours or noxious gases are not released; and
- soil underlying the stockpiles is not affected by contamination.

A report is to be provided to the Administering Authority within 28 days of final disposal that verifies that the storage area is fully cleared of contamination.

7. Treatment of soil

(a) Licensed facility

When treatment is to be undertaken at a licensed general waste disposal facility or regulated waste treatment and disposal facility, acceptance receipts must be provided to the Administering Authority within 10 days of contaminated soil delivery. The contamination level in the soil must be reduced to a level agreed by the Administering Authority. When contaminated soil is stored at such facility pending treatment, storage is to be undertaken according to condition 6.

(b) Other treatment sites

i. Soil remediation and validation report.

The permit holder must provide a report of the soil remediation including chemical test results that validate that the contamination has been lowered to levels agreed with the Administering Authority. The report must provide evidence that the land underlying the treatment activity is not affected by contamination.

ii. Environmental harm.

Treatment activities must be carried out to ensure that environmental harm is not caused and that contaminants including treatment agents are not released from the site by wind, stormwater or as offensive or noxious gases. The requirements of condition 6 also apply.

(c) Final disposal

When soil contamination has been reduced to levels acceptable to the Administering Authority, the soil may be disposed of as general fill unless otherwise specified in Schedule 1. The location of the final disposal site of the soil is to be identified after treatment by written advice to the Administering Authority.

****End of Document****

Form

Corporate

Part A - General details for all applications

OFFICIAL USE ONLY

DATE RECEIVED

FILE REF

PROJECT REF

COMPLETE FORM

☐

ENTERED BY (SIGNATURE)

DATE

RECEIPTING DETAILS ONLY

DATE RECEIPTED

RECEIPT NUMBER

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

Important information for applicants

This form asks for general applicant details and a description of the proposed project and any associated activities. The completed form must be submitted together with relevant activity specific Part B forms.

Specific details must accompany this form to enable your application to be processed. The guide provided will help you complete your application correctly. If you have any difficulties completing the form, contact Permit and Licence Management on 1300 130 372 (Option 4). Please number all attachments alphabetically (e.g. 'Attachment A').

Commercial and confidential information must be marked clearly. This information will not be disclosed, except where required by law (including the *Right to Information Act 2009*). If subsequent activities are added to the project, you will be required to resubmit this application with details of the additional activity.

Tick relevant boxes below if the applicant(s) are:

- ☐ an individual or sole trader
- ☐ individuals in a partnership
- ☐ individual(s) acting on behalf of an unincorporated organisation
- Go to Section 1
- ☒ an incorporated company
- ☐ an incorporated association
- ☐ a statutory authority
- ☐ a body politic
- Go to Section 2

RECEIVED

05 JUL 2013

P.M.

Form

Part A - General details for all applications

Guide

Question 1

The applicant is the person intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices.

It is the address of a person and cannot be a post office box.

If more than one applicant as part of a partnership, complete the form Joint Applicant Details (EM1863) and attach to this form.

1 Individual applicant(s) details

APPLICANT'S FULL NAME	TITLE	DATE OF BIRTH
-----------------------	-------	---------------

REGISTERED ADDRESS	POST CODE
--------------------	-----------

PHONE	FAX	EMAIL
-------	-----	-------

POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)	POST CODE
---	-----------

Guardian details (if applicable)

A parent or legal guardian must complete the following details if an applicant is less than 18 years of age.

GUARDIAN'S FULL NAME	DATE OF BIRTH
----------------------	---------------

GUARDIAN'S REGISTERED ADDRESS	POST CODE
-------------------------------	-----------

GUARDIAN'S SIGNATURE	DATE
----------------------	------

→ Go to Section 3

Form

Part A - General details for all applications

2 Applicant details

Question 2

The applicant is the registered legal entity (not a business trading name) intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the registered business address of the company making the application and cannot be a post office box.

Enter the Australian Business Number (ABN); or the Australian Company Number (ACN) of the incorporated company; or the Association Number (AN) of the incorporated association; or the title and section of the legislation that gives the statutory corporation its legal status.

REGISTERED LEGAL ENTITY NAME Butler Partners Pty Ltd

TRADING NAME (IF APPLICABLE)

REGISTERED ADDRESS 79 Doggett Street Newstead QLD	POST CODE 4006
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PHONE 07 3852 3800	FAX 07 3852 3808	E-MAIL/WEBSITE www.butlerpartners.com.au
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POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) PO BOX 2267 Fortitude Valley BC	POST CODE 4006
---	-------------------

ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION 14 816 574 868
--

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME sch4p4(6) Personal information	TITLE
---	-------

POSITION IN CORPORATION Associate

TELEPHONE 07 3852 3800	FASCIMILE 07 3852 3808	E-MAIL/WEBSITE sch4p4(6)@butlerpartners.com.au
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POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)	POST CODE
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Form

Part A - General details for all applications

REGISTERED ADDRESS)	
As above	

Authorised signatory

The authorised signatory is the person authorised to sign an application on behalf of a corporation and in doing so declares that the corporation will be bound by the conditions associated with the granting of the licence or permit.

AUTHORIZED SIGNATORY FULL NAME	TITLE
sch4p4(6) Personal information	

POSITION IN CORPORATION
Associate

3 Project details

Pre-lodgement

Have you previously attended a pre-lodgement meeting or submitted a pre-lodgement form for this project?

☒ No

☐ Yes

PROJECT NUMBER (IF APPLICABLE)

Project description

Briefly describe the proposed activities, works, development or management.

Attach a separate sheet if there is insufficient space below.

DESCRIPTION
Basement Excavation (Residential Development)

Form

Part A - General details for all applications

This information should at least provide enough details to allow a Department of Environment and Heritage Protection officer to locate the site of the proposal.

Give as much information as possible to accurately locate your activity, for example maps with contextual or boundary lines on plan or GPS boundary co-ordinates.

Geographical co-ordinates can include northing/easting, longitude/latitude.

Approvals required

Please list all Part B application forms you are attaching to this form.

APPLICATION FORMS

Part B (x2)

Project site

Where will the activities be conducted? Provide the street address, real property description(s) of the land(s) in which the project is located and local government area. If you require more space, attach a separate sheet.

STREET ADDRESS

11 Symes Street, Bowen Hills

LOT

103 & 104

PLAN

SP219236

LOCAL GOVERNMENT AREA

Brisbane

If possible, provide a specific location within a protected area, a property name or an attached map with the project area clearly delineated. Also include the map name/details.

SPECIFIC LOCATION/PROPERTY NAME

RNA Showgrounds

PROTECTED AREA

GEOGRAPHICAL CO-ORDINATES

Label all attachments alphabetically
(e.g. 'Attachment A')

Attachments

List all attached documents, including maps containing information supporting this application in the space below. If there are no attachments mark "N/A."

ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY -- E.G. "ATTACHMENT A")

Covering Letter, EHP Form B (x2), Soil Disposal Permit CLEB03023212, Landfill Acceptance Letters, Current Land Titles, Table 2 - Analytical Results for Soils, Table 3 - TCLP Results for Soils, Drawing No. 2 Rev A, Drawing No. 4 Rev A

Form

Part A - General details for all applications

Privacy statement

The Department of Environment and Heritage Protection is committed to protecting the privacy, accuracy and security of your personal information in accordance with the *Information Privacy Act 2009*. The department is collecting your personal information in accordance with the Act specified in the relevant Part B form in order to process your application. The information will only be accessed by authorised employees within the department. Some of this information may be given to another department or agency as indicated in the privacy statement on the relevant Part B form. Your information will not be given to any other person or agency unless you have given us permission or we are authorised or required by law. All information supplied on this form may be disclosed publicly in accordance with the *Right to Information Act 2009* and *Evidence Act 1977*. For queries about privacy matters email: AdminReview@ehp.qld.gov.au or telephone: (07) 3896 3705.

Further Information

The latest version of this publication can be found at <www.ehp.qld.gov.au>. Note: where available, the publication number (e.g. EM1124 for this document) can be used as a search term.

4 Applicant's certification

If you have not told the truth in this application you may be liable for prosecution under the relevant Acts or Regulations.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge.
- I understand that information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT(1) SIGNATURE
sch4p4(6) Perso

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE
25.6.13

Complete the following checklist.

- ☒ Application form(s) signed and completed
- ☐ Permit fees paid or enclosed (if applicable)
- ☒ Supporting information attached (e.g. maps)

Please return your completed application to:

Permit and Licence Management
Implementation Support Unit
Department of Environment and Heritage Protection
GPO Box 2454
Brisbane Queensland 4001

Enquiries: 1300 130 372 (Option 4)

Fax: (07) 3330 5875

Email: palm@ehp.qld.gov.au

Form

Contaminated land

Part B - Application for contaminated soil disposal permit

This is the approved form for making an application to the administering authority for a disposal permit to treat or dispose of contaminated soil from land recorded in the environmental management register (EMR) or contaminated land register (CLR) under s. 424 of the Environmental Protection Act 1994 (EP Act).

This form should be completed and forwarded to the administering authority with the form Part A - General Details for all Applicants (EM1124¹).

For more information about soil disposal permits see the Guideline for Contaminated Land Professionals, available on the EHP website: <www.ehp.qld.gov.au>

1 Site information

1.1 Site location

Please provide details of site(s) the soil is proposed to be removed from

List any attachments provided.

FULL STREET ADDRESS OF SITE(S) 11 Symes Street, Bowen Hills	
LOT(S) 103 & 104	PLAN(S) SP219236
LOCAL GOVERNMENT AREA Brisbane	
ATTACHMENTS	

1.2 Site investigation

Has a site investigation report been submitted to the Department of Environment and Heritage Protection (EHP)? If yes please provide a project reference or file number.

☒ NO ☐ YES EHP project reference or file number

1.3 Certificate of Title

Please provide a copy of the current Certificate of Title to the land

☒ Enclosed with this application ☐ Submitted previously to EHP as part of a site investigation/validation report

¹ This is the publication number, which can be used as a search term to find the latest version of the publication at <www.ehp.qld.gov.au>.



Form

Part B - Application for contaminated soil disposal permit

1.4 Is the site currently recorded in the environmental management register or contaminated land register because the land has been used for a notifiable activity or has been contaminated by a hazardous contaminate?

- ☒ YES ☐ NO (If no, the owner or occupier of the land must submit a notification form to the administering authority, under chapter 371 of the EP Act)

2 Soil removal and disposal

2.1 Soil volume

What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)? Over estimate the amount as a new permit will be required if the limit is reached before the disposal is complete.

5,550m³ Lined Landfill
110 m³ Treatment

2.2 Disposal period

What are the dates between which soil is proposed to be moved to the disposal location?

FROM DATE: 1 July 2013	TO DATE: 1 July 2014
---------------------------	-------------------------

Note: In accordance with section 424(7) of the EP Act soil disposal permits only authorise the disposal of soil for the term stated on the disposal permit.

2.3 Disposal location

What is the proposed disposal location?

Note: you must provide written acceptance of local government or registered owner of the site to receive the soil. If the soil is being disposed at a non local government administered landfill you must also provide a copy of the Certificate of Title

- (a) ☐ Proposed to dispose of soil at local government administered landfill site

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

- ☐ Written acceptance from the local government is enclosed

- (b) ☐ Proposed to dispose of soil at a non local government-administered landfill

LOT(S) 3 and 8	PLAN(S) SP168875 and RP24574
FULL STREET ADDRESS OF SITE(S) 55 Champions Way, Willowbank, Queensland 4306	

- ☒ Written acceptance from registered owner of site is enclosed with this application, stating the amount of soil and the type of contaminates present in the soil the non-government landfill has agreed to accept.

Form

Part B - Application for contaminated soil disposal permit

(c) ☐ Proposed to remove soil to another parcel of land on the EMR or CLR

LOT(S)	PLAN(S)
FULL STREET ADDRESS OF SITE(S)	

- ☐ Accepting land is listed on the EMR or CLR
- ☐ Written acceptance from registered owner of site is enclosed with this application, stating the amount of soil and the type of contaminants present in the soil the site owner has agreed to accept.

3 Supporting information

3.1 Management options

Disposal to landfill should only be considered where no other method of dealing with the contaminated soil is available / viable.

State reason(s) why on-site treatment or management is not proposed.

Basement Excavation – soil excess to site requirements

3.2 Is it proposed to undertake validation sampling to confirm that all soil has been removed?

☐ NO ☒ YES

3.3 Provide a description of the contamination present in the soil to be removed

Total PAH (1,124.2mg/kg), benzo(a)pyrene (63.4mg/kg), C15-C28(1,870mg/kg), C29-C36 (1,340mg/kg), Cd (6mg/kg), Cr (138mg/kg), Pb (6,000mg/kg), Hg (4.7mg/kg), Zn (6,000mg/kg))

3.4 Please tick relevant boxes below to indicate that you have attached the following information with this application and list the relevant attachments. If a site investigation report has been or is being submitted to the administering authority, refer to the relevant sections of that report.

Required information	Attachment name / number and section
☒ Scaled plan showing soil sampling locations and contamination source(s)	Drawing No. 2 Rev A & Drawing No. 4 Rev A
☒ Tabulation of soil analysis results	Table 2 - Analytical Results for Soils
☒ Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples	Table 3 - TCLP Results for Soils
☐ Copies of all laboratory reports and sample receipt advices for all soil analysis	Previously provided as part of submission of Disposal Permit CLEB03023212
☐ Explanation of location and depths of samples, how	Previously provided as part of submission of

Form

Part B - Application for contaminated soil disposal permit

maintained

Declaration

Note: If you do not tell the truth in this application you may be liable for prosecution under the relevant legislation.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge. I understand that it is an offence under s480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT'S NAME sch4p4(6) Pe	PRINT NAME OF APPOINTED SIGNATORY (IF APPLICABLE)
-----------------------------------	---

APPLICANT'S SIGNATURE/APPOINTED SIGNATORY sch4p4(6) Personal	DATE 25.6.13
--	-----------------

4 Applicant checklist

Required	Not Applicable	
☒	☐	Part A form completed
☒	☐	All sections of the form have been completed
☒	☐	Letter of acceptance from landfill attached (if required).
☒	☐	Application form(s) signed and dated
☒	☐	Supporting information attached
☐	☒	Completed notification of land form (if the originating site is not listed on the EMR or CLR).

Please return your completed application kit to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Heritage Protection
GPO Box 2454
Brisbane Queensland 4001
Enquiries: 1300 130 372 (Option 4)
Email: palm@ehp.qld.gov.au

Form

Contaminated land

Part B - Application for contaminated soil disposal permit

This is the approved form for making an application to the administering authority for a disposal permit to treat or dispose of contaminated soil from land recorded in the environmental management register (EMR) or contaminated land register (CLR) under s. 424 of the Environmental Protection Act 1994 (EP Act).

This form should be completed and forwarded to the administering authority with the form Part A - General Details for all Applicants (EM1124¹).

For more information about soil disposal permits see the Guideline for Contaminated Land Professionals, available on the EHP website: <www.ehp.qld.gov.au>

1 Site information

1.1 Site location

Please provide details of site(s) the soil is proposed to be removed **from**

List any attachments provided.

FULL STREET ADDRESS OF SITE(S) 11 Symes Street, Bowen Hills	
LOT(S) 103 & 104	PLAN(S) SP219236
LOCAL GOVERNMENT AREA Brisbane	
ATTACHMENTS	

1.2 Site investigation

Has a site investigation report been submitted to the Department of Environment and Heritage Protection (EHP)? If yes please provide a project reference or file number.

☒ NO ☐ YES EHP project reference or file number

1.3 Certificate of Title

Please provide a copy of the current Certificate of Title to the land

☒ Enclosed with this application ☐ Submitted previously to EHP as part of a site investigation/validation report

¹ This is the publication number, which can be used as a search term to find the latest version of the publication at <www.ehp.qld.gov.au>.



Form

Part B - Application for contaminated soil disposal permit

1.4 Is the site currently recorded in the environmental management register or contaminated land register because the land has been used for a notifiable activity or has been contaminated by a hazardous contaminate?

- ☒ YES ☐ NO (If no, the owner or occupier of the land must submit a notification form to the administering authority, under chapter 371 of the EP Act)

2 Soil removal and disposal

2.1 Soil volume

What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)? Over estimate the amount as a new permit will be required if the limit is reached before the disposal is complete.

4,000m³ Unlined Landfill

2.2 Disposal period

What are the dates between which soil is proposed to be moved to the disposal location?

FROM DATE: 1 July 2013	TO DATE: 1 July 2014
---------------------------	-------------------------

Note: In accordance with section 424(7) of the EP Act soil disposal permits only authorise the disposal of soil for the term stated on the disposal permit.

2.3 Disposal location

What is the proposed disposal location?

Note: you must provide written acceptance of local government or registered owner of the site to receive the soil. If the soil is being disposed at a non local government administered landfill you must also provide a copy of the Certificate of Title

- (a) ☐ Proposed to dispose of soil at local government administered landfill site

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

- ☐ Written acceptance from the local government is enclosed

- (b) ☐ Proposed to dispose of soil at a non local government-administered landfill

LOT(S) 1 & 288 1	PLAN(S) SP231458 SP135673
FULL STREET ADDRESS OF SITE(S) HALLETS RD, RED BANK PLAINS (WATTLE GLEN)	

☒ Written acceptance from registered owner of site is enclosed with this application, stating the amount of soil and the type of contaminates present in the soil the non-government landfill has agreed to accept.

Form

Part B - Application for contaminated soil disposal permit

(c) ☐ Proposed to remove soil to another parcel of land on the EMR or CLR

LOT(S)	PLAN(S)
FULL STREET ADDRESS OF SITE(S)	

- ☐ Accepting land is listed on the EMR or CLR
- ☐ Written acceptance from registered owner of site is enclosed with this application, stating the amount of soil and the type of contaminants present in the soil the site owner has agreed to accept.

3 Supporting information

3.1 Management options

Disposal to landfill should only be considered where no other method of dealing with the contaminated soil is available / viable.

State reason(s) why on-site treatment or management is not proposed.

Basement Excavation – soil excess to site requirements

3.2 Is it proposed to undertake validation sampling to confirm that all soil has been removed?

☐ NO ☒ YES

3.3 Provide a description of the contamination present in the soil to be removed

Total PAH (1,124.2mg/kg), benzo(a)pyrene (63.4mg/kg), C15-C28(1,870mg/kg), C29-C36 (1,340mg/kg) Cd (6mg/kg), Cr (138mg/kg), Pb (6,000mg/kg), Hg (4.7mg/kg), Zn (6,000mg/kg))

3.4 Please tick relevant boxes below to indicate that you have attached the following information with this application and list the relevant attachments. If a site investigation report has been or is being submitted to the administering authority, refer to the relevant sections of that report.

Required information	Attachment name / number and section
☒ Scaled plan showing soil sampling locations and contamination source(s)	Drawing No. 2 Rev A & Drawing No. 4 Rev A
☒ Tabulation of soil analysis results	Table 2 - Analytical Results for Soils
☒ Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples	Table 3 - TCLP Results for Soils
☐ Copies of all laboratory reports and sample receipt advices for all soil analysis	Previously provided as part of submission of Disposal Permit CLEB03023212
☐ Explanation of location and depths of samples, how samples were collected, and how sample integrity was	Previously provided as part of submission of Disposal Permit CLEB03023212

Form

Part B - Application for contaminated soil disposal permit

samples were collected, and how sample integrity was maintained	Disposal Permit CLEB03023212
---	------------------------------

Declaration

Note: If you do not tell the truth in this application you may be liable for prosecution under the relevant legislation.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge. I understand that it is an offence under s480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT'S NAME sch4p4(6) Pers	PRINT NAME OF APPOINTED SIGNATORY (IF APPLICABLE)
-------------------------------------	---

APPLICANT'S SIGNATORY sch4p4(6) Personal	DATE 25.6.13
--	-----------------

4 Applicant checklist

Required	Not Applicable	
☒	☐	Part A form completed
☒	☐	All sections of the form have been completed
☒	☐	Letter of acceptance from landfill attached (if required).
☒	☐	Application form(s) signed and dated
☒	☐	Supporting information attached
☐	☒	Completed notification of land form (if the originating site is not listed on the EMR or CLR).

Please return your completed application kit to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Heritage Protection
GPO Box 2454
Brisbane Queensland 4001
Enquiries: 1300 130 372 (Option 4)
Email: palm@ehp.qld.gov.au

☐ For Regional Information & Filing

☐ Regional Action Required

Admin. Office: Contaminated Land Unit, Flr 9, 400 George

Project No: 379808

Applic ID: 533929

EMR/CLR ID No. 91843 + 92051

Permit No. CLEB04054013

App. Rcd. No. 045143

Application for Disposal Permit (Contaminated Land) Checklist

☒	Part A and Part B application forms supplied and complete.
☒	Forms signed and dated
☒	All parts of the forms completed
☒	Letter of acceptance from Landfill etc

Applicant Name: BUTLER PARTNERS PTY LTD

Contact Name: sch4p4(6) Personal info

Location: 11 SYMES ST, BOWEN HILLS (103 + 104 SP219236)

Co-ordinator: sch4p4(6) Personal inform

Date Received: 5 / 7 / 20 / 13

Date Application Deemed Valid: 5 / 7 / 20 / 13

Due Date (10 business days after application deemed valid): 19 / 7 / 20 / 13

BNE 46110



May 17, 2012

Ref: RRS - REM - 1125A1
Lined Landfill Disposal

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) P4

Reference: LINED LANDFILL DISPOSAL AT TI TREE BIOENERGY OF 6,800m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4(

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6800m³ in volume (approximately), is acceptable for Lined Landfill Disposal at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY
Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.
RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: ENRE01296010, ERA 60 1(d)

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code: 0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.

www.titreebioenergy.com.au

J.J.Richards & SONS PTY LTD VEOLIA ENVIRONMENTAL SERVICES

Page 1 of 3



Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

sch4p4(6) Person



Environmental Engineer

Tel: 07 3275 0164

Mob: sch4p4(6)

Fax: 07 3275 0101

email: sch4p4(6) P@veolia.com.au
qld.remediation@veolia.com.au

Resource Recovery Services
Queensland

May 17, 2012

Ref: RRS - REM - 1125A1
Unlined Landfill Disposal

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) P

Reference: UNLINED LANDFILL DISPOSAL AT WATTLE GLEN LANDFILL OF 6,000m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6000m³ in volume (approximately), is acceptable for Unlined Landfill Disposal at our Wattle Glen Landfill Facility if it meets moisture content <20% at time of disposal, otherwise to be diverted to

Site: Wattle Glen Landfill
Description: Halletts Road, Patrick Street and Greenwood Village Road
Redbank Plains, Queensland 4031.
RP Address: Lot 288 on S31235 and Lot 1 on RP885033,
County of Stanley, Parish of Bundamba.
DA Number: ENRE00975309, ERA 33, ERA 60 2(h) & ERA 62
Site Address: Halletts Road, Redbank Plains, Queensland 4031.
Lot 1 Plan SP231458; Lot 288 Plan SP231458; & Lot 1 Plan SP135673.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.



Veolia Environmental Services (Australia) Pty Ltd
166 Boundary Road, Rocklea, QLD 4106 - tel +61 (0) 4 3275 0111 - fax +61 (0) 4 3275 0101
www.veolia.com.au ABN 20 051 316 584





Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

sch4p4(6) Personal i

Environmental Engineer

Tel: 07 3275 0164

Mob: sch4p4(6) Per

Fax: 07 3275 0101

emial: sch4p4(6) P@veolia.com.au
qld.remediation@veolia.com.au





Unlined Landfill Disposal
KRS - REM - 1125A1

Samples Acceptable for Unlined Landfill Disposal at Wattle Glen Landfill.

Sample ID	Depth (m)	Sample ID	Depth (m)
A2-1	0.2-0.3	E10-3	0.6-0.8
A2-2	0.4-0.6	F3-2	0.6-0.8
B3-1	0.2-0.4	F4-2	0.4-0.6
E3-3	0.6-0.8	F4-3	0.8-1.0
F7-3	0.8-1.0	F5-1	0.1-0.3
GA122	0.4-0.6	F5-2	0.4-0.6
GA124	0.2-0.3	F7-2	0.4-0.6
A4-1	0.2-0.4	F10-2	0.3-0.5
A4-2	0.6-0.7	F10-3	0.7-0.8
A5-2	0.6-0.8	GA118	0.4-0.6
A6-1	0-0.2	GA120	0.9-1.0
A6-2	0.5-0.8	GA121	0.4-0.6
B2-2	0.5-0.6	GA124	1.9-2.0
B5-1	0.2-0.4	GA125	0.9-1.1
B5-2	0.5-0.6	GA130	0.2-0.3
B6-1	0-0.2	GA17	0.4-0.5
B6-2	0.5-0.7	GA55	0.6-0.7
B7-3	0.6-0.8		
B7-4	1.0-1.1		
B8-3	0.8-0.9		
C2-1	0.2-0.4		
C7-1	0.0-0.2		
C7-2	0.3-0.5		
C7-3	0.7-0.8		
C7-4	1.0-1.2		
C8-1	0-0.2		
C8-3	0.9-1.0		
C9-2	0.3-0.4		
D6-1	0-0.2		
D6-2	0.4-0.6		
D7-2	0.1-0.3		
D8-1	0-0.2		
D10-3	0.8-1.0		
E3-2	0.4-0.5		
E5-2	0.4-0.6		
E6-1	0-0.2		
E8-1	0-0.1		
E8-2	0.3-0.4		
E9-1	0-0.1		
E9-2	0.3-0.5		
E10-2	0.3-0.5		

converting waste into clean energy



TI TREE
BIOENERGY

A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q.4106
PO Box 933
Archerfield Q.4108
T: 07 3275 0111
F: 07 3275 0142

May 17, 2012

Ref: RRS - REM - 1125A1

Soil Treatment

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) Pe

Reference: SOIL TREATMENT AT TI TREE BIOENERGY OF 110m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4,

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 110m³ in volume (approximately), is acceptable for Soil Treatment at our Ti Tree bioENERGY Facility for PAH treatment.

Site: Ti Tree bioENERGY

Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.

RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: ENRE01296010, ERA 60 1(d)

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.

www.titreebioenergy.com.au

J.J.Richards
& SONS PTY LTD

VEOLIA
ENVIRONMENTAL SERVICES

Page 1 of 3



Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

[Redacted Signature] sch4p4(6) Person

Environmental Engineer

Tel: 07 3275 0164

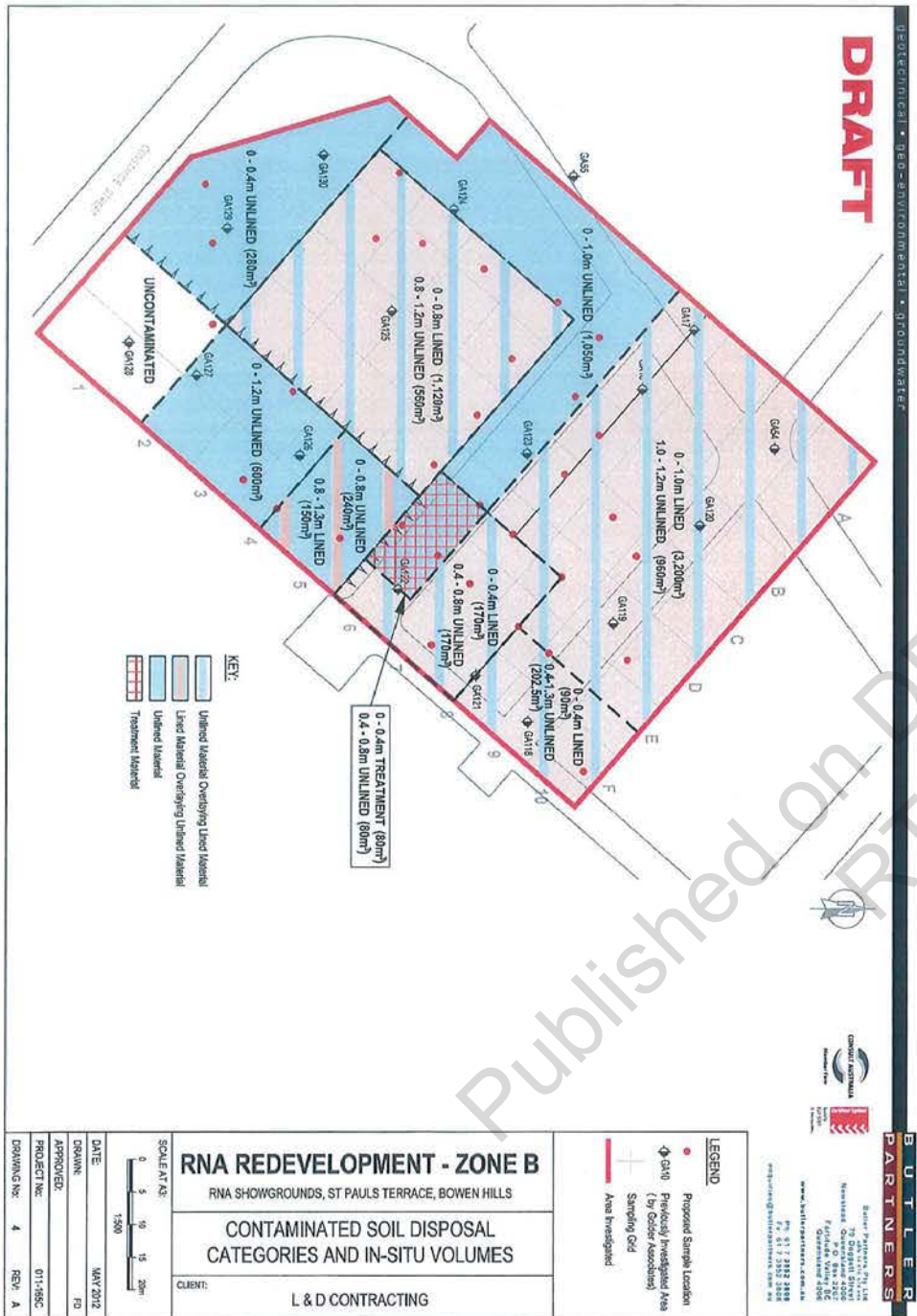
Mob: [Redacted] sch4p4(6)

Fax: 07 3275 0101

Email: [Redacted] sch4p4(6) Pe@veolia.com.au
qld.remediation@veolia.com.au

[illegible]

[illegible][illegible]



CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 13855298

Search Date: 15/05/2012 10:58

Title Reference: 50829661

Date Created: 11/11/2010

Previous Title: 50658054

REGISTERED OWNER

Dealing No: 713512624 12/10/2010

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL
ASSOCIATION OF QUEENSLAND

ESTATE AND LAND

Estate in Fee Simple

LOT 103 SURVEY PLAN 219236
County of STANLEY Parish of NORTH BRISBANE
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 13833226 (POR 485)
2. LEASE No 713732238 25/02/2011 at 11:23
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351
OF THE WHOLE OF THE LAND
TERM: 21/12/2010 TO 20/12/2030 OPTION NIL
3. MORTGAGE No 713732241 25/02/2011 at 11:24
LEND LEASE (BOWEN HILLS) PTY LTD A.B.N. 68 127 727 351
4. CAVEAT No 713841631 09/05/2011 at 11:47
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713690945	HERITAGE SITE	01/02/2011 09:05	CURRENT

QUEENSLAND HERITAGE ACT 1992

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 13855668

Search Date: 15/05/2012 11:14

Title Reference: 50829662

Date Created: 11/11/2010

Previous Title: 50658052

50658054

50658058

REGISTERED OWNER

Dealing No: 713512624 12/10/2010

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL
ASSOCIATION OF QUEENSLAND

ESTATE AND LAND

Estate in Fee Simple

LOT 104 SURVEY PLAN 219236
County of STANLEY Parish of NORTH BRISBANE
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 13833226 (POR 485)
(POR 487)
(POR 641)
2. LEASE No 713732238 25/02/2011 at 11:23
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351
OF THE WHOLE OF THE LAND
TERM: 21/12/2010 TO 20/12/2030 OPTION NIL
3. MORTGAGE No 713732241 25/02/2011 at 11:24
LEND LEASE (BOWEN HILLS) PTY LTD A.B.N. 68 127 727 351
4. CAVEAT No 713841631 09/05/2011 at 11:47
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713690945	HERITAGE SITE	01/02/2011 09:05	CURRENT
QUEENSLAND HERITAGE ACT 1992			

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

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** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

Page 1/1

DRAFT



**BUTLER
PARTNERS**

Butler Partners Pty Ltd
ABN 14 816 514 888
79 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au

LEGEND

- Proposed Sample Location
- ◊ GA10 Previously Investigated Area (by Golder Associates)
- + Sampling Grid
- Area Investigated

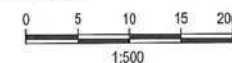
RNA REDEVELOPMENT - ZONE B

RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

INVESTIGATION SAMPLE LOCATIONS

CLIENT: L & D CONTRACTING

SCALE AT A3:



DATE: MAY 2012

DRAWN: FD

APPROVED:

PROJECT No: 011-165C

DRAWING No: 2 REV: A

DRAFT

**BUTLER
PARTNERS**



Butler Partners Pty Ltd
ABN 14 216 574 188
79 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au

LEGEND

- Proposed Sample Location
- ⬮ GA10 Previously Investigated Area (by Golder Associates)
- ⊕ Sampling Grid
- Area Investigated

RNA REDEVELOPMENT - ZONE B

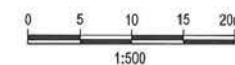
RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

**CONTAMINATED SOIL DISPOSAL
CATEGORIES AND IN-SITU VOLUMES**

CLIENT:

L & D CONTRACTING

SCALE AT A3:



DATE: MAY 2012

DRAWN: FD

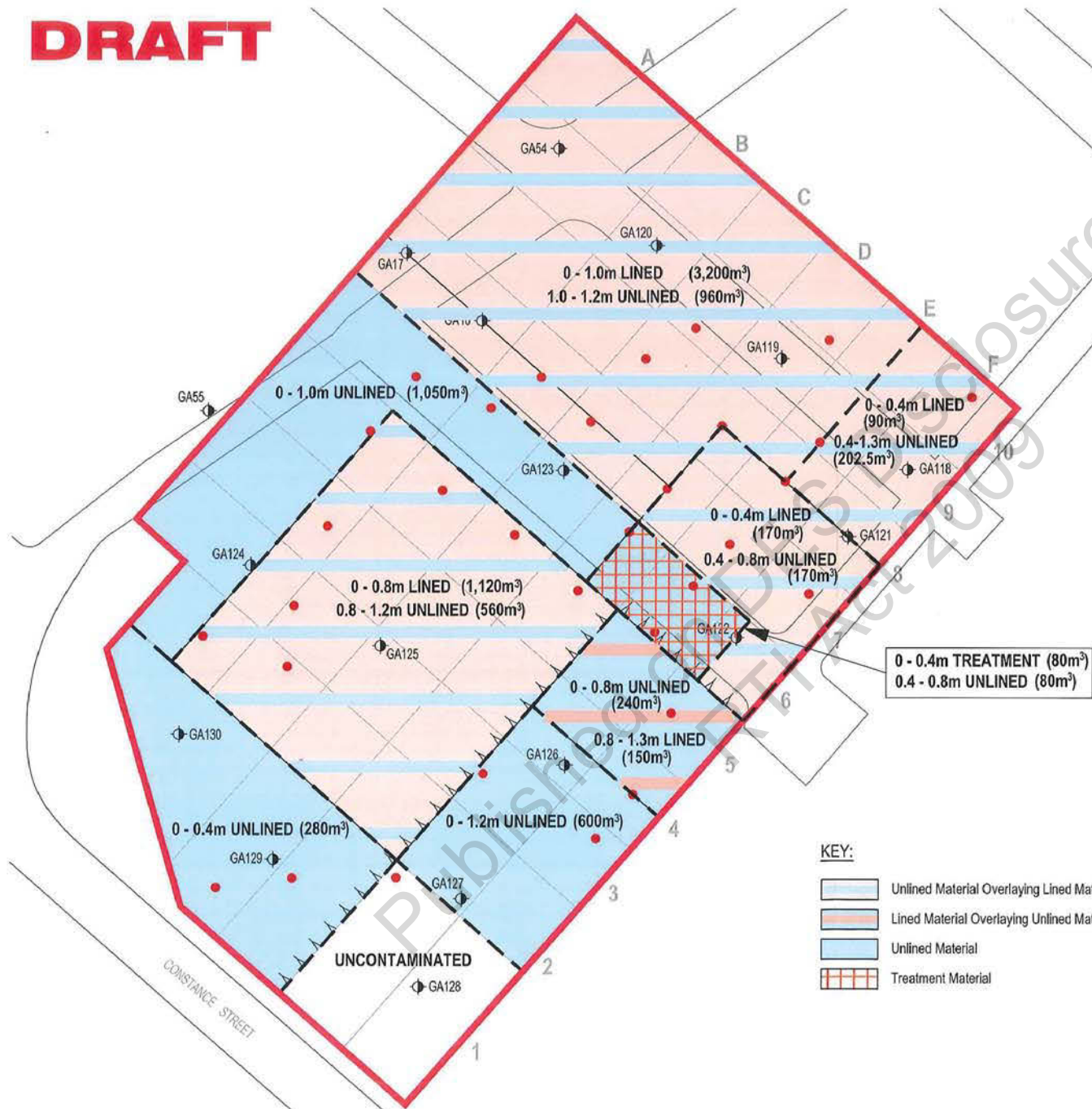
APPROVED:

PROJECT No: 011-165C

DRAWING No: 4 REV: A

KEY:

- Unlined Material Overlaying Lined Material
- Lined Material Overlaying Unlined Material
- Unlined Material
- Treatment Material



[illegible]

Background Levels

LANDFILL CATEGORY

Table 3: TCLP Results

Sample Date	Sample Location	Sample Number	Sample Depth	Material Type	Organics PAH			Inorganics Heavy Metals										
					Total PAH (mg/kg)	PAH-TCLP (mg/L)	Total BiOP (mg/kg)	Total Cd (mg/kg)	TCLP Cd (mg/L)	Total Cr (mg/kg)	TCLP Cr (mg/L)	Total Pb (mg/kg)	Pb-TCLP (mg/L)	Total Hg (mg/kg)	TCLP Hg (mg/L)	Total Zn (mg/kg)	Zn-TCLP (mg/L)	
Landfill Criteria - Unlined																		
Laboratory Level of Reporting (mg/L)					500.0	0.1	-	0.002	-	0.1	-	0.5	-	5.0	-	0.1	-	50.0
Landfill Criteria - Maximum					1000.0	1.0	-	0.02	-	0.5	-	5.0	-	5.0	-	0.1	-	500.0
Laboratory Level of Reporting (mg/L)					8.0	0.0155	0.5	0.0005	1	0.005	2	0.01	5	0.01	0.1	0.00	5	0.1
BUTLER PARTNERS 2012 RESULTS																		
04-May-12	Zone B	B3-2	0.6-0.7	F#B	61.9	<0.0155	3.2	<0.0005	<1	-	6	-	1040	-	-	-	965	
04-May-12	Zone B	B5-2	0.5-0.6	F#B	17.7	-	0.6	-	1	-	9	-	1150	0.2	0.3	<0.001	1080	
04-May-12	Zone B	B6-2	0.5-0.5	F#B	121.8	-	7.5	-	1	-	4	-	261	-	0.2	-	195	
04-May-12	Zone B	G2-3	0.5-0.5	Gravelly Sand/ Clay	124.9	<0.0155	7.4	<0.0005	<1	-	128	<0.1	424	0.1	0.9	<0.001	189	
04-May-12	Zone B	G7-1	0.5-0.4	F#B	11.4	-	<0.5	-	<1	-	5	-	167	-	0.2	-	993	
04-May-12	Zone B	G8-2	0.5-0.5	F#B	163.7	<0.0155	14.1	<0.0005	1	-	8	-	1660	0.3	0.3	-	819	
04-May-12	Zone B	G9-2	0.4-0.6	F#B	35.2	<0.0155	1.7	<0.0005	<1	-	5	-	157	-	0.2	-	551	
04-May-12	Zone B	D1A-2	0.5-0.5	F#B	24.7	<0.0155	1.6	<0.0005	<1	-	7	-	150	0.2	0.2	-	819	
04-May-12	Zone B	E1-1	0.4-2	F#B	132.2	0.0266	63.4	<0.0005	<1	-	6	-	100	<0.1	0.4	-	508	
04-May-12	Zone B	E1-1	0.5-1	F#B	22.8	<0.0155	1.5	<0.0005	1	-	4	-	186	-	0.4	-	331	
04-May-12	Zone B	E10-1	0.5-2	F#B	166.5	<0.0155	4.9	<0.0005	<1	-	3	-	254	<0.1	0.1	-	344	
04-May-12	Zone B	F5-3	0.5-1.0	F#B	57.9	<0.0155	4.5	<0.0007	<1	-	8	-	140	-	-	-	148	
04-May-12	Zone B	F7-1	0.5-2	F#B	<LOD	-	<0.5	-	6	0.05	<2	-	1660	0.3	<0.1	-	189	
04-May-12	Zone B	F8-1	0.5-1	F#B	34.6	<0.0155	3.5	<0.0005	<1	-	3	-	932	0.3	-	-	553	
GOLDER ASSOCIATES 2009/2011 RESULTS																		
05-Dec-09	Zone B	GAT7	0.2-0.3	Assumed Fill	556.2	0.035	47.1	<0.0005	-	-	-	-	-	-	-	-	-	
27-Jun-11	Zone B	GAT8	0.4-0.6	Assumed Fill	15.9	-	1.8	-	-	-	-	-	642	0.2	-	-	-	
27-Jun-11	Zone B	GAT9	0.4-0.6	Assumed Fill	15.9	-	1.8	-	-	-	-	-	190	0.2	-	-	-	
27-Jun-11	Zone B	GAT10	0.4-0.6	Assumed Fill	219	<0.0155	33.4	<0.0005	-	-	-	-	-	-	-	-	-	
NOTES																		
1	Analyte below Reporting Level Criteria				Analyte exceeds the Listed Landfill Criteria (within the Listed Landfill Criteria)													
2	Analyte below Reporting Level Criteria				Analyte exceeds the Listed Landfill Criteria													
3	Analyte below Reporting Level Criteria				Analyte exceeds the Listed Landfill Criteria													
4	Analyte below Reporting Level Criteria				Analyte exceeds the Listed Landfill Criteria													

butlerpartners.com.au



Enquiries to: Allen Johns
Telephone: (07) 3330 5694
Our reference: File Ref: BNE46110/ Project Ref: 379808/ Permit No. CLEB03023212

Permit to Remove and Dispose of Contaminated Soil

Pursuant to Section 424 of the *Environment Protection Act* 1994 (EP Act) permission is given to the applicant;

Butler Partners Pty Ltd
PO Box 2267
FORTITUDE VALLEY BC QLD 4006

Attention sch4p4(6) Personal info@butlerpartners.com.au

to remove and dispose of soil contaminated from Lot(s) 103 & 104 on SP219236 and described in the following correspondence:

"Application for Contaminated Soil Disposal Permit" dated 18 May 2012 and received 31 May 2012.

The permit holder is responsible for ensuring that all personnel involved in the excavation, removal and disposal comply with the specific and standard conditions in Schedules 1 and 2 of this permit.

Signed

sch4p4(6) Personal info

Delegate

Environmental Protection Act 1994

6.6.2012

Notice to Applicant

The conditions on this permit have been decided after consideration of the standard criteria (EP Act) and for the purpose of preventing environmental harm. The applicant may apply for a review or appeal against the decision within 10 business days of receipt of this notice (s521 and s531).

400 George Street
GPO Box 2454
BRISBANE QLD 4001
Telephone (07) 3330 5695
Website www.derm.qld.gov.au
ABN 46 640 294 485

Schedule 2 of 2 – Standard Conditions

1. Volume / mass of contaminated soil

This permit applies to the specified volume or mass only. Any increases to the specified quantity will require a new disposal permit.

2. Disposal time period

Disposal must occur within the dates specified or a new disposal permit must be sought.

3. Excavation and loading

The holder of this disposal permit must take all reasonable precautions necessary to prevent the spillage of contaminated soil during loading and prevent contaminated soil being transported from the site of origin on vehicle tyres and plant and equipment.

4. Transportation

(a) *Transporter to be advised of permit conditions*

Prior to the removal of contaminated soil, the permit holder must provide a copy of the permit and conditions to the transporter.

(b) *Load to be secured*

The contaminated soil must be covered in the transportation vehicle to ensure that the contaminated soil or offensive or noxious gases are not released during transport.

(c) *Cleaning of vehicles and plant equipment*

An effective system must be employed for cleaning of vehicles and plant and equipment which are used to transport or handle contaminated soil which prevents release of contaminants onto any roadway or to any waters or stormwater drainage system.

(d) *Spillage*

Any spillage of contaminants must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise releasing such contaminants or material to any stormwater drainage system, roadside gutter or waters.

5. Receival and disposal

(a) *Licence conditions*

The acceptance and disposal of the contaminated soil must comply with the licence conditions and the specific requirements of the disposal facility.

(b) *Disposal receipts*

Copies of disposal acceptance receipts are to be submitted to the Administering Authority within 10 business days of the date of disposal. The holder of, or person acting under a disposal permit, must comply with the conditions of the permit (s425 of the *Environmental Protection Act 1994*).
Maximum penalty - 100 penalty units.

Johns Allen

From: [sch4p4(6) Personal informati]@butlerpartners.com.au]
Sent: Tuesday, 5 June 2012 2:24 PM
To: Johns Allen
Subject: Bowen Hills Disposal Permit - RNA Development
Attachments: Acceptance - Lined.pdf; Acceptance - Unlined.pdf; Acceptance - Treat.pdf; Application Form - Part B - Wattle Glen.doc; Application Form - Part B - Ti Tree.doc

Hi Allen,

As per our application we are requesting the disposal of 12,610m³ as follows:

Disposal Destination	Estimated In-situ Volume (m ³)	Estimated Bulk Volume (m ³)
Unlined Landfill Disposal (Wattle Glenn)	4,150	6,000
Lined Landfill Disposal (Ti-Tree)	4,750	6,800
Treatment (heavy metals) (Ti-Tree)	80	110
Total		12,610

Landfill Acceptance letters are attached, along with two copies of the DEHP Form B (one for material Wattle Glen and one for material to Ti-Tree).

Hope this clears things up.

Any problems, please give me a call.

Regards,

[sch4p4(6)]

converting waste into clean energy



TI TREE
bioENERGY

A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

May 17, 2012

Ref: RRS - REM - 1125A1

Lined Landfill Disposal

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) Person

Reference: LINED LANDFILL DISPOSAL AT TI TREE BIOENERGY OF 6,800m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4(6)

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6800m³ in volume (approximately), is acceptable for Lined Landfill Disposal at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY
Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at
Champions Way, Willowbank, Qld 4306.
RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: ENRE01296010, ERA 60 1(d)

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.

[illegible]

Resource Recovery Services
Queensland

May 17, 2012

Ref: RRS - REM - 1125A1

Unlined Landfill Disposal

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) Person

Reference: UNLINED LANDFILL DISPOSAL AT WATTLE GLEN LANDFILL OF 6,000m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4(6)

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6000m³ in volume (approximately), is acceptable for Unlined Landfill Disposal at our Wattle Glen Landfill Facility if it meets moisture content <20% at time of disposal, otherwise to be diverted to

Site: Wattle Glen Landfill
Description: Hallets Road, Patrick Street and Greenwood Village Road
Redbank Plains, Queensland 4031.
RP Address: Lot 288 on S31235 and Lot 1 on RP885033,
County of Stanley, Parish of Bundamba.

DA Number: ENRE00975309, ERA 33, ERA 60 2(h) & ERA 62

Site Address: Hallets Road, Redbank Plains, Queensland 4031.
Lot 1 Plan SP231458; Lot 288 Plan SP231458; & Lot 1 Plan SP135673.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.



Veolia Environmental Services (Australia) Pty Ltd
166 Boundary Road, Rocklea, QLD 4106 - tel +61 (0) 4 3275 0111 - fax +61 (0) 4 3275 0101
www.veolia.com.au ABN 20 051 316 584





Samples Acceptable for Unlined Landfill Disposal at Wattle Glen Landfill.

Sample ID	Depth (m)	Sample ID	Depth (m)
A2-1	0.2-0.3	E10-3	0.6-0.8
A2-2	0.4-0.6	F3-2	0.6-0.8
B3-1	0.2-0.4	F4-2	0.4-0.6
E3-3	0.6-0.8	F4-3	0.8-1.0
F7-3	0.8-1.0	F5-1	0.1-0.3
GA122	0.4-0.6	F5-2	0.4-0.6
GA124	0.2-0.3	F7-2	0.4-0.6
A4-1	0.2-0.4	F10-2	0.3-0.5
A4-2	0.6-0.7	F10-3	0.7-0.8
A5-2	0.6-0.8	GA118	0.4-0.6
A6-1	0-0.2	GA120	0.9-1.0
A6-2	0.5-0.8	GA121	0.4-0.6
B2-2	0.5-0.6	GA124	1.9-2.0
B5-1	0.2-0.4	GA125	0.9-1.1
B5-2	0.5-0.6	GA130	0.2-0.3
B6-1	0-0.2	GA17	0.4-0.5
B6-2	0.5-0.7	GA55	0.6-0.7
B7-3	0.6-0.8		
B7-4	1.0-1.1		
B8-3	0.8-0.9		
C2-1	0.2-0.4		
C7-1	0.0-0.2		
C7-2	0.3-0.5		
C7-3	0.7-0.8		
C7-4	1.0-1.2		
C8-1	0-0.2		
C8-3	0.9-1.0		
C9-2	0.3-0.4		
D6-1	0-0.2		
D6-2	0.4-0.6		
D7-2	0.1-0.3		
D8-1	0-0.2		
D10-3	0.8-1.0		
E3-2	0.4-0.5		
E5-2	0.4-0.6		
E6-1	0-0.2		
E8-1	0-0.1		
E8-2	0.3-0.4		
E9-1	0-0.1		
E9-2	0.3-0.5		
E10-2	0.3-0.5		

converting waste into clean energy



TI TREE
bioENERGY

A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

May 17, 2012

Ref: RRS - REM - 1125A1

Soil Treatment

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention:

sch4p4(6) Person

Reference: SOIL TREATMENT AT TI TREE BIOENERGY OF 110m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4(

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 110m³ in volume (approximately), is acceptable for Soil Treatment at our Ti Tree bioENERGY Facility for PAH treatment.

Site: Ti Tree bioENERGY

Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at
Champions Way, Willowbank, Qld 4306.

RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: ENRE01296010, ERA 60 1(d)

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.

[illegible]

Bring Up Details Report

379808 - Movement, Treatment Or Disposal Of Contaminated Soil/631 Gregory Terrace, Bowen Hills/Butler Partners Pty Ltd

Ref:	<input type="text" value="84804"/>	Created Date:	<input type="text" value="31/MAY/12"/>
Status:	<input type="text" value="Submitted"/>	Closed Date:	<input type="text"/>
Assigned To:	<input type="text" value="READY, Kelli-Jean"/>	Due Date:	<input type="text" value="05/JUN/12"/>
Email Address:	<input type="text" value="Kelli.Ready@derm.qld.gov.au"/>	Reminder Date:	<input type="text"/>
Project Director:	<input type="text"/>		
Project Manager:	<input type="text"/>		
CC:	<input type="text"/>		
CC:	<input type="text"/>		
Subject:	<input type="text" value="Contaminated Land Disposal Permit - CLEB03023212"/>		
Comments:	<input type="text" value=" Project Number : 379808
 Permit Number : CLEB03023212
 Client: Butler Partners Pty Ltd
 Lot on Plan : Lots 103 and 104 on SP219236
 Location: 11 Symes Street BOWEN HILLS and 191 Constance Street BOWEN HILLS"/>		



Project Running Report

Date 24-MAY-2012 **Status** Application Validation **Decision** Level 2

Agency Interests/Ratings

Category	Type	Rating
----------	------	--------

Permits: 1

Permit Ref	Permit Type	Status
CLEB03023212	Contaminated Soil Disposal Permit	Assessment

Published on DES Disclosure Log
RTI Act 2009

Application Form

Part A

General details for all applications

OFFICIAL USE ONLY

DATE RECEIVED

--	--	--

FILE REF

--

PROJECT REF

--

COMPLETE FORM

☐

ENTERED BY [SIGNATURE]

--

DATE

--	--	--

RECEIPTING DETAILS ONLY

DATE RECEIPTED

--	--	--

RECEIPT NUMBER

--

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

--

GUIDE

1. The applicant is the person intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the address of a person and cannot be a post office box.

If more than one applicant as part of a partnership, complete the "Joint applicant details" form and attach to this PART A form.

Important information for applicants

This form asks for general applicant details and a description of the proposed project and any associated activities. The completed form must be submitted together with relevant activity specific [Part B] forms.

Specific details must accompany this form to enable your application to be processed. The guide provided will help you complete your application correctly. If you have any difficulties completing the form, contact Permit and Licence Management on 1300 130 372. Please number all attachments alphabetically (e.g. 'Attachment A').

(Commercial and confidential information must be marked clearly. If subsequent activities are added to the project, you will be required to resubmit this application with details of the additional activity).

Tick relevant boxes below if the applicant(s) are:

- ☐ an individual or sole trader
- ☐ individuals in a partnership
- ☐ individual(s) acting on behalf of an unincorporated organisation

→ Go to Section 1

- ☒ an incorporated company
- ☐ an incorporated association
- ☐ a statutory authority
- ☐ a body politic

→ Go to Section 2

1. Individual applicant(s) details⁽¹⁾

APPLICANT'S FULL NAME	TITLE	DATE OF BIRTH
-----------------------	-------	---------------

REGISTERED ADDRESS	POST CODE
--------------------	-----------

TELEPHONE	FACSIMILE	E-MAIL
-----------	-----------	--------

POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)	POST CODE
---	-----------

Application form – Part A

General details for all applications

Approvals required

Please list all Part B application forms you are attaching to this form.

APPLICATION FORMS

Part B - Contaminated Soil Disposal application

Project site

Where will the activities be conducted? Provide the street address, real property description(s) of the land(s) in which the project is located and local government area. If you require more space, attach a separate sheet.

This information should at least provide enough details to allow a Department of Environment and Resource Management officer to locate the site of the proposal.

STREET ADDRESS

Lots 103 and 104 on SP219236

LOT

as above

PLAN

as above

LOCAL GOVERNMENT AREA

Brisbane City Council

If possible, provide a specific location within a protected area, a property name or an attached map with the project area clearly delineated. Also include the map name/details.

Give as much information as possible to accurately locate your activity, for example maps with contextual or boundary lines on plan or GPS boundary co-ordinates.

SPECIFIC LOCATION/PROPERTY NAME

PROTECTED AREA

GEOGRAPHICAL CO-ORDINATES

Geographical co-ordinates can include northing/easting, longitude/latitude.

Attachments

List all attached documents, including maps containing information supporting this application in the space below. If there are no attachments mark "N/A."

Label all attachments alphabetically (e.g. 'Attachment A')

ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY – E.G. "ATTACHMENT A")

Application Form B, Application Covering Letter, Landfill acceptance letter, Drawing No. 2 Rev A, Drawing No. 4 Rev A, Table 2, Table 3, laboratory documentation, bore logs with explanatory notes, Certificates of Title, Registered Plans

Guardian details (if applicable)

A parent or legal guardian must complete the following details if an applicant is under 18 years of age.

GUARDIAN'S FULL NAME	DATE OF BIRTH
GUARDIAN'S REGISTERED ADDRESS	POST CODE
GUARDIAN'S SIGNATURE	DATE

→ Go to Section 3

2. Applicant details

2. The applicant is the registered legal entity (not a business trading name) intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the registered business address of the company making the application and cannot be a post office box.

Enter the Australian Business Number (ABN); or the Australian Company Number (ACN) of the incorporated company; or the Association Number (AN) of the incorporated association; or the title and section of the legislation that gives the statutory corporation its legal status.

REGISTERED LEGAL ENTITY NAME Butler Partners Pty Ltd		
TRADING NAME (IF APPLICABLE)		
REGISTERED ADDRESS 79 Doggett Street Newstead QLD		POST CODE 4006
TELEPHONE (07) 3852 3800	FASCIMILE (07) 3852 3808	E-MAIL/WEBSITE www.butlerpartners.com.au
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) PO BOX 2267 Fortitude Valley BC		POST CODE 4006
ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION 14 816 574 868		

Application form – Part A

General details for all applications

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME sch4p4(6) Personal information		TITLE
POSITION IN CORPORATION Associate		
TELEPHONE (07) 3852 3800	FASCIMILE (07) 3825 3808	E-MAIL/WEBSITE sch4p4(6) P butlerpartners.co m.au
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) as above		POST CODE

Authorised signatory

The authorised signatory is the person authorised to sign an application on behalf of a corporation and in doing so declares that the corporation will be bound by the conditions associated with the granting of the licence or permit.

AUTHORIZED SIGNATORY FULL NAME sch4p4(6) Personal information	TITLE
POSITION IN CORPORATION Associate	

3. Project details

Pre-lodgement

Have you previously attended a pre-lodgement meeting or submitted a pre-lodgement form for this project?

☒ NO ☐ YES

PROJECT NUMBER (IF APPLICABLE)

Project description

Briefly describe the proposed activities, works, development or management. Attach a separate sheet if there is insufficient space below.

DESCRIPTION
Basement Excavation

4. Applicant's certification

Note: If you have not told the truth in this application you may be liable for prosecution under the relevant Acts or Regulations.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge.
- I understand that information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT(1) SIGNATURE	Sch4p4(6) Personal inform
------------------------	----------------------------

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE 18.05.2012

Complete the following checklist.

- ☒ Application form(s) signed and completed
- ☐ Permit fees paid or enclosed (if applicable)
- ☒ Supporting information attached (e.g. maps)

Please return your completed application to:

Permit and Licence Management
Implementation Support Unit
Department of Environment and Resource Management
GPO Box 2454
Brisbane Queensland 4001

Enquiries: 1300 130 372
Facsimile: (07) 3896 3342
Email: palm@derm.qld.gov.au

Application form

Environmental Protection Act

Application for contaminated soil disposal permit – Part B

This form sets out the specific details required for an application under s424 of the Environmental Protection Act 1994 for a permit to dispose of contaminated soil offsite. A contaminated soil disposal permit is required before you can proceed lawfully with your project and any associated activities.

1. Specific information requirements

1.1 Please provide details of site(s) from which soil is to be removed

If you require additional space, attach the information requested and make reference to that sheet here.

FULL STREET ADDRESS OF SITE(S) Lot 103 on SP219236 and Lot 104 on SP219236	
LOT(S) as above	PLAN(S) as above
LOCAL GOVERNMENT AREA Brisbane City Council	

1.2 Has a site investigation report been submitted to the Department of Environment and Resource Management (DERM)?

☒ NO

☐ YES

DERM PROJECT REFERENCE OR FILE NUMBER? (IF KNOWN)

1.3 Please provide a copy of the current Certificate of Title to the land

☒ ENCLOSED WITH THIS APPLICATION

☐ SUBMITTED PREVIOUSLY TO EPA AS PART OF A SITE INVESTIGATION / VALIDATION REPORT

1.4 Has the site been used for a notifiable activity as per Schedule 3 of the *Environmental Protection Act 1994*?

☐ NO

☒ YES (PLEASE SPECIFY) HAZARDOUS CONTAMINANT

1.5 Is the site presently being used for a notifiable activity?

☒ NO

☐ YES (PLEASE SPECIFY)

1.6 Is the site currently on the Environmental Management Register or Contaminated Land Register?

☒ YES ☐ NO (IF NO, YOU MUST SUBMIT A NOTIFICATION FORM TO THE DERM)

1.7 Has contaminated soil been removed from this site in the past?

☐ NO (GO TO QUESTION 19) ☒ YES

1.8 Was approval for off-site disposal obtained?

☐ NO ☒ YES

1.9 What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)?

6,000m3 for disposal to unlined landfill

1.10 How did you calculate the volume of soil to be removed?

Based on in-situ estimate of contaminated material

1.11 What are the dates between which soil will be moved to the disposal location?

FROM DATE:
28 May 2012

TO DATE:
28 May 2013

(In accordance with Section 424(7), permits will only be valid between dates stipulated in the disposal permit)

1.12 Justification of request?

State reason(s) why on-site treatment or management is not proposed

Material excess to site use - basement excavation

1.13 Will validation sampling be undertaken to confirm that all soil has been removed?

☐ NO ☒ YES

1.14 Provide a description of the contamination present in the soil to be removed?

Total PAH (182mg/kg), benzo(a)pyrene (19.4mg/kg), C15-C28(1,870mg/kg), C29-C36 (1,340mg/kg) Cd (6mg/kg), Cr (138mg/kg), Pb (558mg/kg), Hg (4.7mg/kg), Zn (6,000mg/kg)

1.15 Please tick relevant boxes to indicate that you have attached the following information with this application?

- ☒ Scaled plan showing soil sampling locations and contamination source(s)
- ☒ Tabulation of soil analysis results
- ☒ Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples
- ☒ Laboratory reports and sample receipt advices for all soil analysis
- ☒ Explanation of location and depths of samples, how samples were collected, and how sample integrity was maintained

1.16 Written acceptance from owner of site receiving contaminated soil?

- (a) ☐ Soil being removed to a local government administered landfill

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

- ☐ Written acceptance from local government authority is enclosed

- (b) ☒ Soil being removed not going to a local government-administered landfill

- ☐ Copy of Certificate of Title for the disposal location site

LOT(S) 288 1	PLAN(S) S31235 RP885033
FULL STREET ADDRESS OF SITE(S) 5HALLETS RD/PATRICK ST & GREENWOOD VILLAGE RD, RED BANK PLAINS (WATTLE GLEN)	

- ☒ Written acceptance from registered owner of site is enclosed with this application

Declaration

Note: If you do not tell the truth in this application you may be liable for prosecution under the relevant legislation.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge. I understand that it is an offence under s480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

Application form – Part B
Contaminated soil disposal permit

APPLICANT'S NAME BUTLER PARTNERS PTY LTD	PRINT NAME OF APPOINTED SIGNATORY (IF APPLICABLE) sch4p4(6) Personal
APPLICANT'S SIGNATURE / APPOINTED SIGNATORY sch4p4(6) Personal info	DATE 18.05.2012

Applicant checklist

- ☒ Application form(s) completed and signed
- ☒ Supporting information attached (if applicable)

Please return your completed application kit to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Resource Management
GPO Box 2454
Brisbane Queensland 4001

Enquiries: **1300 130 372**
Facsimile: (07) 3896 3342
palm@derm.qld.gov.au

You may apply for an exemption from disclosing information contained in a document submitted, or proposed to be submitted with this application (see Section 564 of the *Environmental Protection Act 1994*).

Application form

Environmental Protection Act

Application for contaminated soil disposal permit – Part B

This form sets out the specific details required for an application under s424 of the Environmental Protection Act 1994 for a permit to dispose of contaminated soil offsite. A contaminated soil disposal permit is required before you can proceed lawfully with your project and any associated activities.

1. Specific information requirements

1.1 Please provide details of site(s) from which soil is to be removed

If you require additional space, attach the information requested and make reference to that sheet here.

FULL STREET ADDRESS OF SITE(S) Lot 103 on SP219236 and Lot 104 on SP219236	
LOT(S) as above	PLAN(S) as above
LOCAL GOVERNMENT AREA Brisbane City Council	

1.2 Has a site investigation report been submitted to the Department of Environment and Resource Management (DERM)?

☒ NO ☐ YES DERM PROJECT REFERENCE OR FILE NUMBER? (IF KNOWN)

1.3 Please provide a copy of the current Certificate of Title to the land

☒ ENCLOSED WITH THIS APPLICATION ☐ SUBMITTED PREVIOUSLY TO EPA AS PART OF A SITE INVESTIGATION / VALIDATION REPORT

1.4 Has the site been used for a notifiable activity as per Schedule 3 of the *Environmental Protection Act 1994*?

☐ NO ☒ YES (PLEASE SPECIFY) HAZARDOUS CONTAMINANT

1.5 Is the site presently being used for a notifiable activity?

☒ NO ☐ YES (PLEASE SPECIFY)

1.6 Is the site currently on the Environmental Management Register or Contaminated Land Register?

☒ YES ☐ NO (IF NO, YOU MUST SUBMIT A NOTIFICATION FORM TO THE DERM)

1.7 Has contaminated soil been removed from this site in the past?

☒ NO (GO TO QUESTION 19) ☐ YES

1.8 Was approval for off-site disposal obtained?

☐ NO ☐ YES

1.9 What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)?

6,800m³ for disposal to lined landfill disposal
110m³ for disposal to treatment for heavy metals

1.10 How did you calculate the volume of soil to be removed?

Based on in-situ estimate of contaminated material

1.11 What are the dates between which soil will be moved to the disposal location?

FROM DATE: 28 May 2012	TO DATE: 28 May 2013
---------------------------	-------------------------

(In accordance with Section 424(7), permits will only be valid between dates stipulated in the disposal permit)

1.12 Justification of request?

State reason(s) why on-site treatment or management is not proposed

Material excess to site use - basement excavation

1.13 Will validation sampling be undertaken to confirm that all soil has been removed?

☐ NO ☒ YES

1.14 Provide a description of the contamination present in the soil to be removed?

Total PAH (1,124.2mg/kg), benzo(a)pyrene (63.4mg/kg), C15-C28(1,870mg/kg), C29-C36 (1,340mg/kg) Cd (6mg/kg), Cr (138mg/kg), Pb (6,000mg/kg), Hg (4.7mg/kg), Zn (6,000mg/kg))

1.15 Please tick relevant boxes to indicate that you have attached the following information with this application?

- ☒ Scaled plan showing soil sampling locations and contamination source(s)
- ☒ Tabulation of soil analysis results
- ☒ Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples
- ☒ Laboratory reports and sample receipt advices for all soil analysis
- ☒ Explanation of location and depths of samples, how samples were collected, and how sample integrity was maintained

1.16 Written acceptance from owner of site receiving contaminated soil?

- (a) ☐ Soil being removed to a local government administered landfill

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

- ☐ Written acceptance from local government authority is enclosed

- (b) ☒ Soil being removed not going to a local government-administered landfill

- ☐ Copy of Certificate of Title for the disposal location site

LOT(S) 3 and 8	PLAN(S) SP168875 and RP24574
FULL STREET ADDRESS OF SITE(S) 55 Champions Way, Willowbank, Queensland 4306	

- ☒ Written acceptance from registered owner of site is enclosed with this application

Declaration

Note: If you do not tell the truth in this application you may be liable for prosecution under the relevant legislation.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge. I understand that it is an offence under s480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

Application form – Part B
Contaminated soil disposal permit

APPLICANT'S NAME BUTLER PARTNERS PTY LTD	PRINT NAME OF APPOINTED SIGNATORY (IF APPLICABLE) sch4p4(6) Persona
APPLICANT'S SIGNATURE sch4p4(6) Personal in	DATE 18.05.2012

Applicant checklist

- ☒ Application form(s) completed and signed
- ☒ Supporting information attached (if applicable)

Please return your completed application kit to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Resource Management
GPO Box 2454
Brisbane Queensland 4001

Enquiries: **1300 130 372**
Facsimile: (07) 3896 3342
palm@derm.qld.gov.au

You may apply for an exemption from disclosing information contained in a document submitted, or proposed to be submitted with this application (see Section 564 of the *Environmental Protection Act 1994*).

Resource Recovery Services
Queensland

May 17, 2012

Ref: RRS - REM - 1125A1

Unlined Landfill Disposal

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) Persona

Reference: UNLINED LANDFILL DISPOSAL AT WATTLE GLEN LANDFILL OF 6,000m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4(6)

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6000m³ in volume (approximately), is acceptable for Unlined Landfill Disposal at our Wattle Glen Landfill Facility if it meets moisture content <20% at time of disposal, otherwise to be diverted to

Site: Wattle Glen Landfill
Description: Hallets Road, Patrick Street and Greenwood Village Road
Redbank Plains, Queensland 4031.
RP Address: Lot 288 on S31235 and Lot 1 on RP885033,
County of Stanley, Parish of Bundamba.

DA Number: ENRE00975309, ERA 33, ERA 60 2(h) & ERA 62

Site Address: Hallets Road, Redbank Plains, Queensland 4031.
Lot 1 Plan SP231458; Lot 288 Plan SP231458; & Lot 1 Plan SP135673.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.



Veolia Environmental Services (Australia) Pty Ltd
166 Boundary Road, Rocklea, QLD 4106 - tel +61 (0) 4 3275 0111 - fax +61 (0) 4 3275 0101
www.veolia.com.au ABN 20 051 316 584





Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

sch4p4(6) Personal informa

Environmental Engineer

Tel: 07 3275 0164

Mob: sch4p4(6) Pd

Fax: 07 3275 0101

emial: sch4p4(6) Person@veolia.com.au

qld.remediation@veolia.com.au





Samples Acceptable for Unlined Landfill Disposal at Wattle Glen Landfill.

Sample ID	Depth (m)	Sample ID	Depth (m)
A2-1	0.2-0.3	E10-3	0.6-0.8
A2-2	0.4-0.6	F3-2	0.6-0.8
B3-1	0.2-0.4	F4-2	0.4-0.6
E3-3	0.6-0.8	F4-3	0.8-1.0
F7-3	0.8-1.0	F5-1	0.1-0.3
GA122	0.4-0.6	F5-2	0.4-0.6
GA124	0.2-0.3	F7-2	0.4-0.6
A4-1	0.2-0.4	F10-2	0.3-0.5
A4-2	0.6-0.7	F10-3	0.7-0.8
A5-2	0.6-0.8	GA118	0.4-0.6
A6-1	0-0.2	GA120	0.9-1.0
A6-2	0.5-0.8	GA121	0.4-0.6
B2-2	0.5-0.6	GA124	1.9-2.0
B5-1	0.2-0.4	GA125	0.9-1.1
B5-2	0.5-0.6	GA130	0.2-0.3
B6-1	0-0.2	GA17	0.4-0.5
B6-2	0.5-0.7	GA55	0.6-0.7
B7-3	0.6-0.8		
B7-4	1.0-1.1		
B8-3	0.8-0.9		
C2-1	0.2-0.4		
C7-1	0.0-0.2		
C7-2	0.3-0.5		
C7-3	0.7-0.8		
C7-4	1.0-1.2		
C8-1	0-0.2		
C8-3	0.9-1.0		
C9-2	0.3-0.4		
D6-1	0-0.2		
D6-2	0.4-0.6		
D7-2	0.1-0.3		
D8-1	0-0.2		
D10-3	0.8-1.0		
E3-2	0.4-0.5		
E5-2	0.4-0.6		
E6-1	0-0.2		
E8-1	0-0.1		
E8-2	0.3-0.4		
E9-1	0-0.1		
E9-2	0.3-0.5		
E10-2	0.3-0.5		

converting waste into clean energy



TI TREE
bioENERGY
A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

May 17, 2012

Ref: RRS - REM - 1125A1

Soil Treatment

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) Person

Reference: SOIL TREATMENT AT TI TREE BIOENERGY OF 110m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dea sch4p4(6)

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 110m³ in volume (approximately), is acceptable for Soil Treatment at our Ti Tree bioENERGY Facility for PAH treatment.

Site: Ti Tree bioENERGY
Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.
RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.
DA Number: ENRE01296010, ERA 60 1(d)
Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code: 0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.

www.titreebioenergy.com.au

J.J. Richards & SONS PTY LTD **VEOLIA**
ENVIRONMENTAL SERVICES



Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

[Redacted Signature]
sch4p4(6) Personal inf

Environmental Engineer

Tel: 07 3275 0164

Mob: sch4p4(6) Per

Fax: 07 3275 0101

emial: sch4p4(6) Personal@veolia.com.au
qld.remediation@veolia.com.au



TI TREE
bioENERGY

[illegible]

converting waste into clean energy



TI TREE

bioENERGY

A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

May 17, 2012

Ref: RRS - REM - 1125A1

Lined Landfill Disposal

Butler Partners
P.O. Box 2267
Fortitude Valley QLD 4006

Attention: sch4p4(6) Person

Reference: LINED LANDFILL DISPOSAL AT TI TREE BIOENERGY OF 6,800m³ OF
CONTAMINATED MATERIALS FROM THE RNA ZONE B PROJECT
SITUATED AT GREGORY TERRACE BOWEN HILLS QLD

Dear sch4p4(

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Butler Partners. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6800m³ in volume (approximately), is acceptable for Lined Landfill Disposal at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY
Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at
Champions Way, Willowbank, Qld 4306.
RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.
DA Number: ENRE01296010, ERA 60 1(d)
Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.

www.titreebioenergy.com.au

J.J. Richards
& SONS PTY LTD

VEOLIA
ENVIRONMENTAL SERVICES

Page 1 of 3



Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

[Redacted Signature]

[Redacted] sch4p4(6) Personal infor

Environmental Engineer

Tel: 07 3275 0164

Mob: [Redacted] sch4p4(6) Pe

Fax: 07 3275 0101

emial: [Redacted] sch4p4(6) Personalveolia.com.au

qld.remediation@veolia.com.au

[illegible]

J.J. Richards & Sons Pty Ltd  **VEOLIA**
ENVIRONMENTAL SERVICES

DRAFT

Butler Partners Pty Ltd
 800 14 814 114
 79 Doggett Street
 Newcastle, Queensland 4006
 P.O. Box 2267
 Fortitude Valley, BC
 Queensland 4006

www.butterpartners.com.au

Ph: 61 7 3852 3880
 Fax: 61 7 3852 3888
 enquiries@butterpartners.com.au

LEGEND

- Proposed Sample Location
- GA10 Previously Investigated Area (by Golder Associates)
- Sampling Grid
- Area Investigated

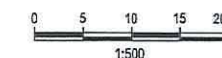
RNA REDEVELOPMENT - ZONE B

RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

CONTAMINATED SOIL DISPOSAL
 CATEGORIES AND IN-SITU VOLUMES

CLIENT:
 L & D CONTRACTING

SCALE AT A3:



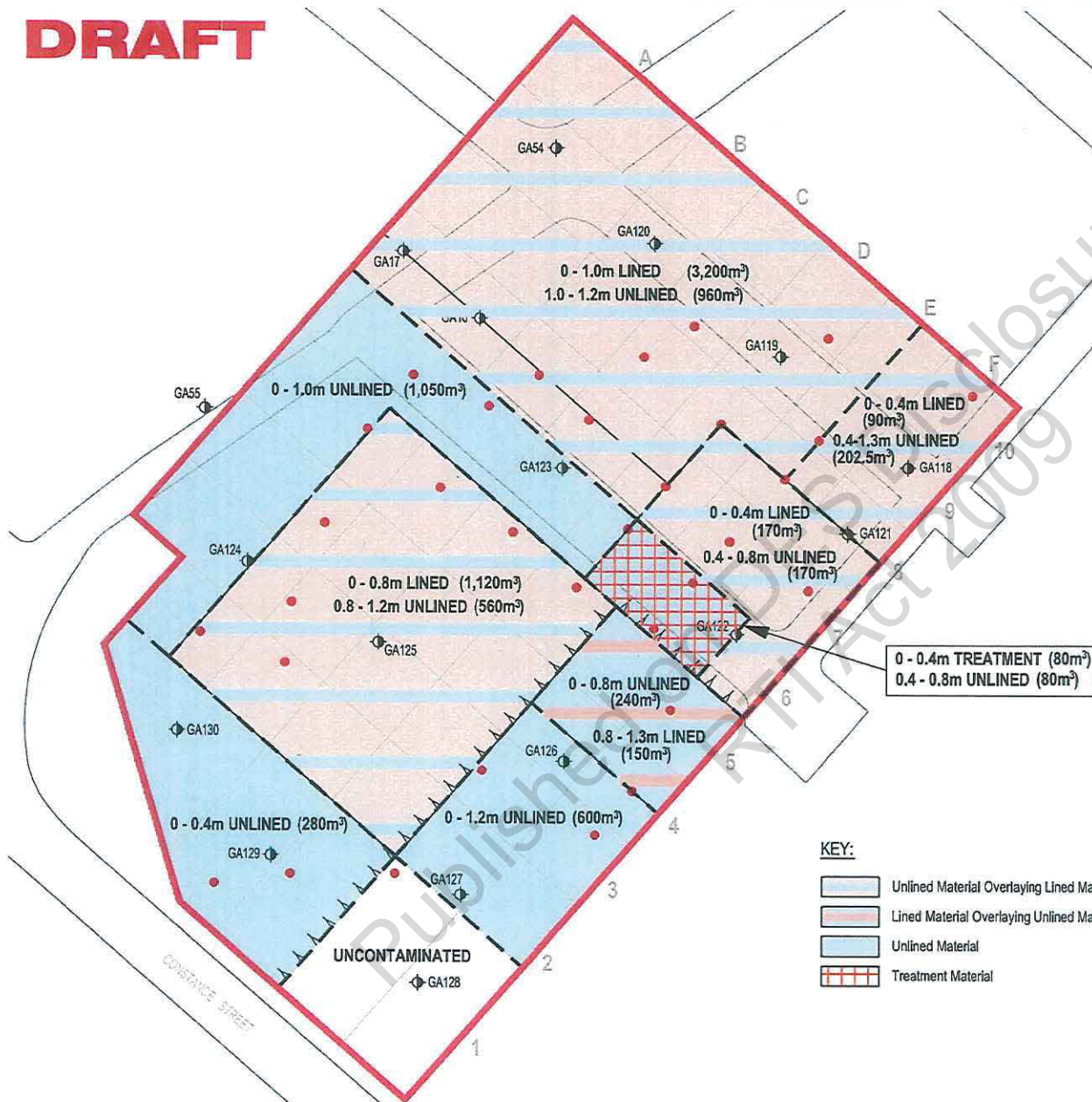
DATE: MAY 2012

DRAWN: FD

APPROVED:

PROJECT No: 011-165C

DRAWING No: 4 REV: A



CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 13855668

Search Date: 15/05/2012 11:14

Title Reference: 50829662

Date Created: 11/11/2010

Previous Title: 50658052

50658054

50658058

REGISTERED OWNER

Dealing No: 713512624 12/10/2010

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL
ASSOCIATION OF QUEENSLAND

ESTATE AND LAND

Estate in Fee Simple

LOT 104 SURVEY PLAN 219236

County of STANLEY

Parish of NORTH BRISBANE

Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 13833226 (POR 485)
(POR 487)
(POR 641)
2. LEASE No 713732238 25/02/2011 at 11:23
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351
OF THE WHOLE OF THE LAND
TERM: 21/12/2010 TO 20/12/2030 OPTION NIL
3. MORTGAGE No 713732241 25/02/2011 at 11:24
LEND LEASE (BOWEN HILLS) PTY LTD A.B.N. 68 127 727 351
4. CAVEAT No 713841631 09/05/2011 at 11:47
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713690945	HERITGE SITE	01/02/2011 09:05	CURRENT

QUEENSLAND HERITAGE ACT 1992

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

Page 1/1

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 13855298
Search Date: 15/05/2012 10:58

Title Reference: 50829661
Date Created: 11/11/2010

Previous Title: 50658054

REGISTERED OWNER

Dealing No: 713512624 12/10/2010

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL
ASSOCIATION OF QUEENSLAND

ESTATE AND LAND

Estate in Fee Simple

LOT 103 SURVEY PLAN 219236
County of STANLEY Parish of NORTH BRISBANE
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 13833226 (POR 485)
2. LEASE No 713732238 25/02/2011 at 11:23
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351
OF THE WHOLE OF THE LAND
TERM: 21/12/2010 TO 20/12/2030 OPTION NIL
3. MORTGAGE No 713732241 25/02/2011 at 11:24
LEND LEASE (BOWEN HILLS) PTY LTD A.B.N. 68 127 727 351
4. CAVEAT No 713841631 09/05/2011 at 11:47
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ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713690945	HERITAGE SITE	01/02/2011 09:05	CURRENT

QUEENSLAND HERITAGE ACT 1992

UNREGISTERED DEALINGS - NIL

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** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM



**Queensland
Government**

Level 8, 400 George St, Brisbane, Queensland, GPO Box 2454 QLD 4001 Australia
Telephone (07)3330 5685, Facsimile(07)3330 5754
www.derm.qld.gov.au/environmental_management/land/contaminated_land

SEARCH RESPONSE
ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 48957085 EMR Site Id: 92051 31 May 2012
This response relates to a search request received for the site:
Lot: 103 Plan: SP219236

EMR RESULT

The above site IS included on the Environmental Management Register.
The site you have searched has been subdivided from the following site, which is included on the EMR.
Subdivided new parcels will remain on the EMR unless it can be shown that they are not located near the
contaminating activity.

Lot: 485 Plan: SP192466
Address: 631 GREGORY TERRACE
BOWEN HILLS 4006

The site has been subject to contamination from a hazardous contaminant as follows:
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant. Refer to the
summary given below.
Lead up to 9910 mg/kg, Benzo (a) Pyrene up to 47.1 mg/kg, PAH up to 556.3 mg/kg, TPH up to 3120
mg/kg.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

From the 1st August 2011, the price of an EMR/CLR search will increase to \$40.15 per lot for
internet based searches and \$47.20 per lot for EMR/CLR searches done by means other than the
internet.

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Registrar
Contaminated Land Unit



**Queensland
Government**

Level 8, 400 George St, Brisbane, Queensland, GPO Box 2454 QLD 4001 Australia
Telephone (07)3330 5685, Facsimile(07)3330 5754
www.derm.qld.gov.au/environmental_management/land/contaminated_land

SEARCH RESPONSE
ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 48957087 EMR Site Id: 91843 31 May 2012
This response relates to a search request received for the site:
Lot: 104 Plan: SP219236

SEARCH RESULT

The site you have searched is a lot resulting from the amalgamation of the following sites, which are included on the Environmental Management Register (EMR) or the Contaminated Land Register (CLR), as indicated below. Further details for these sites are available by contacting this Agency.

Lot	Plan	
485	SP192466	EMR
487	SP196776	EMR

ADDITIONAL ADVICE

From the 1st August 2011, the price of an EMR/CLR search will increase to \$40.15 per lot for internet based searches and \$47.20 per lot for EMR/CLR searches done by means other than the internet.

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Registrar
Contaminated Land Unit

[-] Search

Profile
Find/Locate

Admin Area
Imagery
Notings
Place Names
Survey Marks
Survey Plans

[-] Mapping

Profile
Settings

[-] Data Suppression

Area By Filter
Area By Scale
Survey Mark Filter
Noting Filter

[-] Map Suppression

Layers
User Defined

Shading
Define Area
Build Map
Refresh Map
Export SmartMap

[+] Other Services

[+] Admin

Hide Keymap

Spatial Search Results for Lot 103 on Plan SP219236

Search Imagery at Point

Survey Search on selected plan(s)

Lot/Plan	103/SP219236
Segment/Parcel:	25150/230
Tenure:	FH - FREEHOLD
Area:	2321.00 m ²
Excluded Area:	0.00 m ²
Surveyed:	Yes
Coverage:	Base
Accuracy:	STANDARD 1:2500 CADASTRAL MAP - 1.5M
Locality:	BOWEN HILLS
Local Government:	BRISBANE CITY
Address:	191 CONSTANCE STREET , BOWEN HILLS
<u>Retrieve Plan Image</u>	
<u>Display additional data</u>	
<u>Current Title Search</u>	
<u>Build Map</u>	

[-] Search

Profile
Find/Locate

Admin Area
Imagery
Notings
Place Names
Survey Marks
Survey Plans

[-] Mapping

Profile
Settings
[-] Data Suppression
Area By Filter
Area By Scale
Survey Mark Filter
Noting Filter

[-] Map Suppression

Layers
User Defined

Shading
Define Area
Build Map
Refresh Map
Export SmartMap

[+] Other Services

[+] Admin

Hide Keymap

Spatial Search Results for Lot 104 on Plan SP219236

Search Imagery at Point

Survey Search on selected plan(s)

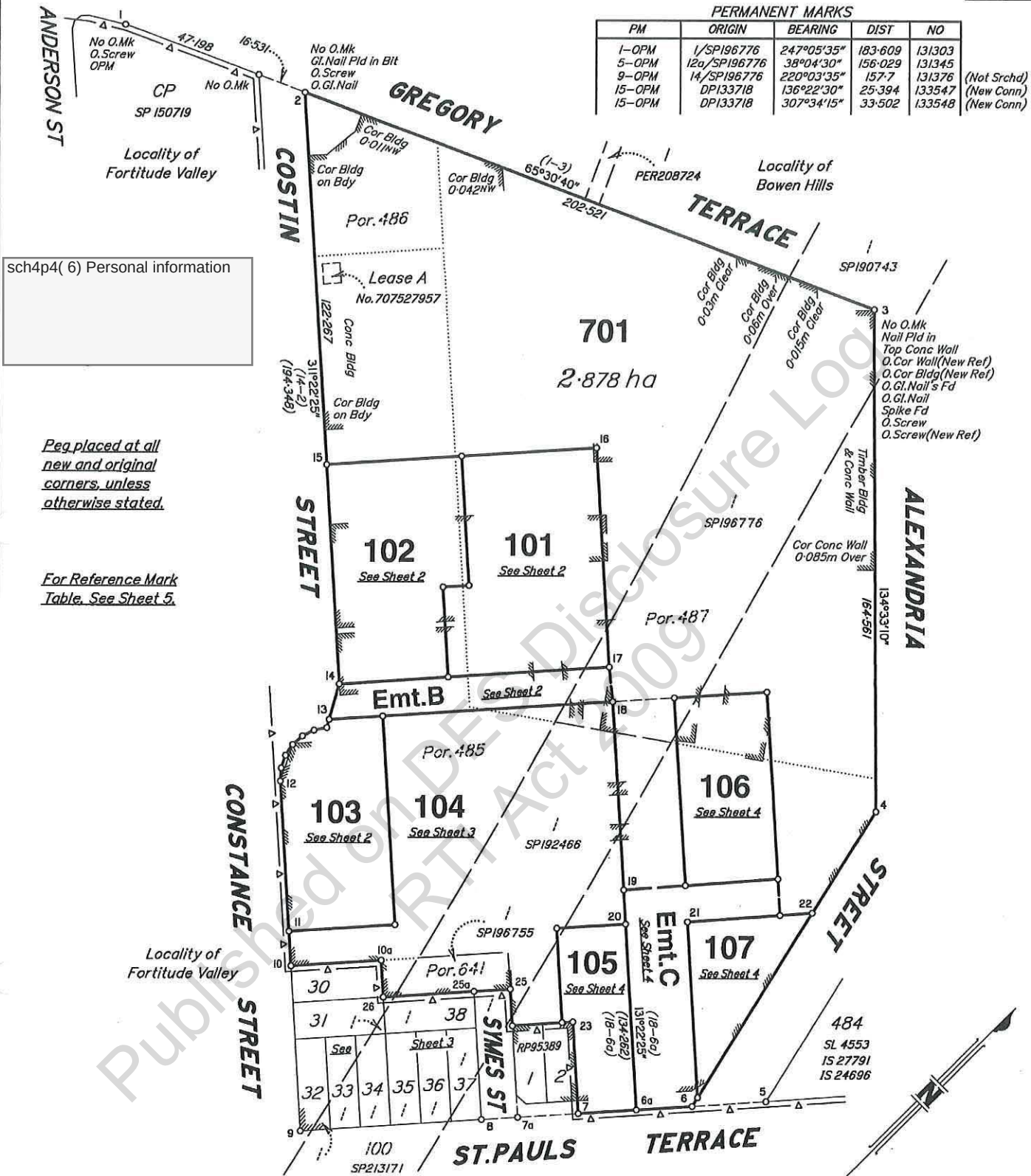
Lot/Plan	104/SP219236
Segment/Parcel:	25150/231
Tenure:	FH - FREEHOLD
Area:	7266.00 m ²
Excluded Area:	0.00 m ²
Surveyed:	Yes
Coverage:	Base
Accuracy:	STANDARD 1:2500 CADASTRAL MAP - 1.5M
Locality:	BOWEN HILLS
Local Government:	BRISBANE CITY
Address:	11 SYMES STREET , BOWEN HILLS

Retrieve Plan Image
Display additional data
Current Title Search
Build Map

PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO
1-OPM	1/SP196776	247°05'35"	183.609	131303
5-OPM	12a/SP196776	38°04'30"	156.029	131345
9-OPM	14/SP196776	220°03'35"	157.7	131376
15-OPM	DP133718	136°22'30"	25.394	133547
15-OPM	DP133718	307°34'15"	33.502	133548

(Not Srchd)
(New Conn)
(New Conn)



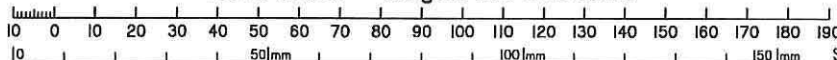
Peg placed at all new and original corners, unless otherwise stated.

For Reference Mark Table. See Sheet 5.

T.H. JENSEN & BOWERS PTY. LTD. (ACN 010 872 607) hereby certify that the land comprised in this plan was surveyed by the corporation, by Scott James MORRISON, surveying graduate, for whose work the corporation accepts responsibility, under the supervision of David George BURKE, cadastral surveyor, and that the plan is accurate, that the said survey was performed in accordance with the Survey and Mapping Infrastructure Act 2003 and Surveyors Act 2003 and associated Regulations and Standards and that the said survey was completed on 23/06/10

sch4p4(6) Personal inform

Scale 1:1250 - Lengths are in Metres.



State copyright reserved.

Plan of Lots 101-107, 701 and Easements B & C in Lot 701

Cancelling Lot 485 on SP192466, Lot 486 on SL4553, Lot 487 on SP196776 and Lot 641 on SP196755.

PARISH: **NORTH BRISBANE** COUNTY: **Stanley**

Meridian: **SP196776**

F/N's: **No**

Scale: **1:1250**

Format: **STANDARD**



SP219236

Plan Status:

(Dealing No.)		WARNING : Folded or Mutilated Plans will not be accepted. Plans may be rolled. Information may not be placed in the outer margins.					
		Registered			5. Lodged by		
		(Include address, phone number, reference, and Lodger Code)					

1. Certificate of Registered Owners or Lessees. I/We <u>THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION OF QUEENSLAND</u> (Names in full) *as Registered Owners of this land agree to this plan and dedicate the Public Use Land as shown hereon in accordance with Section 50 of the Land Title Act 1994. *as Lessees of this land agree to this plan. Signature of *Registered Owners *Lessees				6. Existing <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <th>Title Reference</th> <th>Lot</th> <th>Plan</th> <th>Lots</th> <th>Emts</th> <th>Road</th> </tr> <tr> <td>50658054</td> <td>485</td> <td>SP192466</td> <td>101-107 & 701</td> <td>B & C</td> <td>-</td> </tr> <tr> <td>50658029</td> <td>486</td> <td>SL4553</td> <td>701</td> <td>-</td> <td>-</td> </tr> <tr> <td>50658052</td> <td>487</td> <td>SP196776</td> <td>101, 102, 104, 106 & 701</td> <td>B</td> <td>-</td> </tr> <tr> <td>50658058</td> <td>641</td> <td>SP196755</td> <td>104</td> <td>-</td> <td>-</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small; margin: 10px auto;"> <tr> <th colspan="3" style="text-align: center;">MORTGAGE ALLOCATIONS</th> </tr> <tr> <th>Mortgage</th> <th>Lots Fully Encumbered</th> <th>Lots Partially Encumbered</th> </tr> <tr> <td>601742907</td> <td>101-107 & 701</td> <td>-</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small; margin: 10px auto;"> <tr> <th colspan="2" style="text-align: center;">EXISTING LEASE ALLOCATIONS</th> </tr> <tr> <th>Lease</th> <th>Lots to be Encumbered</th> </tr> <tr> <td>707527957</td> <td>701</td> </tr> </table> <p style="text-align: center; font-size: x-small; margin: 10px auto;"> <i>Encroachment notice issued to the owner(s) of Lot 2 on RP95389, Constance Street, Alexandria Street and Gregory Terrace on 29/6/2010, in accordance with s.19 of the Survey and Mapping Infrastructure Regulation 2004.</i> </p>			Title Reference	Lot	Plan	Lots	Emts	Road	50658054	485	SP192466	101-107 & 701	B & C	-	50658029	486	SL4553	701	-	-	50658052	487	SP196776	101, 102, 104, 106 & 701	B	-	50658058	641	SP196755	104	-	-	MORTGAGE ALLOCATIONS			Mortgage	Lots Fully Encumbered	Lots Partially Encumbered	601742907	101-107 & 701	-	EXISTING LEASE ALLOCATIONS		Lease	Lots to be Encumbered	707527957	701
Title Reference	Lot	Plan	Lots	Emts	Road																																														
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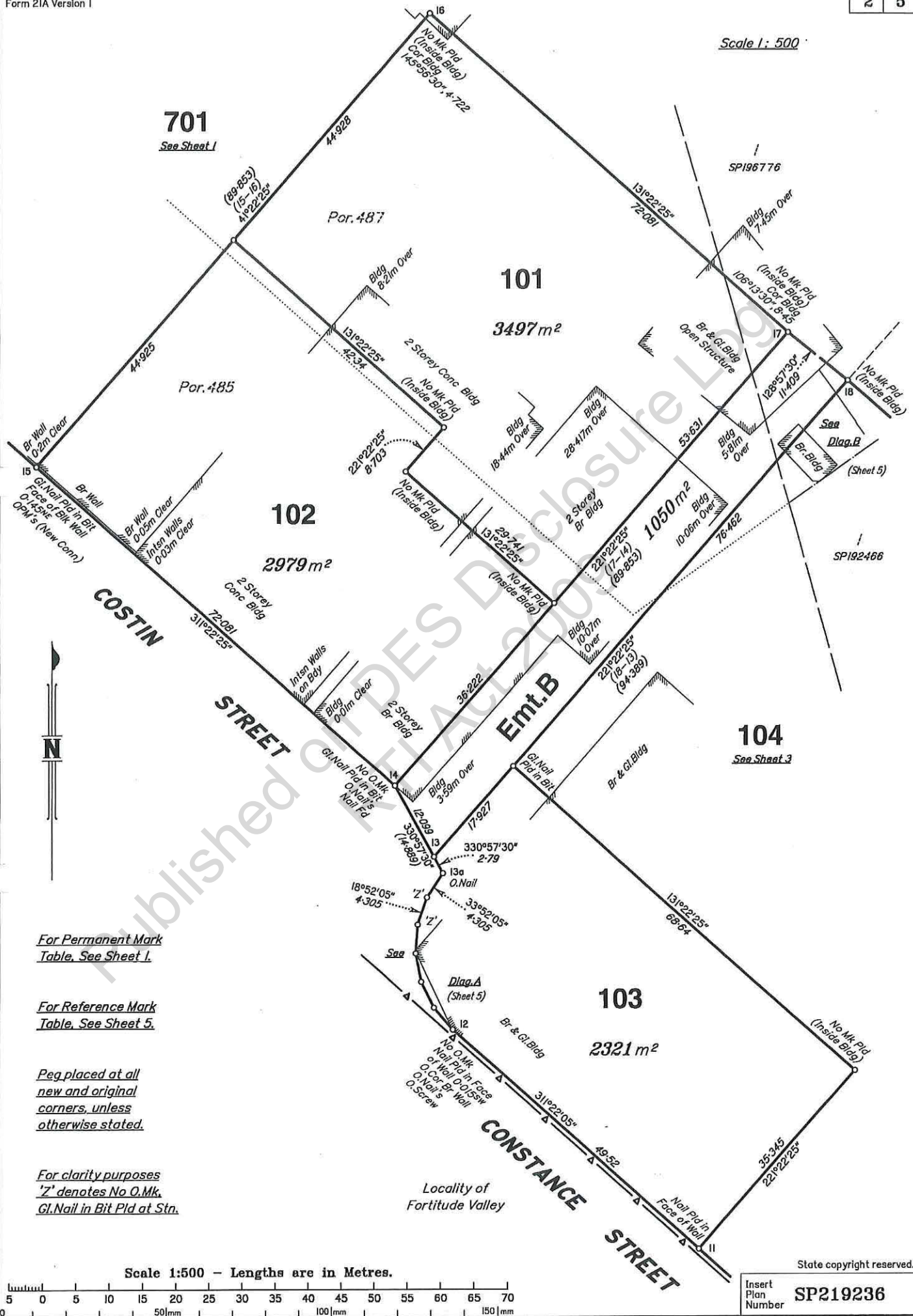
2. Local Government Approval. * hereby approves this plan in accordance with the : Dated this day of # # <small>* Insert the name of the Local Government. % Insert Integrated Planning Act 1997 or # Insert designation of signatory or delegation Local Government (Planning & Environment) Act 1990</small>		<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <td>101, 102 & 106 103, 105 & 107 104 701</td> <td>Por. 485 & 487 Por. 485 Por's. 485, 641 486 & 487 Por's. 485, 486 & 487</td> </tr> <tr> <td style="text-align: center;">Lots</td> <td style="text-align: center;">Orig</td> </tr> </table> 7. Portion Allocation : 8. Map Reference : 9543-33314 9. Locality : BOWEN HILLS 10. Local Government : BRISBANE CITY COUNCIL 11. Passed & Endorsed : By: T.H. Jensen & Bowers Pty.Ltd. Date: 29/06/10 7/9/2010 Signed: sch4p4(6) Personal infor Designation: Director		101, 102 & 106 103, 105 & 107 104 701	Por. 485 & 487 Por. 485 Por's. 485, 641 486 & 487 Por's. 485, 486 & 487	Lots	Orig
101, 102 & 106 103, 105 & 107 104 701	Por. 485 & 487 Por. 485 Por's. 485, 641 486 & 487 Por's. 485, 486 & 487						
Lots	Orig						

3. Plans with Community Management Statement : CMS Number : Name :		4. References : Dept File : Local Govt : Surveyor : 6441	
---	--	--	--

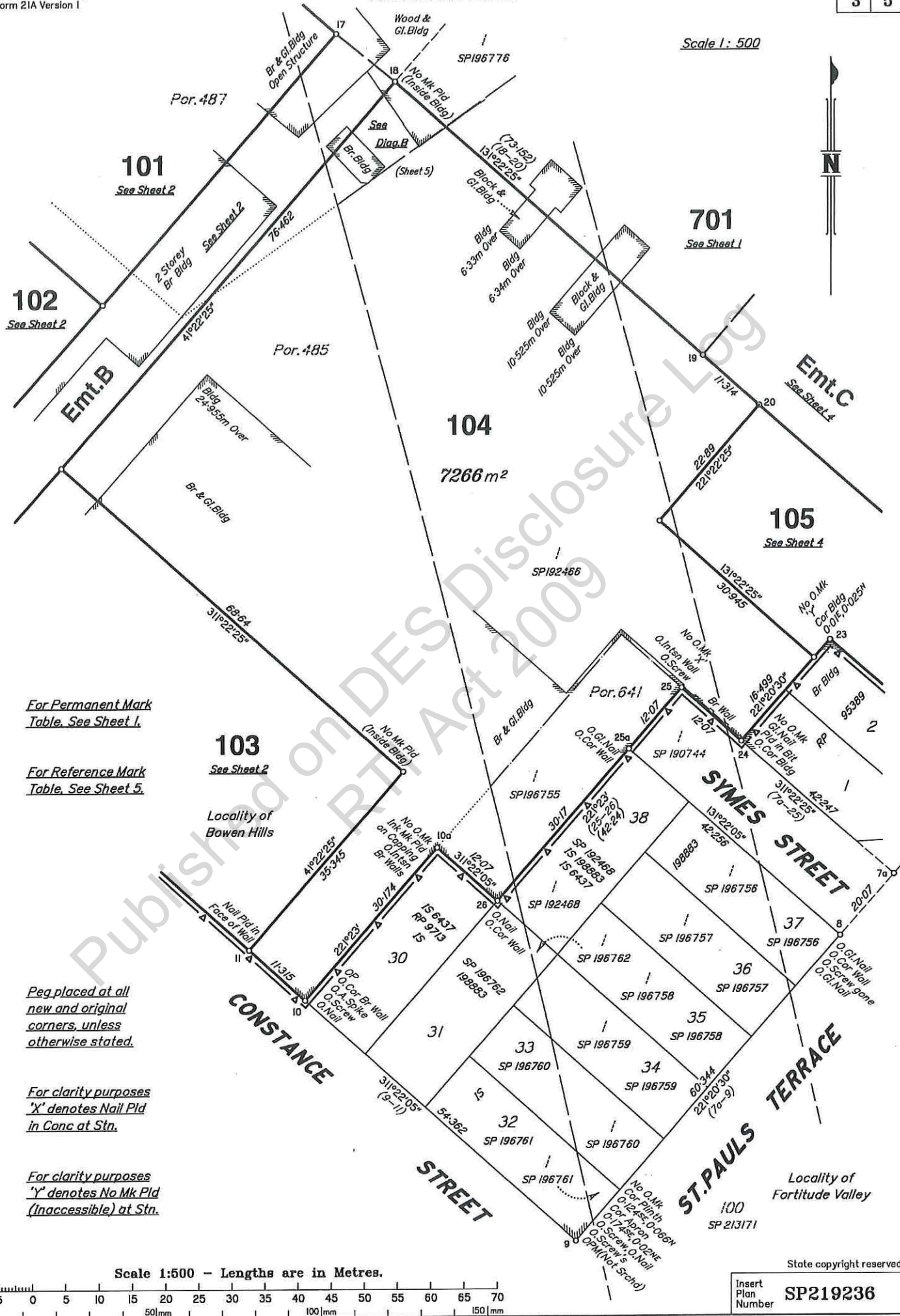
12. Building Format Plans only. I certify that : * As far as it is practical to determine, no part of the building shown on this plan encroaches onto adjoining lots or road. * Part of the building shown on this plan encroaches onto adjoining * lots and road Cadastrol Surveyor/Director * Date *delete words not required		13. Lodgement Fees : Survey Deposit \$ Lodgement \$ New Titles \$ Photocopy \$ Postage \$ TOTAL \$	
---	--	---	--

14. Insert Plan Number	SP219236
-------------------------------	-----------------

Scale 1: 500



Scale 1: 500



For Permanent Mark
Table, See Sheet 1.

For Reference Mark
Table, See Sheet 5.

103

See Sheet 2

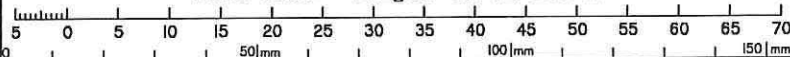
Locality of
Bowen Hills

Peg placed at all
new and original
corners, unless
otherwise stated.

For clarity purposes
'X' denotes Nail Pld
in Conc at Stn.

For clarity purposes
'Y' denotes No Mk Pld
(Inaccessible) at Stn.

Scale 1:500 - Lengths are in Metres.



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Insert
Plan
Number **SP219236**

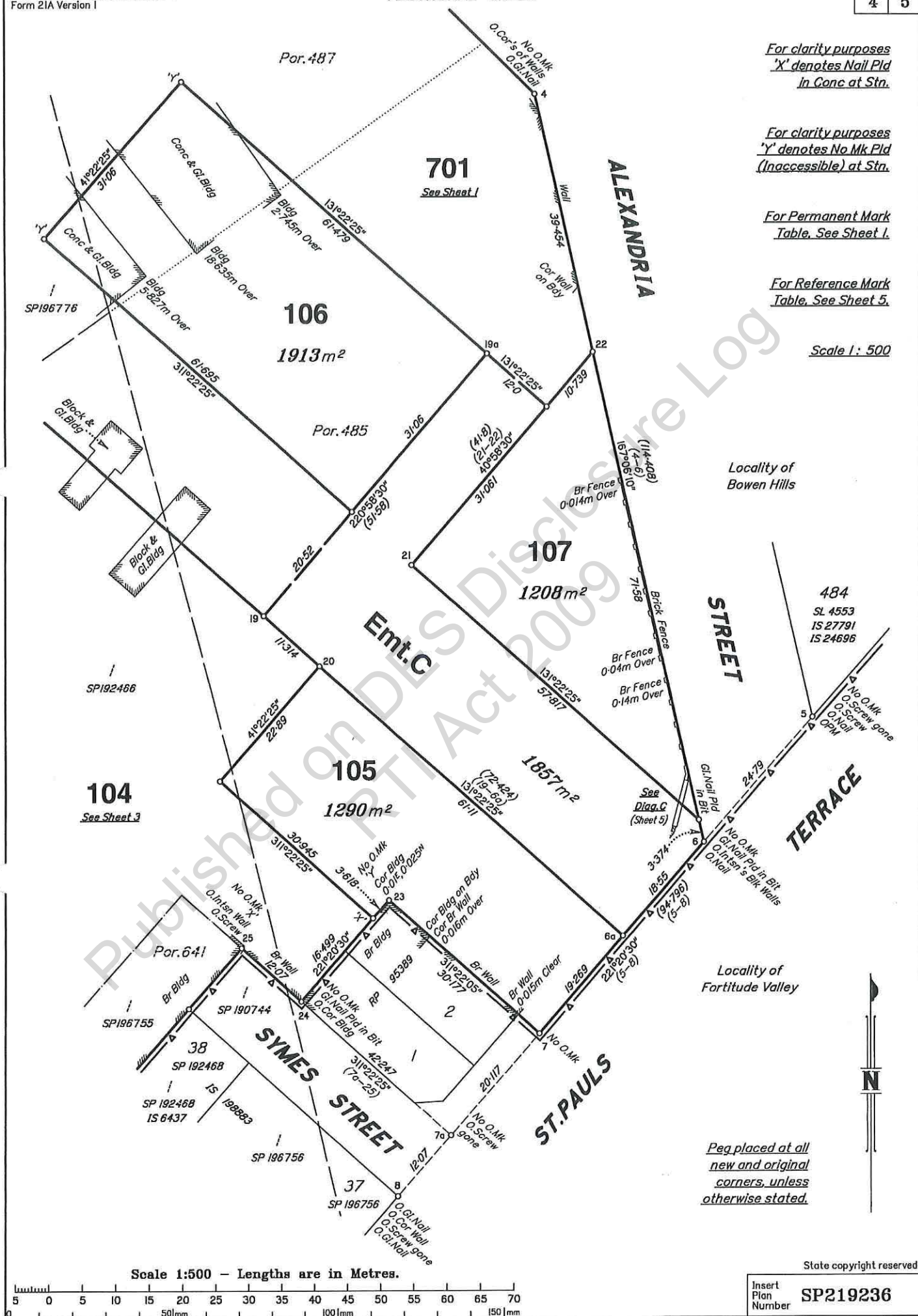
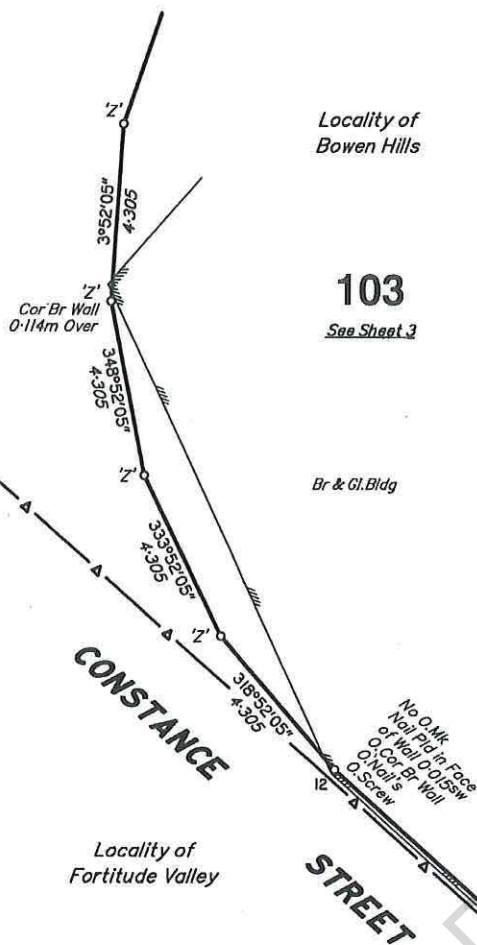


DIAGRAM A
1:125



REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	O. Screw	RP173798	332°11'	3-811
2	O. Screw in Kb	15173313	49°41'	10-625
2	O. Gl. Nail in Bit	2/SP196776	309°36'05"	19-192
3	O. Cor Wall	5/SP196776	64°50'	0-11 (New Ref)
3	O. Cor Bldg	5/SP196776	126°06'	0-281 (New Ref)
3	Gl. Nail in Bit Fd		43°02'	0-963
3	Gl. Nail in Bit Fd		50°41'	3-704
3	O. Gl. Nail in Bit	4/SP196765	13°14'35"	3-74
3	Spike in Bit Fd		34°08'	4-823
3	O. Screw in Wall	1524696	134°29'20"	54-708 (New Ref)
3	O. Screw in Wall	1524696	134°31'30"	82-437
4	O. Cor Wall	11/SP196776	298°40'	2-258
4	O. Cor Wall	11/SP196776	164°53'	3-089
4	O. Gl. Nail in Bit	11/SP196776	356°29'45"	3-257
4	Nail in Conc		34°46'	16-634
4a	Nail in Kb		131°16'	4-869
5	O. Cor Wall	5/SP196775	33°22'	0-218
5	O. Screw in Bit	1527791	167°06'25"	0-744
5	O. Screw in Kb gone	1527791	347°06'25"	2-118
5	O. Nail in Face of Wall	1524696	347°54'15"	18-371
5	Nail in Conc		179°01'40"	26-602
6	O. Gl. Nail in Bit	12/SP196776	144°13'25"	0-473
6	O. Intsn Blk Wall	12/SP196776	285°10'20"	4-692
6	O. Intsn Blk Wall	12/SP196776	347°22'30"	10-35
7a	Nail in Conc		151°05'	0-698
7a	O. Screw in Conc gone	13/SP196776	173°18'15"	1-589
8	O. Gl. Nail in Bit	4/15198883	At	Stn
8	O. Screw in Kb gone	5/SP196755	101°26'	3-004
8	O. Gl. Nail in Bit	4/15198883	152°58'	12-81
9	O. Screw in M/H Surround	6/SP196755	136°47'	2-411
9	O. Nail in Kb	B3370/SL4271	208°04'	2-447
9	O. Screw in Conc	6/SP196755	214°35'	12-911
9	O. Screw in Conc	6/SP196755	131°47'50"	19-847
9	O. Screw in Conc	6/SP196755	166°18'35"	20-279
10	O. Cor Br Wall	8/SP196755	293°0'	0-074
10	O. A. Spike	B3370/SL4271	221°22'25"	0-604
10	O. Screw in Conc	156437	217°32'30"	0-607
10	O. Nail in Conc	2/15198883	203°29'	0-693
10a	O. Intsn Br Walls	7/15198883	337°36'	0-07
12	O. Cor Br Wall	16/SP196776	301°32'	0-086
12	O. Tack in Bit	16/SP196776	310°16'30"	29-81
12	O. Screw in Kb	16/SP196776	306°35'30"	31-076
12	O. Nail in Wall	B3370/SL4271	310°23'50"	35-623
13a	O. Gl. Nail in Bit	17/SP196776	1°36'55"	3-601
14	O. Gl. Nail in Bit	18/SP196776	189°16'35"	2-351
14	Nail in Kb Fd		196°10'	2-393
14	O. Nail in Conc	18/SP196776	145°09'30"	2-565
14	O. Nail in Bit	18/SP196776	142°56'15"	6-021
24	O. Cor Bldg	9/SP190749	48°31'	0-011
24	Gl. Nail in Bit		203°13'	1-509
24	Nail in Kb		160°24'	3-241
25	O. Screw in Wall	SL5642	28°56'25"	0-029
25	O. Intsn Walls	12/SP196755	337°36'	0-07
25a	O. Gl. Nail in SFP	5/15198883	At	Stn
25a	O. Cor Wall	11/SP196755	301°42'	0-065
26	O. Nail in Conc	15198883	At	Stn
26	O. Cor Br Wall	14/SP196755	351°40'	0-048

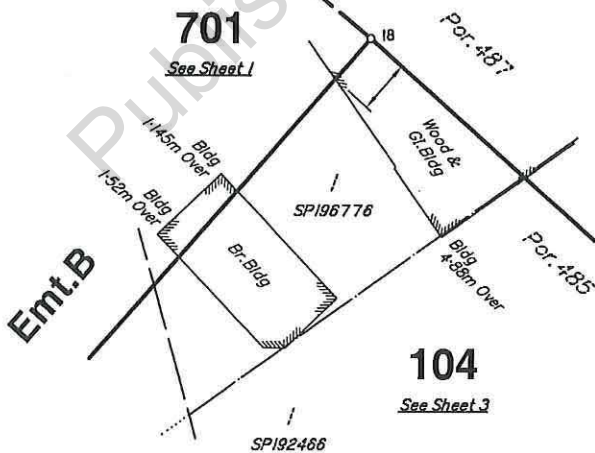


DIAGRAM B
1:250

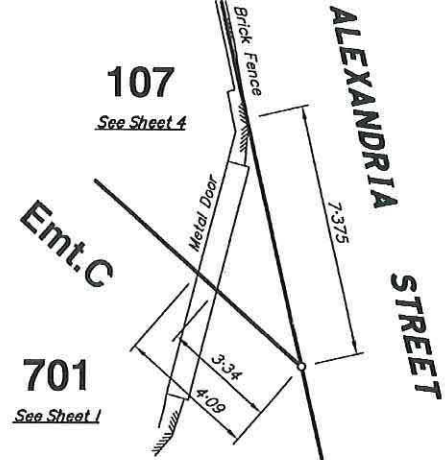


DIAGRAM C
1:150

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Insert Plan Number SP219236

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE A2

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 200mm thick	8.0				
	FILL - sandy clay and gravels/ash			E	0.2	
				E	0.3	
				E	0.4	
	GRAVELLY SANDY CLAY - light brown/grey				0.6	
				E	0.8	
1		7.0			1.0	
				E	1.3	
					1.5	
	End of Bore at 1.6 m					
2		6.0				
3		5.0				

Is(50) Point Load Test Result (mPa) **Up** Pushtube Sample **S** Standard Pentrometer Test (SPT) **D** Disturbed Sample
E Environmental Sample **C** NLMC Coring **(d)** Diametral Point Load Strength Test **B** Bulk Sample
U Undisturbed Tube (50mm diameter) **HB** SPT Hammer Bouncing **(a)** Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) **()** No Sample Recovery **V** Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: SD

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

Release



geotechnical • geo-environmental • groundwater

AR 024943

Butler Partners Pty Ltd
ABN 14 816 574 868
79 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Project No. 011-165C

18 May 2012

Department of Environment and Heritage Protection
C/- Permit and Licensing Management
GPO Box 2454
Brisbane QLD 4001

RECEIVED

24 MAY 2012

PaLM

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au

Email: allen.johns@derm.qld.gov.au

Attention: Mr A Johns

Dear Allen

**RE: APPLICATION FOR DISPOSAL PERMIT
RNA SHOWGROUNDS REDEVELOPMENT - ZONE B
ST PAULS TERRACE, BOWEN HILLS**

In accordance with the requirements of an application for disposal permit the following information is presented regarding the site.

1.0 BACKGROUND

It is understood that it is proposed to develop the site by the excavation of a shallow basement in the area identified as 'Zone B' within the RNA showgrounds development site. The proposed basement is located adjacent to Constance Street within the southern portion of the overall RNA site, as shown on the attached Drawing 2 Rev A.

Investigations on the site have previously been undertaken by Golder Associates and Butler Partners Pty Ltd (Butler Partners) to characterise site soil material within the proposed basement footprint. Results of the investigations identified fill material with concentrations of polycyclic aromatic hydrocarbons (PAH), heavy metals (cadmium (Cd), chromium (Cr), lead (Pb), mercury (Hg) and zinc (Zn)) and total petroleum hydrocarbons (TPH) fractions C₁₅-C₃₆ above the adopted clean fill criteria.

Analytical results obtained through previous investigations by Golder Associates have been combined with current investigations undertaken by Butler Partners to adequately characterise soil material for offsite disposal.

2.0 REAL PROPERTY DESCRIPTION

The property descriptions covering the area of the site in this application are Lots 103 on SP219236 and 104 on SP219236.

At the time of this application both lots were listed on the Environmental Management Register (EMR).



Release

RNA Showgrounds Redevelopment - Zone B
St Pauls Terrace, Bowen Hills
Project No.: 011-165C
18 May 2012

3.0 INVESTIGATION AND SAMPLING METHODS

Fieldwork was undertaken on the 17 and 18 April 2012 and comprised test pitting at 33 test locations. Test pits were excavated using a combination of 4, 8 and 30 tonne excavators. Test pits were advanced to the proposed excavation depth, with strata identification and soil samples taken from materials brought to the surface in the excavator bucket. In general, soil samples were taken from each 0.5m depth interval and/or from each strata unit down the soil profile to characterise soil materials at an approximate rate of 1 sampler per 50m³. Sample locations are shown on Drawing No. 2 Rev A.

A total of one hundred and fifty-seven soil samples were analysed for a selection of PAH, benzene, toluene, ethyl benzene and xylenes (BTEX), TPH, organochlorine pesticides (OCPs) and heavy metals, with selected samples submitted for Toxicity Characteristic Leaching Procedure (TCLP).

To minimise the potential for cross contamination of samples, each sample was collected by hand using disposable gloves, which were replaced between the collection of each sample. Samples were placed immediately into laboratory prepared jars that were sealed, labelled with a unique identifier and placed into a chilled ice chest. Each sample was recorded on a chain of custody register, which was used to track the movement of the samples. The samples remained in the chilled ice chest and were transported to the analytical laboratories for analysis.

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) METHODS

All primary and duplicate soil samples were sent to Australian Laboratory Services (ALS) and Advanced Analytical Australia (AAA) with appropriate Chain of Custody forms. Duplicate samples were analysed at a minimum rate of one set of duplicate samples for every twenty primary samples analysed.

Both laboratories employed accepted industry QA/QC procedures including the analysis of duplicate samples, spike samples and equipment blanks. To prevent transcription errors, the laboratory results were downloaded electronically. A copy of the laboratory results are attached to this letter.

5.0 DISPOSAL QUANTITIES

Disposal quantities have been assessed based on discussions with Veolia Environmental Services (Veolia) who have reviewed and assessed the data provided. A copy of the landfill acceptance letter is attached to this application. Soil disposal volumes have been calculated based on the lateral and vertical extent of contaminated fill material to determine an approximate volume of in-situ contamination. A bulking factor of 1.4 was then applied to the in-situ volumes to allow for calculation of ex-situ volumes.

The material has been deemed acceptable for disposal to unlined landfill located at Veolia's Wattle Glenn landfill disposal site, lined landfill at Veolia's Ti-Tree bioenergy disposal site and PAH treatment and lined disposal at Ti-Tree. As such, the estimated quantity for disposal of materials from the site is as follows:

Disposal Destination	Estimated In-situ Volume (m ³)	Estimated Bulk Volume (m ³)
Unlined Landfill Disposal (Wattle Glenn)	4,150	6,000
Lined Landfill Disposal (Ti-Tree)	4,750	6,800
Treatment (heavy metals) (Ti-Tree)	80	110
Total		12,610

On this basis, a Soil Disposal Permit for the disposal of 12,910m³ (bulk) is required.

RNA Showgrounds Redevelopment - Zone B
St Pauls Terrace, Bowen Hills
Project No.: 011-165C
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The classification of the proposed disposal destinations are identified on Drawing No. 4 Rev A (attached), with depths of contamination indicated.

We trust this provides the information you require in order to review and assess this application. If you have any queries please do not hesitate to contact the undersigned.

Yours faithfully

BUTLER PARTNERS PTY LTD

sch4p4(6) Personal information

Associate

Enc: *DERM Application Forms A & B*
Current Land Titles
Test Pit Logs with Explanatory Notes
Table 2 - Analytical Results for Soils
Table 3 - TCLP Results for Soils
Laboratory Documentation
Drawing No. 2 Rev A
Drawing No. 4 Rev A
Landfill Acceptance Letter

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE A4

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 200mm thick	7.2				
	FILL - crushed rock, bricks	7.0		E	0.2	
					0.4	
				E	0.6	
					0.7	
	SANDY CLAY - predominantly dark brown					
1				E	1.0	
		6.0			1.2	
	GRAVELLY SANDY CLAY - light brown/grey			E	1.3	
	End of Bore at 1.5 m				1.5	
2						
		5.0				
3						
		4.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE A5

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 200mm thick	7.0				
	FILL - gravelly sand			E	0.2	
					0.4	
	SANDY CLAY - predominantly brown			E	0.6	
					0.8	
1		6.0		E	1.0	
					1.2	
				E	1.3	
	End of Bore at 1.5 m				1.5	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) **Up** Pushtube Sample **S** Standard Pentrometer Test (SPT) **D** Disturbed Sample
E Environmental Sample **C** NLMC Coring **(d)** Diametral Point Load Strength Test **B** Bulk Sample
U Undisturbed Tube (50mm diameter) **HB** SPT Hammer Bouncing **(a)** Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) **()** No Sample Recovery **V** Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L _TEMPLATE.GDT 04/05/12 GINT

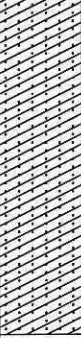
BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE A6

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.9m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - pale brown gravelly sand, crushed rock	6.9		E	0.0	
					0.2	
				E	0.5	
					0.8	
1	SANDY CLAY - light brown/grey mottle	6.0		E	1.0	
					1.2	
				E	1.5	
					1.8	
2	End of Bore at 1.8 m	5.0				
3		4.0				

Is(50) Point Load Test Result (mPa)
E Environmental Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

Up Pushtube Sample
C NLMC Coring
HB SPT Hammer Bouncing
() No Sample Recovery

S Standard Penetrometer Test (SPT)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test
V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample
B Bulk Sample

Rig: 30 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE B2

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 200mm thick	8.0				
	FILL - dark brown sandy clay			E	0.2	
	SANDY CLAY - dark brown/brown mottle, sandy lenses			E	0.4	
				E	0.5	
				E	0.6	
				E	0.8	
1		7.0		E	1.0	
				E	1.3	
				E	1.5	
	End of Bore at 1.8 m					
2		6.0				
3		5.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE B3

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.5m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 200mm thick	7.5				
	FILL - sandy clay, clay pipe, gravels			E	0.2	
					0.4	
		7.0		E	0.6	
					0.7	
	SANDY CLAY - dark brown, minor sandy lenses				1.0	
1				E	1.2	
					1.4	
		6.0		E	1.6	
	End of Bore at 1.6 m					
2						
		5.0				
3						

Is(50) Point Load Test Result (mPa)
E Environmental Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample
C NLMC Coring
HB SPT Hammer Bouncing
() No Sample Recovery

S Standard Pentrometer Test (SPT)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test
V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample
B Bulk Sample

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE B5

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 150mm thick	7.0				
	FILL - brown sandy clay, with concrete and brick fragments			E	0.2	
					0.4	
				E	0.5	
					0.6	
	SANDY CLAY - brown/light brown mottle				0.8	
				E	1.0	
1		6.0				
				E	1.5	
	End of Bore at 1.6 m				1.6	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L- _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE B6

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - brown sandy clay with gravel	7.0		E	0.0	
					0.2	
	- with ash			E	0.5	
					0.7	
1	SANDY CLAY - brown	6.0		E	1.0	
	- orange and brown mottled			E	1.1	
					1.2	
				E	1.4	
	End of Bore at 1.4 m					
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE B7

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.1m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - light brown sandy clay	7.1		E	0.0	
	- dark brown sandy clay, with gravels and brick	7.0		E	0.1	
				E	0.3	
				E	0.5	
	- ash			E	0.6	
				E	0.8	
	- dark brown sandy clay			E	1.0	
1	SANDY CLAY - brown and orange mottled	6.0		E	1.1	
				E	1.4	
	End of Bore at 1.6 m			E	1.6	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L- _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE B8

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.1m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - dark brown sandy clay, with bricks	7.1			0.0	
		7.0		E	0.2	
				E	0.3	
					0.5	
				E	0.8	
					0.9	
1	SANDY CLAY - brown - brown and orange mottled	6.0			1.2	
				E	1.3	
	End of Bore at 1.3 m					
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) **Up** Pushtube Sample **S** Standard Pentrometer Test (SPT) **D** Disturbed Sample
E Environmental Sample **C** NLMC Coring **(d)** Diametral Point Load Strength Test **B** Bulk Sample
U Undisturbed Tube (50mm diameter) **HB** SPT Hammer Bouncing **(a)** Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) **()** No Sample Recovery **V** Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE C1

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.5m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 100mm thick	8.5				
	GRAVELLY SANDY CLAY - soft rock lenses, grey/brown mottle			E	0.1	
				E	0.2	
				E	0.3	
		8.0		E	0.5	
				E	0.8	
1	End of Bore at 1 m			E	1.0	
		7.0				
		6.0				
2						
3						

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 8 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE C2

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 100mm thick	8.0				
	GRAVELLY SANDY CLAY - brown/grey, large rocks			E	0.2	
					0.4	
				E	0.6	
					0.8	
1	End of Bore at 1 m	7.0				
	(Refusal - Solid - large rock)					
2		6.0				
3		5.0				

Is(50) Point Load Test Result (mPa)

E Environmental Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

Up Pushtube Sample

C NLMC Coring

HB SPT Hammer Bouncing

() No Sample Recovery

S Standard Penetrometer Test (SPT)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample

B Bulk Sample

Rig: 8 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L- _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE C5

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - light brown sandy clay	6.8		E	0.0	
					0.2	
				D	0.3	
	SANDY CLAY - soft, grey			D/E	0.4	
				D	0.5	
	- orange and grey				0.7	
		6.0		D/E		
1	End of Bore at 1 m				1.0	
		5.0				
2						
		4.0				
3						

Is(50) Point Load Test Result (mPa)
E Environmental Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample
C NLMC Coring
HB SPT Hammer Bouncing
() No Sample Recovery

S Standard Pentrometer Test (SPT)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test
V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample
B Bulk Sample

Rig: 3 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

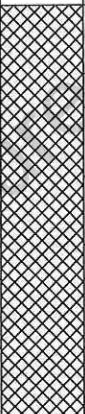
BORE REPORT

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Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE C7

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - sandy clay and bricks, ash and concrete fragments	7.0		E	0.0	
					0.2	
				E	0.3	
					0.5	
				E	0.7	
					0.8	
1	End of Bore at 1.2 m (Pipework preventing further excavation)	6.0		E	1.0	
					1.2	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa)
E Environmental Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample
C NLMC Coring
HB SPT Hammer Bouncing
() No Sample Recovery

S Standard Pentrometer Test (SPT)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test
V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample
B Bulk Sample

Rig: 8 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L..._TEMPLATE.GDT 04/05/12 GINT

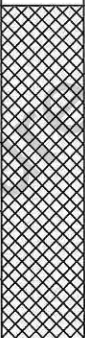
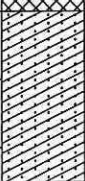
BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE C8

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - dark brown gravelly clay, with brick, tiles, concrete, sand and trace ash	7.0		E	0.0	
					0.2	
				E	0.3	
					0.5	
				E	0.9	
1	SANDY CLAY - brown	6.0		E	1.0	
				E	1.2	
				E	1.4	
	End of Bore at 1.5 m				1.5	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa)
E Environmental Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample
C NLMC Coring
HB SPT Hammer Bouncing
() No Sample Recovery

S Standard Pentrometer Test (SPT)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test
V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample
B Bulk Sample

Rig: 3 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LC _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE C9

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - light brown gravelly sand	6.8		E	0.0	
	- sandy clay, ash and bricks			E	0.2	
				E	0.3	
				E	0.4	
	SANDY CLAY - dark brown/red mottle			E	0.6	
		6.0			0.8	
1						
	SANDY GRAVELLY CLAY - light brown/grey			E	1.3	
	End of Bore at 1.5 m				1.5	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa)
E Environmental Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample
C NLMC Coring
HB SPT Hammer Bouncing
() No Sample Recovery

S Standard Pentrometer Test (SPT)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test
V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample
B Bulk Sample

Rig: 30 Tonne Tracked Excavator

Logged By: sch

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L... TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE D1

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.5m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SAND - 100mm thick	8.5			0.1	
	GRAVELLY SAND - soft, red/brown/grey shaley rock, some some pockets of sandy clay throughout			E	0.2	
					0.4	
		8.0		E	0.6	
					0.8	
				E	1.0	
1						
		7.0				
	End of Bore at 1.6 m					
2		6.0				
3						

Is(50) Point Load Test Result (mPa)

E Environmental Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample

C NLMC Coring

HB SPT Hammer Bouncing

() No Sample Recovery

S Standard Pentrometer Test (SPT)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample

B Bulk Sample

Rig: 8 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE D5

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - grey and green gravels and cobbles	6.8				
	- light brown sandy clay			E	0.2	
					0.3	
				E	0.4	
	SANDY CLAY - grey, slightly moist				0.6	
		6.0			0.9	
				E	1.0	
1	- brown and orange				1.3	
				E	1.4	
	End of Bore at 1.4 m					
		5.0				
2						
		4.0				
3						

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE D6

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - dark brown gravelly sandy clay	6.8		E	0.0	
	- with ash			E	0.2	
				E	0.4	
	SANDY CLAY - brown			E	0.6	
				E	0.7	
		6.0		E	0.8	
1	- orange and brown mottled			E	1.0	
	End of Bore at 1.2 m				1.2	
		5.0				
2						
		4.0				
3						

Is(50) Point Load Test Result (mPa)

E Environmental Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Pentrometer Test (kPa)

Up Pushtube Sample

C NLMC Coring

HB SPT Hammer Bouncing

() No Sample Recovery

S Standard Pentrometer Test (SPT)

(d) Diametral Point Load Strength Test

(a) Axial Point Load Strength Test

V Vane Shear Strength, Uncorrected (kPa)

D Disturbed Sample

B Bulk Sample

Rig: 3 Tonne Tracked Excavator

Logged By: sch

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LC _TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE D7

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL7.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - brown gravelly clay - ash	7.0		E	0.0	
				E	0.1	
					0.3	
	SANDY CLAY - brown and orange mottled			E	0.5	
					0.7	
1		6.0		E	1.0	
	End of Bore at 1.2 m				1.2	
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

**BUTLER
PARTNERS**

Ground Surface Level: RL6.9m*

Project No: 011-165C

	R	L	S	S
	6.9			0.0
FILL - dark brown sandy clay, pipeworks, ash, bricks			E	0.2
			E	0.3
SANDY CLAY - brown/orange mottle				0.5
	6.0		E	0.8
- light brown/grey mottle				1.0
			E	1.3
	5.0			1.5
End of Bore at 2 m				

Logged By: sch4p4

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE D10

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.4m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - dark brown/black sandy clay, crushed rock, ash, bricks	6.4		E	0.0	
				E	0.1	
				E	0.3	
		6.0		E	0.5	
				E	0.8	
1				E	1.0	
	SANDY CLAY - dark brown and reddish mottle			E	1.2	
		5.0		E	1.4	
				E	1.6	
	End of Bore at 1.8 m			E	1.8	
2						
		4.0				
3						
		3.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP+SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L..._TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE E1

Page No: 1 of 1

Date: 17 April 2012

Ground Surface Level: RL8.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 100mm thick	8.0				
	GRAVELLY SAND - soft, red/brown/grey shaley rock, some areas of sandy clay			E	0.2	
					0.3	
				E	0.4	
					0.6	
				E	0.8	
1	End of Bore at 1 m	7.0			1.0	
2		6.0				
3		5.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 8 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE E3

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.5m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 150mm thick	8.5			0.1	
	FILL - light brown			E	0.3	
	- dark grey sandy clay, minor brick fragments	8.0		E	0.4	
				E	0.5	
				E	0.6	
					0.8	
1	SANDY CLAY - light brown/grey mottle			E	1.0	
					1.2	
		7.0		E	1.4	
					1.6	
	End of Bore at 1.8 m					
2						
		6.0				
3						

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 8 Tonne Tracked Excavator

Logged By: sch4p4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP+SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L..._TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE E5

Page No: 1 of 1

Date: 17 April 2012

Ground Surface Level: RL8.0m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - brown sandy clay, with boulders gravels and ash	8.0		E	0.0	
					0.2	
	SANDY CLAY - grey			E	0.4	
					0.6	
				E	0.8	
					0.9	
1	End of Bore at 0.9 m	7.0				
2		6.0				
3		5.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch4p4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

**BUTLER
PARTNERS**

Ground Surface Level: RL6.7m*

Project No: 011-165C

Is(50)	Point Load Test Result (mPa)	Up	Pushtube Sample	S	Standard Pentrometer Test (SPT)	D	Disturbed Sample
E	Environmental Sample	C	NLMC Coring	(d)	Diametral Point Load Strength Test	B	Bulk Sample
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(a)	Axial Point Load Strength Test		
pp	Pocket Pentrometer Test (kPa)	()	No Sample Recovery	V	Vane Shear Strength, Uncorrected (kPa)		

Logged By: sch4p

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwa No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE E7

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.9m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - ash	6.9		E	0.0	
					0.2	
					0.3	
	SANDY CLAY - brown			E	0.5	
					0.8	
		6.0		E	0.9	
1	End of Bore at 0.9 m					
2		5.0				
3		4.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

**BUTLER
PARTNERS**

BORE E8

Page No: 1 of 1

Date: 17 April 2012

Ground Surface Level: RL6.7m*

(m)	Description
-----	-------------

FILL
- sandy clay, ash and brick fragments

SANDY CLAY
- dark brown/orange mottle

SANDY GRAVELLY CLAY
- light brown/grey

End of Bore at 1.8 m

3

B Bulk Sample

Logged By: sch4p

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE E9

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.45m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - sandy clay, minor ash layer	6.45		E	0.0 0.1	
				E	0.3 0.5	
	SANDY CLAY - dark brown/orange mottle	6.0		E	0.8 1.0	
1				E	1.3 1.5	
	End of Bore at 1.6 m	5.0				
2		4.0				
3		3.0				

Is(50) Point Load Test Result (mPa) **Up** Pushtube Sample **S** Standard Pentrometer Test (SPT) **D** Disturbed Sample
E Environmental Sample **C** NLMC Coring **(d)** Diametral Point Load Strength Test **B** Bulk Sample
U Undisturbed Tube (50mm diameter) **HB** SPT Hammer Bouncing **(a)** Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) **()** No Sample Recovery **V** Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE L... TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE E10

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.4m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - sandy clay, bricks, ash and small gravels	6.4		E	0.0	
				E	0.2	
				E	0.3	
		6.0		E	0.5	
				E	0.6	
				E	0.8	
1	SANDY CLAY - dark brown and grey mottle becoming light with depth					
					1.3	
		5.0		E	1.5	
				E	1.6	
				E	1.8	
2	End of Bore at 1.8 m					
		4.0				
3		3.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE F3

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL8.5m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	CONCRETE SLAB - 200mm thick	8.5				
	FILL - dark brown sandy clay, bricks and gravels, ash			E	0.2	
					0.4	
		8.0		E	0.6	
					0.8	
1	SANDY CLAY - dark grey				1.2	
				E	1.4	
	- light grey/brown mottle	7.0			1.6	
				E	1.8	
	End of Bore at 1.8 m					
2						
		6.0				
3						

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 8 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT 011-165C-TP-SAMPLE ID- RNA SHOWGROUNDS.GPJ GENERAL BORE LOG TEMPLATE.GDT 04/05/12 GINT

BUTLER
PARTNERS

BORE F4

Date: 17 April 2012

Ground Surface Level: RL8.5m*

Is(50)	Point Load Test Result (mPa)	Up	Pushtube Sample	S	Standard Pentrometer Test (SPT)	D	Disturbed Sample
E	Environmental Sample	C	NLMC Coring	(d)	Diametral Point Load Strength Test	B	Bulk Sample
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(a)	Axial Point Load Strength Test		
pp	Pocket Penetrometer Test (kPa)	()	No Sample Recovery	V	Vane Shear Strength, Uncorrected (kPa)		

Logged By: sch4p

Groundwater: No free groundwater encountered during excavation.

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

**BUTLER
PARTNERS**

BORE F5

Date: 17 April 2012

Ground Surface Level: RL8.0m*

	8.0			
CONCRETE SLAB - 150mm thick				
FILL - brown sandy clay, concrete, brick fragments, ash throughout			E	0.2
				0.3
				0.4
			E	0.6
				0.8
			E	1.0
SILTY SANDY CLAY - dark brown/grey	7.0			1.3
			E	1.5
SANDY CLAY - orange/pink				1.8
			E	2.0
End of Bore at 2 m	6.0			

Is(50)	Point Load Test Result (mPa)	Up	Pushtube Sample	S	Standard Pentrometer Test (SPT)	D	Disturbed Sample
E	Environmental Sample	C	NLMC Coring	(d)	Diametral Point Load Strength Test	B	Bulk Sample
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(a)	Axial Point Load Strength Test		
pp	Pocket Pentrometer Test (kPa)	()	No Sample Recovery	V	Vane Shear Strength, Uncorrected (kPa)		

Logged By: sch4

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE F7

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.65m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - dark brown silty sandy, trace ash	6.65		E	0.0	
					0.2	
					0.4	
	SANDY CLAY - brown	6.0		E	0.6	
					0.8	
1				E	1.0	
					1.3	
				E	1.5	
	End of Bore at 1.5 m	5.0				
2						
		4.0				
3						

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 3 Tonne Tracked Excavator

Logged By: sch4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

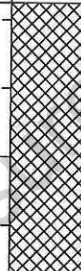
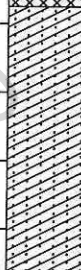
BORE REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting
Project: RNA Showgrounds Redevelopment
Location: St Paul's Terrace, Bowen Hills
Project No: 011-165C

BORE F10

Page No: 1 of 1
Date: 17 April 2012
Ground Surface Level: RL6.45m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Test Results
0	FILL - sandy clay	6.45		E	0.0 0.1	
				E	0.3 0.5	
		6.0		E	0.7 0.8	
				E		
				E		
1	SANDY CLAY - dark brown, minor light brown mottle				1.3	
				E	1.5	
		5.0				
				E	1.8	
				E	2.0	
2	SANDY GRAVELLY CLAY - light brown/grey					
	End of Bore at 2 m					
		4.0				
3						
		3.0				

Is(50) Point Load Test Result (mPa) Up Pushtube Sample S Standard Pentrometer Test (SPT) D Disturbed Sample
E Environmental Sample C NLMC Coring (d) Diametral Point Load Strength Test B Bulk Sample
U Undisturbed Tube (50mm diameter) HB SPT Hammer Bouncing (a) Axial Point Load Strength Test
pp Pocket Pentrometer Test (kPa) () No Sample Recovery V Vane Shear Strength, Uncorrected (kPa)

Rig: 30 Tonne Tracked Excavator

Logged By: sch4p4

Drilling Method:

Groundwater: No free groundwater encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

Notes on Description and Classification of Soil

The methods of description and classification of soils used in this report are generally based on Australian Standard AS1726-1993 *Geotechnical Site Investigations*.

Soil description is based on an assessment of disturbed samples, as recovered from bores and excavations, or from undisturbed materials as seen in excavations and exposures or in undisturbed samples. Descriptions given on report sheets are an interpretation of the conditions encountered at the time of investigation.

In the case of cone or piezocone penetrometer tests, actual soil samples are not recovered and soil description is inferred based on published correlations, past experience and comparison with bore and/or test pit data (if available).

Soil classification is based on the particle size distribution of the soil and the plasticity of the portion of the material finer than 0.425mm. The description of particle size distribution and plasticity is based on the results of visual field estimation, laboratory testing or both. When assessed in the field, the properties of the soil are estimated; precise description will always require laboratory testing to define soil properties.

Where soil can be clearly identified as FILL this will be noted as the main soil type followed by a description of the composition of the fill (e.g. FILL – yellow-brown, fine to coarse grained gravelly clay fill with concrete rubble). If the soil is assessed as possibly being fill this will be noted as an additional observation.

Soils are generally described using the following sequence of terms. In certain instances, not all of the terms will be included in the soil description.

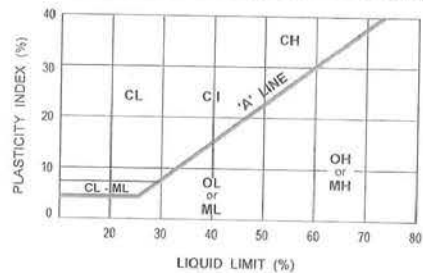
MAIN SOIL TYPE (CLASSIFICATION GROUP SYMBOL)

- strength/density, colour, structure/grain size, secondary and minor components, additional observations

Information on the definition of descriptive and classification terms follows.

SOIL TYPE and CLASSIFICATION GROUP SYMBOLS

	Major Divisions	Particle Size	Classification Group Symbol	Typical Names
COARSE GRAINED SOILS (more than half of material is larger than 0.075 mm)	BOULDERS	> 200mm		
	COBBLES	63 – 200mm		
	GRAVELS (more than half of coarse fraction is larger than 2.36mm)	Coarse: 20 – 63mm Medium: 6 – 20mm Fine: 2.36 – 6mm	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels.
			GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (more than half of coarse fraction is smaller than 2.36mm)	Coarse: 0.6 – 2.36mm Medium: 0.2 – 0.6mm Fine: 0.075 – 0.2mm	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands and gravelly sands, little or no fines, uniform sands.
			SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (more than half of material is smaller than 0.075 mm)	SILTS & CLAYS (liquid limit <50%)		ML	Inorganic silts and very fine sands, silty/clayey fine sands or clayey silts with low plasticity.
			CL and CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS & CLAYS (liquid limit >50%)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils.
			CH	Inorganic clays of high plasticity.
			OH	Organic clays of medium to high plasticity, organic silts.
	HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils.

PLASTICITY CHART FOR CLASSIFICATION OF FINE GRAINED SOILS

(Reference: Australian Standard AS1726-1993 *Geotechnical site investigations*)

DESCRIPTIVE TERMS FOR MATERIAL PROPORTIONS

Coarse Grained Soils		Fine Grained Soils	
% Fines	Modifier	% Coarse	Modifier
< 5	Omit, or use 'trace'	< 15	Omit, or use trace.
5 – 12	Describe as 'with clay/silt' as applicable.	15 – 30	Describe as 'with sand/gravel' as applicable.
> 12	Prefix soil as 'silty/clayey' as applicable	> 30	Prefix soil as 'sandy/gravelly' as applicable.

STRENGTH TERMS – COHESIVE SOILS

Strength Term	Undrained Shear Strength	Field Guide to Strength
Very soft	< 12kPa	Exudes between the fingers when squeezed in hand.
Soft	12 – 25kPa	Can be moulded by light finger pressure.
Firm	25 – 50kPa	Can be moulded by strong finger pressure.
Stiff	50 – 100kPa	Cannot be moulded by fingers, can be indented by thumb.
Very stiff	100 – 200kPa	Can be indented by thumb nail.
Hard	> 200kPa	Can be indented with difficulty by thumb nail.

DENSITY TERMS – NON COHESIVE SOILS

Density Term	Density Index	SPT "N"	CPT Cone Resistance
Very loose	< 15%	0 – 5	0 – 2MPa
Loose	15 – 35%	5 – 10	2 – 5MPa
Medium dense	35 – 65%	10 – 30	5 – 15MPa
Dense	65 – 85%	30 – 50	15 – 25MPa
Very dense	> 85%	> 50	> 25MPa

COLOUR

The colour of a soil will generally be described in a 'moist' condition using simple colour terms (eg. black, grey, red, brown etc.) modified as necessary by 'pale', 'dark', 'light' or 'mottled'. Borderline colours will be described as a combination of colours (eg. grey-brown).

EXAMPLE

e.g. CLAYEY SAND (SC) – medium dense, grey-brown, fine to medium grained with silt.

Indicates a medium dense, grey-brown, fine to medium grained clayey sand with silt.

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Sample Date	Sample Location	Sample Duplicate	Sample Number	Sample Depth	Material Type	Organics (mg/kg)										Pesticides								Inorganics (mg/kg)									
						PAH		TPH		BTEX						Pesticides								As		Cd		Total Cr		Cu		Pb	
						Total	Benzo (a) pyrene	C ₆ -C ₇	C ₈ -C ₉	C ₁₀ -C ₁₁	C ₁₂ -C ₁₃	C ₁₄ -C ₁₅	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX	Aldrin & Dieldrin	Chlordane	DDT	Heptachlor	Total OCOP	PCBs	As	Cd	Total Cr	Cu	Pb	Hg	Ni	Zn		
Background Levels						0.95-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2-20	0.04-2	0.5-110	5-190	<2-200	0.01-0.1	2-400	2-180
TPR Approved Clean Fill Criteria (mg/kg)						20	1	100 ¹	100 ¹	1,000 ¹	1,000 ¹	1	-	-	-	-	7	0.2	-	0.2	-	-	-	-	100	3	100 ¹	200	300	1	60	200	
RP Area B Site Acceptance Criteria (SAC) (mg/kg)						80	4	100 ¹	100 ¹	1,000 ¹	1,000 ¹	1	-	-	-	-	-	-	-	-	-	-	-	-	400	10	400 ¹	4,000	1,200	60	2,400	28,000	
Laboratory Level of Reporting (mg/kg)						8	0.5	10	50	100	100	0.2	0.5	0.5	1.0	2.2	0.1	0.1	0.3	0.1	-	-	-	-	21	1	2	5	5	0.1	2	5	
BULTEK PARTNERS 2012 RESULTS																																	
18-Apr-12	Zone B		F3-3	12-1.4	Sandy Clay	<LOR	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	<5	12	<0.1	<2	<5		
18-Apr-12	Zone B		F4-1	02-0.3	Fill	9.4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	8	<0.1	<2	<5			
18-Apr-12	Zone B		F4-2	04-0.6	Fill	25.6	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	8	65	<0.1	<2	104		
18-Apr-12	Zone B		F4-3	08-1.0	Fill	5.8	0.6	<10	<50	<100	<100	<0.2	<0.5	<0.5	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<5	<1	<2	20	554	0.3	3	251		
18-Apr-12	Zone B		F4-4	11-1.2	Sandy Clay	5.8	0.6	<10	<50	<100	<100	<0.2	<0.5	<0.5	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	<5	<1	<2	20	554	0.3	3	227		
17-Apr-12	Zone B		F5-1	01-0.3	Fill	33.2	2	<10	<50	<100	110	<0.2	<0.5	<0.5	<LOR	<LOR	-	-	-	-	-	-	-	<5	<1	<2	3	13	75	<0.1	<2	103	
17-Apr-12	Zone B		F5-2	04-0.6	Fill	29.2	1.1	<10	<50	<100	110	<0.2	<0.5	<0.5	<LOR	<LOR	-	-	-	-	-	-	-	<5	<1	<2	16	150	0.1	<2	133		
17-Apr-12	Zone B		F5-3	08-1.0	Fill	57.8	4.5	<10	<50	130	160	<0.2	<0.5	<0.5	<LOR	<LOR	-	-	-	-	-	-	-	<5	<1	<2	3	8	50	<0.1	<2	103	
17-Apr-12	Zone B		F5-4	13-1.5	Silty sandy clay	<LOR	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	<5	16	<0.1	<2	103		
17-Apr-12	Zone B		F7-1	04-0.6	Fill	<LOR	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<LOR	<LOR	-	-	-	-	-	-	-	<5	<1	<2	30	1850	<0.1	4	6949		
17-Apr-12	Zone B		F7-2	04-0.6	Sandy Clay	<LOR	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	7	7	<0.1	<2	203		
17-Apr-12	Zone B		F7-3	08-1.0	Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	<5	23	<0.1	<2	203		
17-Apr-12	Zone B		F10-1	04-0.6	Fill	54.4	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	12	151	0.2	4	52		
17-Apr-12	Zone B		F10-2	03-0.5	Fill	33.2	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	12	230	0.2	3	141		
17-Apr-12	Zone B		F10-3	07-0.8	Fill	30.1	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	12	230	0.2	3	141		
17-Apr-12	Zone B		F10-4	13-1.5	Sandy Clay	<LOR	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<1	<2	3	5	<0.1	<2	14		
GOLDEN ASSOCIATES 2009/2011 RESULTS																																	
27-Jun-11	Zone B		GA118	04-0.6	Fill	71.0	5.9	<10	<50	140	130	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	6	1	6	58	842	4.7	25	587		
27-Jun-11	Zone B		GA118	09-1.1	Silty Clay	3.7	1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	8	<1	7	19	76	0.1	6	155		
27-Jun-11	Zone B		GA118	19-2.0	Silty Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA119	04-0.6	Fill	1.2	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA119	09-1.1	Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA119	29-3.1	Sandy Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA119	44-5.1	Sandy Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA120	04-0.6	Fill	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA120	09-1.0	Fill	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA121	04-0.6	Fill	65.1	16.7	<10	<50	230	610	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA121	09-1.1	Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA121	19-2.0	Clayey sand	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA122	04-0.6	Fill	<0.5	<0.5	<10	<50	290	620	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA122	09-1.1	Silty Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA123	04-0.6	Fill	218	33.4	<10	<50	500	680	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA123	09-1.1	Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA123	19-2.0	Silty Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA124	04-0.6	Fill	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA124	09-1.0	Clay	7.5	1.2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA125	04-0.6	Fill	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA125	09-1.1	Silty Clay	15.9	1.8	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA126	04-0.6	Gravel	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA126	09-1.1	Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA127	04-0.6	Fill	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA127	09-1.0	Silty Clay	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-	-	-	-	-	-	<5	<1	3	<5	<5	<0.1	<2	<5		
27-Jun-11	Zone B		GA129	03-0.3	Fill	<0.5	<0.5	<10	<50	<100	<100	<0.2	<0.5	<0.5	<1.0	<0.2	-	-</															



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID				
Client sampling date / time				B8-3 0.8-0.9	C1-1 0.1-0.2	C1-2 0.3-0.5	C2-1 0.2-0.4	C2-2 0.6-0.8
				17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-040	EB1210561-042	EB1210561-043	EB1210561-045	EB1210561-046
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	0.8	<0.5	<0.5	<0.5	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Phenanthrene	85-01-8	0.5	mg/kg	3.6	<0.5	<0.5	<0.5	---
Anthracene	120-12-7	0.5	mg/kg	3.1	<0.5	<0.5	<0.5	---
Fluoranthene	206-44-0	0.5	mg/kg	9.2	<0.5	<0.5	1.0	---
Pyrene	129-00-0	0.5	mg/kg	8.5	<0.5	<0.5	1.2	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	6.1	<0.5	<0.5	0.9	---
Chrysene	218-01-9	0.5	mg/kg	3.8	<0.5	<0.5	0.6	---
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	10.8	<0.5	<0.5	1.9	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	9.0	<0.5	<0.5	1.6	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	7.4	<0.5	<0.5	1.4	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	0.7	<0.5	<0.5	0.7	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	0.6	<0.5	<0.5	<0.5	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	3.1	<0.5	<0.5	0.8	---
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	66.7	<0.5	<0.5	10.1	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	---	---	---	83.2	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	---	---	---	93.0	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	95.9	104	113	96.0	---
2-Chlorophenol-D4	93951-73-6	0.1	%	95.7	105	113	93.4	---
2,4,6-Tribromophenol	118-79-6	0.1	%	93.8	82.4	94.6	64.2	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	79.5	86.4	95.8	80.4	---
Anthracene-d10	1719-06-8	0.1	%	94.6	61.2	65.1	69.6	---
4-Terphenyl-d14	1718-51-0	0.1	%	90.6	88.7	93.3	84.2	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL		Client sample ID		A6-2 0.5-0.8	A6-3 1.0-1.2	B2-1 0.2-0.4	B2-2 0.5-0.6	B2-3 0.8-1.0
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-014	EB1210561-015	EB1210561-017	EB1210561-018	EB1210561-019
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	---	---	<0.2	---
Total Xylenes	1330-20-7	0.5	mg/kg	---	---	---	<0.5	---
Naphthalene	91-20-3	1	mg/kg	---	---	---	<1	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	88.0	---	---	---	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	86.5	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	91.0	---	90.7	91.2	---
2-Chlorophenol-D4	93951-73-6	0.1	%	91.9	---	90.3	94.5	---
2,4,6-Tribromophenol	118-79-6	0.1	%	84.9	---	65.5	79.3	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	88.5	---	76.0	77.9	---
Anthracene-d10	1719-06-8	0.1	%	90.0	---	72.6	60.0	---
4-Terphenyl-d14	1718-51-0	0.1	%	89.7	---	92.4	96.1	---
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	---	---	110	---
Toluene-D8	2037-26-5	0.1	%	---	---	---	111	---
4-Bromofluorobenzene	460-00-4	0.1	%	---	---	---	105	---

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RNA Showgrounds - Lots 103 and 104 on SP219236
St Pauls Terrace, Fortitude Valley
Project No. 011-165G, May 2012

Table 3: TCLP Results

Table 3: TCLP Results																		
Sample Date	Sample Location	Sample Number	Sample Depth	Material Type	Organics				Inorganics Heavy Metals									
					Total PAH (mg/kg)	PAH TCLP (mg/L)	Total B(a)P (mg/kg)	B(a)P TCLP (mg/L)	Total Cd (mg/kg)	TCLP Cd (mg/L)	Total Cr (mg/kg)	TCLP Cr (mg/L)	Total Pb (mg/kg)	Pb TCLP (mg/L)	Total Hg (mg/kg)	TCLP Hg (mg/L)	Total Zn (mg/kg)	Zn TCLP (mg/L)
Landfill Criteria - Unlined					500.0	0.1	-	0.002	-	0.1	-	0.5	-	0.5	-	0.0	-	50.0
Landfill Criteria - Maximum					1000.0	1.0	-	0.02	-	0.5	-	5.0	-	5.0	-	0.1	-	500.0
Laboratory Level of Reporting (mg/L)					8.0	0.0155	0.5	0.0005	1	0.005	2	0.01	5	0.01	0.1	0.00	5	0.1
BULTER PARTNERS 2012 RESULTS																		
17-Apr-12	Zone B	B3-2	0.6-0.7	Fill	61.9	<0.0155	3.2	<0.0005	<1	-	6	-	1040	-	0.4	-	965	-
04-May-12	Zone B	B5-2	0.5-0.6	Fill	17.7	-	0.6	-	<1	-	4	-	235	-	1.9	<0.001	198	-
04-May-12	Zone B	B8-2	0.3-0.5	Fill	121.8	-	7.5	-	1	-	9	-	1150	0.2	0.3	-	1060	2.6
17-Apr-12	Zone B	B8-3	0.8-0.9	Fill	134.9	<0.0155	7.4	<0.0005	<1	-	4	-	261	-	0.2	-	195	-
04-May-12	Zone B	C2-1	0.2-0.4	Gravelly Sandy Clay	23.7	-	1.4	-	<1	-	138	<0.1	164	-	1.8	<0.001	189	-
04-May-12	Zone B	C7-1	0.0-0.2	Fill	11.4	-	<0.5	-	<1	-	6	-	444	0.1	0.2	-	441	1.1
17-Apr-12	Zone B	C8-2	0.3-0.5	Fill	163.7	<0.0155	14.1	<0.0005	1	-	8	-	1060	0.9	0.3	-	985	6.7
17-Apr-12	Zone B	D6-2	0.4-0.6	Fill	35.2	<0.0155	1.7	<0.0006	<1	-	5	-	197	-	0.2	-	519	-
04-May-12	Zone B	D10-2	0.3-0.5	Fill	24.7	-	1.4	-	1	-	7	-	2000	0.2	0.2	-	851	2.2
17-Apr-12	Zone B	E5-1	0-0.2	Fill	22.8	0.0266	63.4	<0.0005	<1	-	6	-	106	-	0.4	-	131	-
04-May-12	Zone B	E7-1	0-0.2	Fill	22.8	-	1.5	-	1	-	4	-	1840	<0.1	0.4	-	506	0.7
17-Apr-12	Zone B	E9-2	0.3-0.5	Fill	96	<0.0155	7.2	<0.0006	<1	-	3	-	204	-	0.1	-	344	-
17-Apr-12	Zone B	E10-1	0-0.2	Fill	822.7	<0.0155	50.8	<0.0007	<1	-	2	-	140	-	<0.1	-	148	-
04-May-12	Zone B	F5-3	0.8-1.0	Fill	57.9	-	4.5	-	3	-	8	-	1490	0.4	0.1	-	789	2.8
04-May-12	Zone B	F7-1	0-0.2	Fill	<LOR	-	<0.5	-	6	0.05	<2	-	1060	0.9	<0.1	-	6040	92
17-Apr-12	Zone B	F10-1	0-0.1	Fill	84.8	<0.0155	5.5	<0.0005	<1	-	3	-	932	0.8	0.3	-	558	6.5
GOLDER ASSOCIATES 2009/2011 RESULTS																		
02-Dec-09	Zone B	GA17	0.2-0.3	Assumed Fill	556.3	0.035	47.1	<0.0005	-	-	-	-	-	-	-	-	-	-
27-Jun-11	Zone B	GA118	0.4-0.6	Assumed Fill	71.9	-	8.9	-	-	-	-	-	642	0.2	-	-	-	-
27-Jun-11	Zone B	GA125	0.4-0.6	Assumed Fill	15.9	-	1.8	-	-	-	-	-	1360	0.2	-	-	-	-
27-Jun-11	Zone B	GA123	0.4-0.6	Assumed Fill	218	<0.0155	33.4	<0.0005	-	-	-	-	79	-	-	-	-	-

NOTES:

- 1 Analyte below the Unlined Landfill Criteria
- 2 Analyte above Unlined Landfill Criteria (within the Lined Landfill Criteria)
- 3 Analyte exceeds the Lined Landfill Criteria
- <LOR Below the limit of reporting
- Not analysed

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CERTIFICATE OF ANALYSIS

Work Order	: EB1210561	Page	: 1 of 60
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Per	Contact	: Customer Services
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: Sch4p4@butlerpartners.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 07 38523800	Telephone	: +61 7 3243 7222
Facsimile	: +61 07 38523808	Facsimile	: +61 7 3243 7218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 5479	Date Samples Received	: 19-APR-2012
C-Q-C number	: 011-165C/1	Issue Date	: 02-MAY-2012
Sampler	: sch4p4(6)	No. of samples received	: 152
Site	: Bowen Hills RNA	No. of samples analysed	: 117
Quote number	: BN/205/12		

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

sch4p4(6) F

Position

Metals Production Chemist
Senior Organic Chemist
Senior Organic Chemist

Accreditation Category

Brisbane Inorganics
Brisbane Inorganics
Brisbane Organics

Address 32 Shand Street Stafford QLD Australia 4053 | Phone: +61-7-3243 7222 | Facsimile: +61-7-3243 7218
Environmental Division Brisbane | Tel: 84 609 838 029 Part of the ALS Group | A Campbell Brothers Limited Company

Environmental

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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.

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

- EG005T (Total Metals) : Samples EB1210561-002 (A2-2), 078 (D8-1) & 130 (F5-1) show poor matrix spike recovery due to sample heterogeneity. Confirmed by visual inspection.
- EG005T (Total Metals) : Samples EB1210561-001 (A2-1), 115 (E10-1) & 141 (F10-3) show poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.
- EG035T (Total Mercury): Sample EB1210561-001 (A2-1) shows poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.
- PAH: Sample B7-3 shows poor matrix spike recovery due to sample heterogeneity. Confirmed by visual analysis.
- Pesticides - Sample 'A6-2' shows poor matrix spike recovery due to matrix interference.

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID		A2-1 0.2-0.3		A2-2 0.4-0.6		A2-3 0.8-1.0		A4-1 0.2-0.4		A4-2 0.6-0.7	
Client sampling date / time						17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00	
Compound	CAS Number	LOR	Unit	EB1210561-001		EB1210561-002		EB1210561-003		EB1210561-005		EB1210561-006			
EA055: Moisture Content															
Moisture Content (dried @ 103°C)				—	1.0	%	11.4	13.1	11.4	11.2	14.1				
EG005T: Total Metals by ICP-AES															
Arsenic	7440-38-2	5	mg/kg	5	5	8	12	11							
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1							
Chromium	7440-47-3	2	mg/kg	8	5	5	7	8							
Copper	7440-50-8	5	mg/kg	16	13	<5	12	9							
Lead	7439-92-1	5	mg/kg	168	172	6	390	74							
Nickel	7440-02-0	2	mg/kg	5	6	<2	4	3							
Zinc	7440-66-6	5	mg/kg	245	295	8	319	620							
EG035T: Total Recoverable Mercury by FIMS															
Mercury	7439-97-6	0.1	mg/kg	0.4	0.1	<0.1	0.1	0.2							
EP068A: Organochlorine Pesticides (OC)															
alpha-BHC	319-84-6	0.05	mg/kg	—	—	—	<0.05	—							
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	—	<0.05	—							
beta-BHC	319-85-7	0.05	mg/kg	—	—	—	<0.05	—							
gamma-BHC	58-89-9	0.05	mg/kg	—	—	—	<0.05	—							
delta-BHC	319-86-8	0.05	mg/kg	—	—	—	<0.05	—							
Heptachlor	76-44-8	0.05	mg/kg	—	—	—	<0.05	—							
Aldrin	309-00-2	0.05	mg/kg	—	—	—	<0.05	—							
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	—	<0.05	—							
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	—	<0.05	—							
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	—	<0.05	—							
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	—	<0.05	—							
Dieldrin	60-57-1	0.05	mg/kg	—	—	—	<0.05	—							
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	—	<0.05	—							
Endrin	72-20-8	0.05	mg/kg	—	—	—	<0.05	—							
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	—	<0.05	—							
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	—	<0.05	—							
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	—	<0.05	—							
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	—	<0.05	—							
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	—	<0.2	—							
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	—	<0.05	—							
Methoxychlor	72-43-5	0.2	mg/kg	—	—	—	<0.2	—							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons															
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5							

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			A2-1 0.2-0.3	A2-2 0.4-0.6	A2-3 0.8-1.0	A4-1 0.2-0.4	A4-2 0.6-0.7
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-001	EB1210561-002	EB1210561-003	EB1210561-005	EB1210561-006
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	0.5	0.7	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	0.6	0.7	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	0.8	0.9	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.6	0.6	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	2.5	2.9	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	<10	<10	---	---	---
C10 - C14 Fraction	---	50	mg/kg	<50	<50	---	---	---
C15 - C28 Fraction	---	100	mg/kg	<100	<100	---	---	---
C29 - C36 Fraction	---	100	mg/kg	<100	<100	---	---	---
C10 - C36 Fraction (sum)	---	50	mg/kg	<50	<50	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	<10	<10	---	---	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	<10	---	---	---
>C10 - C16 Fraction	---	50	mg/kg	<50	<50	---	---	---
>C16 - C34 Fraction	---	100	mg/kg	<100	<100	---	---	---
>C34 - C40 Fraction	---	100	mg/kg	<100	<100	---	---	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	<50	<50	---	---	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	---	---	---
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	---	---	---
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	---	---	---
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	---	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL		Client sample ID			A2-1 0.2-0.3	A2-2 0.4-0.6	A2-3 0.8-1.0	A4-1 0.2-0.4	A4-2 0.6-0.7
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-001	EB1210561-002	EB1210561-003	EB1210561-005	EB1210561-006	
EP080: BTEXN									
Sum of BTEX	—	0.2	mg/kg	<0.2	<0.2	—	—	—	
Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	—	—	—	
Naphthalene	91-20-3	1	mg/kg	<1	<1	—	—	—	
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%	—	—	—	97.8	—	
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%	—	—	—	94.0	—	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	87.0	90.1	88.9	88.5	87.6	
2-Chlorophenol-D4	93951-73-6	0.1	%	87.8	92.5	91.8	90.2	87.6	
2,4,6-Tribromophenol	118-79-6	0.1	%	70.6	82.7	79.3	66.3	75.2	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	79.4	81.6	75.7	80.1	79.0	
Anthracene-d10	1719-06-8	0.1	%	71.2	79.0	39.8	77.1	53.5	
4-Terphenyl-d14	1718-51-0	0.1	%	82.7	90.8	81.2	81.6	93.4	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	122	110	—	—	—	
Toluene-D8	2037-26-5	0.1	%	115	111	—	—	—	
4-Bromofluorobenzene	460-00-4	0.1	%	115	107	—	—	—	

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			A4-3 1.0-1.2	A5-1 0.2-0.4	A5-2 0.6-0.8	A5-3 1.0-1.2	A6-1 0-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-007	EB1210561-009	EB1210561-010	EB1210561-011	EB1210561-013
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	15.8	11.0	15.5	17.6	8.0
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	13	8	7	11	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	12	7	8	4
Copper	7440-50-8	5	mg/kg	6	18	20	7	18
Lead	7439-92-1	5	mg/kg	10	157	302	11	28
Nickel	7440-02-0	2	mg/kg	2	8	4	<2	7
Zinc	7440-66-6	5	mg/kg	51	168	252	8	51
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.2	0.4	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Fluorene	86-73-7	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Anthracene	120-12-7	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	---	0.8	<0.5	---	0.7
Pyrene	129-00-0	0.5	mg/kg	---	0.8	<0.5	---	0.8
Benz(a)anthracene	56-55-3	0.5	mg/kg	---	0.6	<0.5	---	0.6
Chrysene	218-01-9	0.5	mg/kg	---	<0.5	<0.5	---	0.7
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	---	1.0	<0.5	---	0.7
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	---	0.7	<0.5	---	0.6
Benzo(a)pyrene	50-32-6	0.5	mg/kg	---	<0.5	<0.5	---	1.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	---	<0.5	<0.5	---	0.6
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	---	<0.5	<0.5	---	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	---	<0.5	<0.5	---	0.8
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	---	3.9	<0.5	---	6.6
EP080/071: Total Petroleum Hydrocarbons								
C8 - C9 Fraction	---	10	mg/kg	---	<10	---	---	<10
C10 - C14 Fraction	---	50	mg/kg	---	<50	---	---	<50
C15 - C28 Fraction	---	100	mg/kg	---	<100	---	---	<100
C29 - C36 Fraction	---	100	mg/kg	---	<100	---	---	<100
C10 - C36 Fraction (sum)	---	50	mg/kg	---	<50	---	---	<50

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			A4-3 1.0-1.2	A5-1 0.2-0.4	A5-2 0.6-0.8	A5-3 1.0-1.2	A6-1 0-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-007	EB1210561-009	EB1210561-010	EB1210561-011	EB1210561-013
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	<10	---	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	<10	---	---	<10
>C10 - C16 Fraction	---	50	mg/kg	---	<50	---	---	<50
>C16 - C34 Fraction	---	100	mg/kg	---	<100	---	---	110
>C34 - C40 Fraction	---	100	mg/kg	---	<100	---	---	<100
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	<50	---	---	110
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	---	<0.2
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	---	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	---	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	<0.5	---	---	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	---	<0.5
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	<0.2	---	---	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg	---	<0.5	---	---	<0.5
Naphthalene	91-20-3	1	mg/kg	---	<1	---	---	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	---	89.4	88.8	---	86.8
2-Chlorophenol-D4	93951-73-6	0.1	%	---	83.3	89.0	---	86.4
2,4,6-Tribromophenol	118-79-6	0.1	%	---	60.3	70.8	---	76.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	---	83.7	79.1	---	82.1
Anthracene-d10	1719-06-8	0.1	%	---	81.3	72.8	---	78.6
4-Terphenyl-d14	1718-51-0	0.1	%	---	103	95.8	---	88.2
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	113	---	---	117
Toluene-D8	2037-26-5	0.1	%	---	112	---	---	115
4-Bromofluorobenzene	460-00-4	0.1	%	---	108	---	---	108

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				A6-2 0.5-0.8	A6-3 1.0-1.2	B2-1 0.2-0.4	B2-2 0.5-0.6	B2-3 0.8-1.0
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-014	EB1210561-015	EB1210561-017	EB1210561-018	EB1210561-019
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	9.6	20.6	18.0	12.0	13.6
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	5	<5	5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	4	6	5	4	3
Copper	7440-50-8	5	mg/kg	23	5	7	11	<5
Lead	7439-92-1	5	mg/kg	22	14	74	122	11
Nickel	7440-02-0	2	mg/kg	9	2	<2	2	<2
Zinc	7440-66-6	5	mg/kg	72	14	151	120	8
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.2	0.2	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	---	---	---	---
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	---	---	---	---
beta-BHC	319-85-7	0.05	mg/kg	<0.05	---	---	---	---
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	---	---	---	---
delta-BHC	319-86-8	0.05	mg/kg	<0.05	---	---	---	---
Heptachlor	76-44-8	0.05	mg/kg	<0.05	---	---	---	---
Aldrin	309-00-2	0.05	mg/kg	<0.05	---	---	---	---
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	---	---	---	---
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	---	---	---	---
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	---	---	---	---
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	---	---	---	---
Dieldrin	60-57-1	0.05	mg/kg	<0.05	---	---	---	---
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	---	---	---	---
Endrin	72-20-8	0.05	mg/kg	<0.05	---	---	---	---
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	---	---	---	---
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	---	---	---	---
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	---	---	---	---
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	---	---	---	---
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	---	---	---	---
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	---	---	---	---
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	---	<0.5	<0.5	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			A6-2 0.5-0.8	A6-3 1.0-1.2	B2-1 0.2-0.4	B2-2 0.5-0.6	B2-3 0.8-1.0
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-014	EB1210561-015	EB1210561-017	EB1210561-018	EB1210561-019
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	0.6	---	<0.5	<0.5	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	---	<0.5	<0.5	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	---	<0.5	<0.5	---
Phenanthrene	85-01-8	0.5	mg/kg	1.2	---	<0.5	<0.5	---
Anthracene	120-12-7	0.5	mg/kg	0.7	---	<0.5	<0.5	---
Fluoranthene	206-44-0	0.5	mg/kg	5.2	---	<0.5	<0.5	---
Pyrene	129-00-0	0.5	mg/kg	5.0	---	<0.5	<0.5	---
Benzo(a)anthracene	56-55-3	0.5	mg/kg	4.3	---	<0.5	<0.5	---
Chrysene	218-01-9	0.5	mg/kg	4.2	---	<0.5	<0.5	---
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	3.8	---	<0.5	<0.5	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	1.9	---	<0.5	<0.5	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	5.9	---	<0.5	<0.5	---
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	2.6	---	<0.5	<0.5	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	0.9	---	<0.5	<0.5	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	2.8	---	<0.5	<0.5	---
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	39.1	---	<0.5	<0.5	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	---	---	<10	---
C10 - C14 Fraction	---	50	mg/kg	---	---	---	<50	---
C15 - C28 Fraction	---	100	mg/kg	---	---	---	<100	---
C29 - C36 Fraction	---	100	mg/kg	---	---	---	<100	---
C10 - C36 Fraction (sum)	---	50	mg/kg	---	---	---	<50	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	---	---	<10	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	---	---	<10	---
>C10 - C16 Fraction	---	50	mg/kg	---	---	---	<50	---
>C16 - C34 Fraction	---	100	mg/kg	---	---	---	<100	---
>C34 - C40 Fraction	---	100	mg/kg	---	---	---	<100	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	---	---	<50	---
EP080: BTEX								
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	108-38-3 108-42-3	0.5	mg/kg	---	---	---	<0.5	---
ortho-Xylene	95-47-6	0.5	mg/kg	---	---	---	<0.5	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Compound	CAS Number	LOR	Unit	B3-1 0.2-0.4	B3-2 0.6-0.7	B3-3 1.0-1.2	B5-1 0.2-0.4	B5-2 0.5-0.6
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Client sampling date / time				EB1210561-021	EB1210561-022	EB1210561-023	EB1210561-025	EB1210561-026
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	—	1.0	%	13.2	17.7	11.9	12.6	11.0
EG005T: Total Metals by ICP-AES								
Arsenic	7440-39-2	5	mg/kg	<5	11	<5	<5	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	5	6	3	4	4
Copper	7440-50-8	5	mg/kg	15	71	9	14	17
Lead	7439-92-1	5	mg/kg	167	1040	31	186	235
Nickel	7440-02-0	2	mg/kg	3	6	<2	3	3
Zinc	7440-66-6	5	mg/kg	384	965	77	221	196
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	1.0	0.4	<0.1	1.3	1.9
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	—	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			B3-1 0.2-0.4	B3-2 0.6-0.7	B3-3 1.0-1.2	B5-1 0.2-0.4	B5-2 0.5-0.6
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-021	EB1210561-022	EB1210561-023	EB1210561-025	EB1210561-026
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3.2	<0.5	<0.5	0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	1.0	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4.0	<0.5	0.8	1.3
Pyrene	129-00-0	0.5	mg/kg	<0.5	4.4	<0.5	0.8	1.3
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.0	<0.5	<0.5	0.6
Chrysene	218-01-9	0.5	mg/kg	<0.5	1.6	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	0.6	5.2	<0.5	1.2	1.6
Benzo(k)fluoranthene	207-08-8	0.5	mg/kg	<0.5	2.4	<0.5	0.6	0.7
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3.2	<0.5	<0.5	0.6
Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.4	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	1.3	<0.5	<0.5	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	0.6	29.7	<0.5	3.4	6.6
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	<10	---	---	<10
C10 - C14 Fraction	---	50	mg/kg	---	<50	---	---	<50
C15 - C28 Fraction	---	100	mg/kg	---	<100	---	---	<100
C29 - C36 Fraction	---	100	mg/kg	---	<100	---	---	<100
C10 - C36 Fraction (sum)	---	50	mg/kg	---	<50	---	---	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	<10	---	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	<10	---	---	<10
>C10 - C16 Fraction	---	50	mg/kg	---	<50	---	---	<50
>C16 - C34 Fraction	---	100	mg/kg	---	110	---	---	<100
>C34 - C40 Fraction	---	100	mg/kg	---	<100	---	---	<100
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	110	---	---	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	---	<0.2
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	---	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	---	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	<0.5	---	---	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	---	<0.5

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	B3-1 0.2-0.4	B3-2 0.6-0.7	B3-3 1.0-1.2	B5-1 0.2-0.4	B5-2 0.5-0.6
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-021	EB1210561-022	EB1210561-023	EB1210561-025	EB1210561-026
EP080: BTEXN									
Sum of BTEX	—	0.2	mg/kg	—	—	<0.2	—	—	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg	—	—	<0.5	—	—	<0.5
Naphthalene	91-20-3	1	mg/kg	—	—	<1	—	—	<1
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%	27.2	—	—	—	—	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-46-8	0.1	%	23.4	—	—	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	87.0	91.3	86.9	90.8	84.1	84.1
2-Chlorophenol-D4	93951-73-6	0.1	%	88.1	92.9	88.2	95.7	90.0	90.0
2,4,6-Tribromophenol	118-79-8	0.1	%	78.7	82.5	79.7	66.6	74.9	74.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	76.3	76.4	67.2	79.0	76.0	76.0
Anthracene-d10	1719-06-8	0.1	%	70.4	83.5	70.0	79.6	91.7	91.7
4-Terphenyl-d14	1718-51-0	0.1	%	82.6	92.5	84.8	96.0	96.7	96.7
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	108	—	—	—	114
Toluene-D8	2037-26-5	0.1	%	—	96.1	—	—	—	115
4-Bromofluorobenzene	460-00-4	0.1	%	—	97.8	—	—	—	110

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	B5-3 0.8-1.0	B6-1 0-0.2	B6-2 0.5-0.7	B6-3 1.0-1.1	B7-1 0-0.1
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-027	EB1210561-029	EB1210561-030	EB1210561-031	EB1210561-033
EA035: Moisture Content									
Moisture Content (dried @ 103°C)	---	1.0	%		18.5	11.4	10.0	21.9	9.3
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		4	8	8	5	3
Copper	7440-50-8	5	mg/kg		5	25	15	7	7
Lead	7439-92-1	5	mg/kg		10	266	181	23	20
Nickel	7440-02-0	2	mg/kg		<2	6	6	3	3
Zinc	7440-66-8	5	mg/kg		6	322	174	80	66
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	0.2	0.2	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		---	1.5	1.9	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		---	1.7	1.9	<0.5	<0.5
Benz[a]anthracene	56-55-3	0.5	mg/kg		---	1.1	1.0	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		---	0.8	0.8	<0.5	<0.5
Benzo[b]fluoranthene	205-99-2	0.5	mg/kg		---	3.6	3.0	<0.5	<0.5
Benzo[k]fluoranthene	207-08-9	0.5	mg/kg		---	1.6	1.4	<0.5	<0.5
Benzo[a]pyrene	50-32-8	0.5	mg/kg		---	1.9	1.1	<0.5	<0.5
Indeno[1,2,3-cd]pyrene	193-39-5	0.5	mg/kg		---	1.0	<0.5	<0.5	<0.5
Dibenzo[a,h]anthracene	53-70-3	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5
Benzo[g,h,i]perylene	191-24-2	0.5	mg/kg		---	0.9	0.7	<0.5	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg		---	14.1	11.8	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	10	mg/kg		---	---	<10	---	<10
C10 - C14 Fraction	---	50	mg/kg		---	---	<50	---	<50
C15 - C28 Fraction	---	100	mg/kg		---	---	<100	---	<100
C29 - C36 Fraction	---	100	mg/kg		---	---	<100	---	<100
C10 - C36 Fraction (sum)	---	50	mg/kg		---	---	<50	---	<50

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID				
Client sampling date / time				B5-3 0.8-1.0	B6-1 0-0.2	B6-2 0.5-0.7	B6-3 1.0-1.1	B7-1 0-0.1
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-027	EB1210561-029	EB1210561-030	EB1210561-031	EB1210561-033
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	---	<10	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	---	<10	---	<10
>C10 - C16 Fraction	---	50	mg/kg	---	---	<50	---	<50
>C16 - C34 Fraction	---	100	mg/kg	---	---	<100	---	<100
>C34 - C40 Fraction	---	100	mg/kg	---	---	<100	---	<100
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	---	<50	---	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	---	<0.2	---	<0.2
Toluene	108-88-3	0.5	mg/kg	---	---	<0.5	---	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	---	---	<0.5	---	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	---	<0.5	---	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	---	---	<0.5	---	<0.5
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	---	<0.2	---	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg	---	---	<0.5	---	<0.5
Naphthalene	91-20-3	1	mg/kg	---	---	<1	---	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	---	77.9	95.0	96.5	93.8
2-Chlorophenol-D4	93951-73-6	0.1	%	---	83.2	97.3	99.7	95.9
2,4,6-Tribromophenol	118-79-6	0.1	%	---	81.7	88.4	91.3	79.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	---	81.6	89.9	91.9	90.7
Anthracene-d10	1719-06-8	0.1	%	---	84.3	92.1	70.1	75.2
4-Terphenyl-d14	1718-51-0	0.1	%	---	90.8	99.7	110	110
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	---	119	---	116
Toluene-D8	2037-26-5	0.1	%	---	---	118	---	114
4-Bromofluorobenzene	460-00-4	0.1	%	---	---	114	---	110

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL				Client sample ID		B7-2 0.3-0.5		B7-3 0.6-0.8		B7-4 1.0-1.1		B8-1 0-0.2		B8-2 0.3-0.5	
				Client sampling date / time		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00	
Compound	CAS Number	LOR	Unit	EB1210561-034		EB1210561-035		EB1210561-036		EB1210561-038		EB1210561-039			
EA055: Moisture Content															
Moisture Content (dried @ 103°C)	—	1.0	%	13.5		24.8		21.6		11.4		16.3			
EG005T: Total Metals by ICP-AES															
Arsenic	7440-38-2	5	mg/kg	<5		<5		<5		6		<5			
Cadmium	7440-43-9	1	mg/kg	<1		2		<1		<1		1			
Chromium	7440-47-3	2	mg/kg	3		18		6		6		9			
Copper	7440-50-8	5	mg/kg	56		37		9		14		67			
Lead	7439-92-1	5	mg/kg	212		253		35		146		1150			
Nickel	7440-02-0	2	mg/kg	2		6		3		4		7			
Zinc	7440-66-6	5	mg/kg	186		890		707		170		1080			
EG035T: Total Recoverable Mercury by FIMS															
Mercury	7439-97-6	0.1	mg/kg	0.2		0.4		<0.1		0.2		0.3			
EP068A: Organochlorine Pesticides (OC)															
alpha-BHC	319-84-6	0.05	mg/kg	—		—		—		—		<0.05			
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—		—		—		—		<0.05			
beta-BHC	319-85-7	0.05	mg/kg	—		—		—		—		<0.05			
gamma-BHC	58-89-9	0.05	mg/kg	—		—		—		—		<0.05			
delta-BHC	319-86-8	0.05	mg/kg	—		—		—		—		<0.05			
Heptachlor	76-44-8	0.05	mg/kg	—		—		—		—		<0.05			
Aldrin	309-00-2	0.05	mg/kg	—		—		—		—		<0.05			
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—		—		—		—		<0.05			
trans-Chlordane	5103-74-2	0.05	mg/kg	—		—		—		—		<0.05			
alpha-Endosulfan	959-98-8	0.05	mg/kg	—		—		—		—		<0.05			
cis-Chlordane	5103-71-9	0.05	mg/kg	—		—		—		—		<0.05			
Dieldrin	60-57-1	0.05	mg/kg	—		—		—		—		<0.05			
4,4'-DDE	72-55-9	0.05	mg/kg	—		—		—		—		<0.05			
Endrin	72-20-8	0.05	mg/kg	—		—		—		—		<0.05			
beta-Endosulfan	33213-65-9	0.05	mg/kg	—		—		—		—		<0.05			
4,4'-DDD	72-54-8	0.05	mg/kg	—		—		—		—		<0.05			
Endrin aldehyde	7421-83-4	0.05	mg/kg	—		—		—		—		<0.05			
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—		—		—		—		<0.05			
4,4'-DDT	50-28-3	0.2	mg/kg	—		—		—		—		<0.2			
Endrin ketone	53494-70-5	0.05	mg/kg	—		—		—		—		<0.05			
Methoxychlor	72-43-5	0.2	mg/kg	—		—		—		—		<0.2			
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons															
Naphthalene	91-20-3	0.5	mg/kg	<0.5		<0.5		—		<0.5		<0.5			

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID		B7-2 0.3-0.5		B7-3 0.6-0.8		B7-4 1.0-1.1		B8-1 0-0.2		B8-2 0.3-0.5	
Client sampling date / time						17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00	
Compound	CAS Number	LOR	Unit	EB1210561-034		EB1210561-035		EB1210561-036		EB1210561-038		EB1210561-039			
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued															
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	---	---	---	<0.5	---	1.0				
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	---	---	---	<0.5	---	<0.5				
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	---	---	---	<0.5	---	<0.5				
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	---	---	---	<0.5	---	2.0				
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	---	---	---	<0.5	---	1.7				
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.9	---	---	---	0.6	---	6.1				
Pyrene	129-00-0	0.5	mg/kg	<0.5	1.0	---	---	---	0.6	---	6.0				
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.6	---	---	---	<0.5	---	4.2				
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.6	---	---	---	<0.5	---	3.0				
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	1.6	---	---	---	0.7	---	10.6				
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	1.3	---	---	---	0.6	---	8.8				
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.0	---	---	---	<0.5	---	7.5				
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.5	---	---	---	<0.5	---	4.3				
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	---	---	---	<0.5	---	<0.5				
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.6	---	---	---	<0.5	---	4.7				
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	8.1	---	---	---	2.5	---	59.9				
EP080/071: Total Petroleum Hydrocarbons															
C6 - C9 Fraction	---	10	mg/kg	---	<10	---	---	---	---	---	---				
C10 - C14 Fraction	---	50	mg/kg	---	<50	---	---	---	---	---	---				
C15 - C28 Fraction	---	100	mg/kg	---	<100	---	---	---	---	---	---				
C29 - C36 Fraction	---	100	mg/kg	---	<100	---	---	---	---	---	---				
C10 - C36 Fraction (sum)	---	50	mg/kg	---	<50	---	---	---	---	---	---				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft															
C6 - C10 Fraction	---	10	mg/kg	---	<10	---	---	---	---	---	---				
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	<10	---	---	---	---	---	---				
>C10 - C16 Fraction	---	50	mg/kg	---	<50	---	---	---	---	---	---				
>C16 - C34 Fraction	---	100	mg/kg	---	110	---	---	---	---	---	---				
>C34 - C40 Fraction	---	100	mg/kg	---	<100	---	---	---	---	---	---				
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	110	---	---	---	---	---	---				
EP080: BTEX															
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	---	---	---	---	---				
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	---	---	---	---	---				
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	---	---	---	---	---				
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	<0.5	---	---	---	---	---	---				
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	---	---	---	---	---				

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL		Client sample ID		B7-2 0.3-0.5	B7-3 0.6-0.8	B7-4 1.0-1.1	B8-1 0-0.2	B8-2 0.3-0.5
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-034	EB1210561-035	EB1210561-036	EB1210561-038	EB1210561-039
EP080: BTEXN								
Sum of BTEX	—	0.2	mg/kg	—	<0.2	—	—	—
Total Xylenes	1330-20-7	0.5	mg/kg	—	<0.5	—	—	—
Naphthalene	91-20-3	1	mg/kg	—	<1	—	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	—	—	85.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	—	—	87.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	95.9	97.8	—	99.0	95.4
2-Chlorophenol-D4	93951-73-6	0.1	%	95.8	94.8	—	96.7	94.1
2,4,6-Tribromophenol	118-79-6	0.1	%	82.8	88.2	—	80.8	85.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	75.3	84.1	—	85.8	82.8
Anthracene-d10	1719-06-8	0.1	%	46.1	79.4	—	88.5	89.7
4-Terphenyl-d14	1718-51-0	0.1	%	89.1	82.9	—	90.2	80.7
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	110	—	—	—
Toluene-D8	2037-28-5	0.1	%	—	105	—	—	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	103	—	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	C5-1 0-0.2	C5-2 0.4-0.5	C5-3 0.7-1.0	C7-1 0.0-0.2	C7-2 0.3-0.5
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
				EB1210561-047	EB1210561-048	EB1210561-049	EB1210561-050	EB1210561-051
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	—	1.0	%	10.2	16.9	23.7	12.9	12.2
EG055T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	12	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	3	3	6	6	5
Copper	7440-50-8	5	mg/kg	<5	<5	6	27	36
Lead	7439-92-1	5	mg/kg	20	8	12	444	387
Nickel	7440-02-0	2	mg/kg	<2	<2	2	3	4
Zinc	7440-66-6	5	mg/kg	18	6	20	441	279
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	0.2	0.3
EP058A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor epoxide	1024-67-3	0.05	mg/kg	<0.05	—	—	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL		Client sample ID		C5-1 0.0-0.2	C5-2 0.4-0.5	C5-3 0.7-1.0	C7-1 0.0-0.2	C7-2 0.3-0.5
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-047	EB1210561-048	EB1210561-049	EB1210561-050	EB1210561-051
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	---	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	---	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	---	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	---	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	---	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	---	0.6	1.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	---	0.6	1.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	---	<0.5	0.8
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	---	<0.5	0.8
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	---	0.8	1.9
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	---	0.7	1.6
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	---	<0.5	1.4
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<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
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	---	<0.5	0.7
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	---	2.7	10.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	<10	---	---	<10	---
C10 - C14 Fraction	---	50	mg/kg	<50	---	---	<50	---
C15 - C28 Fraction	---	100	mg/kg	<100	---	---	<100	---
C29 - C36 Fraction	---	100	mg/kg	<100	---	---	<100	---
C10 - C36 Fraction (sum)	---	50	mg/kg	<50	---	---	<50	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	<10	---	---	<10	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	---	---	<10	---
>C10 - C16 Fraction	---	50	mg/kg	<50	---	---	<50	---
>C16 - C34 Fraction	---	100	mg/kg	<100	---	---	<100	---
>C34 - C40 Fraction	---	100	mg/kg	<100	---	---	<100	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	<50	---	---	<50	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	---	---	<0.2	---
Toluene	108-88-3	0.5	mg/kg	<0.5	---	---	<0.5	---
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	---	---	<0.5	---
meta- & para-Xylene	108-39-3 106-42-3	0.5	mg/kg	<0.5	---	---	<0.5	---
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	---	---	<0.5	---

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	C5-1 0-0.2	C5-2 0.4-0.5	C5-3 0.7-1.0	C7-1 0.0-0.2	C7-2 0.3-0.5
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-047	EB1210561-048	EB1210561-049	EB1210561-050	EB1210561-051
EP080: BTEXN									
Sum of BTEX	---	0.2	mg/kg		<0.2	---	---	<0.2	---
Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	---	---	<0.5	---
Naphthalene	91-20-3	1	mg/kg		<1	---	---	<1	---
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		48.8	---	---	---	---
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		108	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-89-3	0.1	%		98.3	107	---	100	95.2
2-Chlorophenol-D4	93951-73-6	0.1	%		97.1	105	---	99.8	96.0
2,4,6-Tribromophenol	118-79-6	0.1	%		74.9	86.4	---	82.0	75.4
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		80.2	85.3	---	80.0	77.2
Anthracene-d10	1719-06-8	0.1	%		49.5	63.0	---	68.0	82.1
4-Terphenyl-d14	1718-51-0	0.1	%		87.9	93.7	---	89.0	90.3
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		105	---	---	120	---
Toluene-D8	2037-26-5	0.1	%		101	---	---	122	---
4-Bromofluorobenzene	480-00-4	0.1	%		99.0	---	---	116	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				C7-3 0.7-0.87	C7-4 1.0-1.2	C8-1 0-0.2	C8-2 0.3-0.5	C8-3 0.9-1.0
Client sampling date / time				18-APR-2012 15:00	18-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-052	EB1210561-053	EB1210561-054	EB1210561-055	EB1210561-056
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	16.7	14.8	13.0	12.5	17.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	5	6	6	6	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	1	<1
Chromium	7440-47-3	2	mg/kg	7	5	8	8	8
Copper	7440-50-8	5	mg/kg	30	7	44	56	35
Lead	7439-92-1	5	mg/kg	168	44	891	1060	809
Nickel	7440-02-0	2	mg/kg	16	3	4	8	8
Zinc	7440-66-6	5	mg/kg	234	46	518	985	696
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	1.0	<0.1	0.6	0.3	0.2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	0.7	<0.5	<0.5	1.0	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	3.1	0.8	<0.5	2.6	0.7
Anthracene	120-12-7	0.5	mg/kg	1.1	<0.5	<0.5	1.3	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	7.2	2.4	<0.5	11.0	2.0
Pyrene	129-00-0	0.5	mg/kg	7.0	2.0	<0.5	10.8	2.2
Benzo(a)anthracene	56-55-3	0.5	mg/kg	6.3	1.5	<0.5	8.5	1.7
Chrysene	218-01-9	0.5	mg/kg	4.7	1.2	<0.5	6.2	1.3
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	11.3	3.0	<0.5	6.2	1.7
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	9.4	2.5	<0.5	6.5	1.7
Benzo(a)pyrene	50-32-8	0.5	mg/kg	5.3	1.2	<0.5	14.1	4.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	4.5	0.8	<0.5	5.8	1.8
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	0.6	<0.5	<0.5	1.2	0.7
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	4.6	0.8	<0.5	5.9	2.1
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	65.8	16.3	<0.5	81.1	20.0
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	130	---	<100	---	<100
C29 - C36 Fraction	---	100	mg/kg	<100	---	<100	---	<100
C10 - C36 Fraction (sum)	---	50	mg/kg	130	---	<50	---	<50

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	C7-3 0.7-0.87	C7-4 1.0-1.2	C8-1 0-0.2	C8-2 0.3-0.5	C8-3 0.9-1.0
Client sampling date / time					18-APR-2012 15:00	18-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-052	EB1210561-053	EB1210561-054	EB1210561-055	EB1210561-056
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	---	10	mg/kg		<10	---	<10	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg		<10	---	<10	---	<10
>C10 - C16 Fraction	---	50	mg/kg		<50	---	<50	---	<50
>C16 - C34 Fraction	---	100	mg/kg		210	---	<100	---	<100
>C34 - C40 Fraction	---	100	mg/kg		<100	---	<100	---	<100
>C10 - C40 Fraction (sum)	---	50	mg/kg		210	---	<50	---	<50
EP080: BTEX									
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	108-38-3 106-42-3	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
EP080: BTEXN									
Sum of BTEX	---	0.2	mg/kg		<0.2	---	<0.2	---	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	---	<0.5	---	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	---	<1	---	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-86-3	0.1	%		91.3	95.1	97.8	92.3	87.1
2-Chlorophenol-D4	93951-73-6	0.1	%		91.6	94.9	97.0	93.8	87.6
2,4,6-Tribromophenol	118-79-6	0.1	%		83.1	85.4	82.2	87.0	88.2
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		86.9	79.0	84.1	81.2	76.3
Anthracene-d10	1719-06-8	0.1	%		94.4	81.4	66.5	94.7	83.8
4-Terphenyl-d14	1718-51-0	0.1	%		92.6	88.3	92.9	84.0	77.1
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17080-07-0	0.1	%		111	---	105	---	132
Toluene-D8	2037-26-5	0.1	%		110	---	104	---	123
4-Bromofluorobenzene	480-00-4	0.1	%		105	---	98.8	---	118

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	C8-4 1.0-1.2	C9-1 0-0.2	C9-2 0.3-0.4	C9-3 0.6-0.8	D1-1 0.1-0.2
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-057	EB1210561-059	EB1210561-060	EB1210561-061	EB1210561-063
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	---	1.0	%		17.6	6.8	14.9	21.8	17.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		6	7	3	6	7
Copper	7440-50-8	5	mg/kg		6	11	52	6	<5
Lead	7439-92-1	5	mg/kg		42	43	169	15	12
Nickel	7440-02-0	2	mg/kg		3	4	7	3	4
Zinc	7440-66-6	5	mg/kg		46	112	79	12	35
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		---	---	<0.05	---	---
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		---	---	<0.05	---	---
beta-BHC	319-85-7	0.05	mg/kg		---	---	<0.05	---	---
gamma-BHC	58-89-9	0.05	mg/kg		---	---	<0.05	---	---
delta-BHC	319-86-8	0.05	mg/kg		---	---	<0.05	---	---
Heptachlor	76-44-8	0.05	mg/kg		---	---	<0.05	---	---
Aldrin	309-00-2	0.05	mg/kg		---	---	<0.05	---	---
Heptachlor epoxide	1024-57-3	0.05	mg/kg		---	---	<0.05	---	---
trans-Chlordane	5103-74-2	0.05	mg/kg		---	---	<0.05	---	---
alpha-Endosulfan	959-98-5	0.05	mg/kg		---	---	<0.05	---	---
cis-Chlordane	5103-71-9	0.05	mg/kg		---	---	<0.05	---	---
Dieldrin	60-57-1	0.05	mg/kg		---	---	<0.05	---	---
4,4'-DDE	72-55-9	0.05	mg/kg		---	---	<0.05	---	---
Endrin	72-20-8	0.05	mg/kg		---	---	<0.05	---	---
beta-Endosulfan	33213-65-9	0.05	mg/kg		---	---	<0.05	---	---
4,4'-DDD	72-54-8	0.05	mg/kg		---	---	<0.05	---	---
Endrin aldehyde	7421-93-4	0.05	mg/kg		---	---	<0.05	---	---
Endosulfan sulfate	1031-07-8	0.05	mg/kg		---	---	<0.05	---	---
4,4'-DDT	50-29-3	0.2	mg/kg		---	---	<0.2	---	---
Endrin ketone	53494-70-5	0.05	mg/kg		---	---	<0.05	---	---
Methoxychlor	72-43-5	0.2	mg/kg		---	---	<0.2	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		---	<0.5	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	C8-4 1.0-1.2	C9-1 0-0.2	C9-2 0.3-0.4	C9-3 0.6-0.8	D1-1 0.1-0.2
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00
Compound	GAS Number	LOR	Unit	EB1210561-057	EB1210561-059	EB1210561-060	EB1210561-061	EB1210561-063	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Acenaphthylene	208-86-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	---	<0.5	1.4	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	---	<0.5	1.4	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	---	<0.5	1.1	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	---	<0.5	1.1	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	---	<0.5	1.0	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	---	<0.5	1.3	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	---	<0.5	1.8	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	---	<0.5	0.8	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	---	<0.5	1.0	<0.5	<0.5	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	---	<0.5	10.9	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	10	mg/kg	---	---	<10	---	---	---
C10 - C14 Fraction	---	50	mg/kg	---	---	<50	---	---	---
C15 - C28 Fraction	---	100	mg/kg	---	---	<100	---	---	---
C29 - C36 Fraction	---	100	mg/kg	---	---	<100	---	---	---
C10 - C36 Fraction (sum)	---	50	mg/kg	---	---	<50	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	---	10	mg/kg	---	---	<10	---	---	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	---	<10	---	---	---
>C10 - C16 Fraction	---	50	mg/kg	---	---	<50	---	---	---
>C16 - C34 Fraction	---	100	mg/kg	---	---	<100	---	---	---
>C34 - C40 Fraction	---	100	mg/kg	---	---	<100	---	---	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	---	<50	---	---	---
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg	---	---	<0.2	---	---	---
Toluene	108-88-3	0.5	mg/kg	---	---	<0.5	---	---	---
Ethylbenzene	100-41-4	0.5	mg/kg	---	---	<0.5	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	---	<0.5	---	---	---
ortho-Xylene	95-47-6	0.5	mg/kg	---	---	<0.5	---	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			C8-4 1.0-1.2	C9-1 0-0.2	C9-2 0.3-0.4	C9-3 0.6-0.8	D1-1 0.1-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LQR	Unit	EB1210561-057	EB1210561-059	EB1210561-060	EB1210561-061	EB1210561-063
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	---	<0.2	---	---
Total Xylenes	1330-20-7	0.5	mg/kg	---	---	<0.5	---	---
Naphthalene	91-20-3	1	mg/kg	---	---	<1	---	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	---	---	125	---	---
EP069T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	---	---	131	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	---	107	94.9	92.1	91.0
2-Chlorophenol-D4	93951-73-6	0.1	%	---	105	97.8	91.2	96.8
2,4,6-Tribromophenol	118-79-6	0.1	%	---	96.2	81.7	90.3	56.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	---	89.2	78.2	76.8	92.8
Anthracene-d10	1719-06-8	0.1	%	---	82.9	86.4	80.8	87.9
4-Terphenyl-d14	1718-51-0	0.1	%	---	106	94.5	89.9	84.2
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	---	111	---	---
Toluene-D8	2037-26-5	0.1	%	---	---	107	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	---	---	103	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				D1-3 0.8-1.0	D5-1 0.2-0.5	D5-2 0.4-0.6	D5-4 1.3-1.4	D6-1 0-0.2
Client sampling date / time				18-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-065	EB1210561-066	EB1210561-067	EB1210561-069	EB1210561-070
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	19.7	15.0	18.1	22.9	17.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	8	4	9	5
Copper	7440-50-8	5	mg/kg	<5	11	<5	<5	30
Lead	7439-92-1	5	mg/kg	6	98	12	8	269
Nickel	7440-02-0	2	mg/kg	<2	3	<2	<2	7
Zinc	7440-66-6	5	mg/kg	8	69	13	6	796
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.5	<0.1	<0.1	0.2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<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
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	---	---	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	<10	---	---	---
C10 - C14 Fraction	---	50	mg/kg	---	<50	---	---	---
C15 - C28 Fraction	---	100	mg/kg	---	<100	---	---	---
C29 - C36 Fraction	---	100	mg/kg	---	<100	---	---	---
C10 - C36 Fraction (sum)	---	50	mg/kg	---	<50	---	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				D1-3 0.8-1.0	D5-1 0.2-0.5	D5-2 0.4-0.6	D5-4 1.3-1.4	D6-1 0-0.2
Client sampling date / time				18-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-065	EB1210561-066	EB1210561-067	EB1210561-069	EB1210561-070
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	<10	---	---	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	<10	---	---	---
>C10 - C16 Fraction	---	50	mg/kg	---	<50	---	---	---
>C16 - C34 Fraction	---	100	mg/kg	---	<100	---	---	---
>C34 - C40 Fraction	---	100	mg/kg	---	<100	---	---	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	<50	---	---	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	---	---
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	---	---
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	<0.5	---	---	---
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	---	---
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	<0.2	---	---	---
Total Xylenes	1330-20-7	0.5	mg/kg	---	<0.5	---	---	---
Naphthalene	91-20-3	1	mg/kg	---	<1	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	95.2	86.8	---	---	83.3
2-Chlorophenol-D4	93951-73-6	0.1	%	97.9	91.5	---	---	92.4
2,4,6-Tribromophenol	118-79-6	0.1	%	77.2	72.1	---	---	72.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	95.5	85.6	---	---	91.4
Anthracene-d10	1719-06-8	0.1	%	87.9	85.4	---	---	95.4
4-Terphenyl-d14	1718-51-0	0.1	%	93.8	77.2	---	---	85.9
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	108	---	---	---
Toluene-D8	2037-26-5	0.1	%	---	110	---	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	---	106	---	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				D6-2 0.4-0.6	D6-3 0.7-0.8	D7-1 0-0.1	D7-2 0.1-0.3	D7-3 0.5-0.7
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-071	EB1210561-072	EB1210561-074	EB1210561-075	EB1210561-076
EA065: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	15.9	20.9	12.9	14.5	18.5
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	6	<5	7
Cadmium	7440-43-8	1	mg/kg	<1	<1	<1	1	<1
Chromium	7440-47-3	2	mg/kg	5	5	4	4	6
Copper	7440-50-8	5	mg/kg	28	6	<5	13	<5
Lead	7439-92-1	5	mg/kg	157	24	27	49	19
Nickel	7440-02-0	2	mg/kg	7	3	2	4	3
Zinc	7440-66-6	5	mg/kg	519	107	27	735	31
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	---	---	---	<0.05	---
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	---	---	---	<0.05	---
beta-BHC	319-85-7	0.05	mg/kg	---	---	---	<0.05	---
gamma-BHC	58-89-9	0.05	mg/kg	---	---	---	<0.05	---
delta-BHC	319-86-8	0.05	mg/kg	---	---	---	<0.05	---
Heptachlor	76-44-8	0.05	mg/kg	---	---	---	<0.05	---
Aldrin	309-00-2	0.05	mg/kg	---	---	---	<0.05	---
Heptachlor epoxide	1024-57-3	0.05	mg/kg	---	---	---	<0.05	---
trans-Chlordane	5103-74-2	0.05	mg/kg	---	---	---	<0.05	---
alpha-Endosulfan	959-98-8	0.05	mg/kg	---	---	---	<0.05	---
cis-Chlordane	5103-71-9	0.05	mg/kg	---	---	---	<0.05	---
Dieldrin	60-57-1	0.05	mg/kg	---	---	---	<0.05	---
4,4'-DDE	72-55-9	0.05	mg/kg	---	---	---	<0.05	---
Endrin	72-20-8	0.05	mg/kg	---	---	---	<0.05	---
beta-Endosulfan	33213-65-9	0.05	mg/kg	---	---	---	<0.05	---
4,4'-DDD	72-54-8	0.05	mg/kg	---	---	---	<0.05	---
Endrin aldehyde	7421-93-4	0.05	mg/kg	---	---	---	<0.05	---
Endosulfan sulfate	1031-07-8	0.05	mg/kg	---	---	---	<0.05	---
4,4'-DDT	50-29-3	0.2	mg/kg	---	---	---	<0.2	---
Endrin ketone	53494-70-5	0.05	mg/kg	---	---	---	<0.05	---
Methoxychlor	72-43-5	0.2	mg/kg	---	---	---	<0.2	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	---	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL				Client sample ID		D6-3 0.4-0.6		D6-3 0.7-0.8		D7-1 0-0.1		D7-2 0.1-0.3		D7-3 0.5-0.7	
Client sampling date / time				17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00	
Compound	CAS Number	LOR	Unit	EB1210561-071		EB1210561-072		EB1210561-074		EB1210561-075		EB1210561-076			
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued															
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5		---		<0.5		<0.5		<0.5			
Acenaphthene	83-32-9	0.5	mg/kg	<0.5		---		<0.5		<0.5		<0.5			
Fluorene	86-73-7	0.5	mg/kg	<0.5		---		<0.5		<0.5		<0.5			
Phenanthrene	85-01-8	0.5	mg/kg	1.8		---		<0.5		<0.5		<0.5			
Anthracene	120-12-7	0.5	mg/kg	<0.5		---		<0.5		<0.5		<0.5			
Fluoranthene	206-44-0	0.5	mg/kg	2.8		---		1.2		<0.5		<0.5			
Pyrene	129-00-0	0.5	mg/kg	2.6		---		1.1		<0.5		<0.5			
Benzo(a)anthracene	56-55-3	0.5	mg/kg	1.4		---		0.6		<0.5		<0.5			
Chrysene	218-01-9	0.5	mg/kg	1.2		---		0.5		<0.5		<0.5			
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.4		---		<0.5		<0.5		<0.5			
Benzo(k)fluoranthene	207-05-9	0.5	mg/kg	1.2		---		<0.5		<0.5		<0.5			
Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.7		---		0.6		<0.5		<0.5			
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	0.9		---		<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			
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.1		---		<0.5		<0.5		<0.5			
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	16.1		---		4.0		<0.5		<0.5			
EP080/071: Total Petroleum Hydrocarbons															
C6 - C9 Fraction	---	10	mg/kg	<10		---		---		<10		---			
C10 - C14 Fraction	---	50	mg/kg	<50		---		---		<50		---			
C15 - C28 Fraction	---	100	mg/kg	<100		---		---		<100		---			
C29 - C36 Fraction	---	100	mg/kg	<100		---		---		<100		---			
C10 - C36 Fraction (sum)	---	50	mg/kg	<50		---		---		<50		---			
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft															
C6 - C10 Fraction	---	10	mg/kg	<10		---		---		<10		---			
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10		---		---		<10		---			
>C10 - C16 Fraction	---	50	mg/kg	<50		---		---		<50		---			
>C16 - C34 Fraction	---	100	mg/kg	<100		---		---		<100		---			
>C34 - C40 Fraction	---	100	mg/kg	<100		---		---		<100		---			
>C10 - C40 Fraction (sum)	---	50	mg/kg	<50		---		---		<50		---			
EP080: BTEX															
Benzene	71-43-2	0.2	mg/kg	<0.2		---		---		<0.2		---			
Toluene	108-88-3	0.5	mg/kg	<0.5		---		---		<0.5		---			
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5		---		---		<0.5		---			
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5		---		---		<0.5		---			
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5		---		---		<0.5		---			

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID				
				D6-2 0.4-0.6	D6-3 0.7-0.8	D7-1 0-0.1	D7-2 0.1-0.3	D7-3 0.5-0.7
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-071	EB1210561-072	EB1210561-074	EB1210561-075	EB1210561-076
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	<0.2	---	---	<0.2	---
Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	---	---	<0.5	---
Naphthalene	91-20-3	1	mg/kg	<1	---	---	<1	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	---	---	---	40.6	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	---	---	---	45.6	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	91.7	---	94.7	95.0	85.1
2-Chlorophenol-D4	93951-73-6	0.1	%	97.5	---	108	108	96.2
2,4,6-Tribromophenol	118-79-6	0.1	%	85.0	---	83.3	92.5	83.2
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	97.3	---	94.3	103	97.6
Anthracene-d10	1719-06-8	0.1	%	102	---	102	74.5	70.8
4-Terphenyl-d14	1718-51-0	0.1	%	93.7	---	91.5	76.4	67.3
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	112	---	---	104	---
Toluene-D8	2037-26-5	0.1	%	109	---	---	110	---
4-Bromofluorobenzene	460-00-4	0.1	%	105	---	---	103	---

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	D7-4 1.0-1.2	D8-1 0-0.2	D8-2 0.3-0.5	D8-3 0.8-1.0	D10-1 0-0.1
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	GAS Number	LOR	Unit		EB1210561-077	EB1210561-078	EB1210561-079	EB1210561-080	EB1210561-082
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	---	1.0	%		20.6	19.3	22.3	24.6	12.6
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	5	<5	8	9
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		8	6	5	10	11
Copper	7440-50-8	5	mg/kg		<5	29	7	8	13
Lead	7439-92-1	5	mg/kg		15	178	21	19	52
Nickel	7440-02-0	2	mg/kg		4	9	2	4	11
Zinc	7440-66-6	5	mg/kg		23	252	20	16	81
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	0.2	0.3	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		---	<0.5	<0.5	---	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		---	<0.5	<0.5	---	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		---	<0.5	<0.5	---	<0.5
Fluorene	86-73-7	0.5	mg/kg		---	<0.5	<0.5	---	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		---	1.2	<0.5	---	<0.5
Anthracene	120-12-7	0.5	mg/kg		---	<0.5	<0.5	---	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		---	3.2	<0.5	---	<0.5
Pyrene	129-00-0	0.5	mg/kg		---	3.3	<0.5	---	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		---	1.9	<0.5	---	<0.5
Chrysene	218-01-9	0.5	mg/kg		---	1.5	<0.5	---	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		---	2.5	<0.5	---	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		---	2.1	<0.5	---	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		---	3.2	<0.5	---	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		---	1.8	<0.5	---	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		---	0.8	<0.5	---	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		---	2.4	<0.5	---	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg		---	23.9	<0.5	---	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	10	mg/kg		---	---	---	---	<10
C10 - C14 Fraction	---	50	mg/kg		---	---	---	---	<50
C15 - C28 Fraction	---	100	mg/kg		---	---	---	---	<100
C29 - C36 Fraction	---	100	mg/kg		---	---	---	---	<100
C10 - C36 Fraction (sum)	---	50	mg/kg		---	---	---	---	<50

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL		Client sample ID		D7-4 1.0-1.2	D8-1 0-0.2	D8-2 0.3-0.5	D8-3 0.8-1.0	D10-1 0-0.1
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-077	EB1210561-078	EB1210561-079	EB1210561-080	EB1210561-082
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	---	---	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	---	---	---	<10
>C10 - C16 Fraction	---	50	mg/kg	---	---	---	---	<50
>C16 - C34 Fraction	---	100	mg/kg	---	---	---	---	<100
>C34 - C40 Fraction	---	100	mg/kg	---	---	---	---	<100
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	---	---	---	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	---	---	---	<0.2
Toluene	108-88-3	0.5	mg/kg	---	---	---	---	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	---	---	---	---	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	---	---	---	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	---	---	---	---	<0.5
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	---	---	---	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg	---	---	---	---	<0.5
Naphthalene	91-20-3	1	mg/kg	---	---	---	---	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	---	88.4	84.6	---	96.6
2-Chlorophenol-D4	93951-73-6	0.1	%	---	100	97.0	---	111
2,4,6-Tribromophenol	118-79-6	0.1	%	---	69.7	77.1	---	78.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	---	96.3	97.7	---	101
Anthracene-d10	1719-06-8	0.1	%	---	72.7	70.5	---	75.4
4-Terphenyl-d14	1718-51-0	0.1	%	---	67.1	66.2	---	68.8
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	---	---	---	119
Toluene-D8	2037-26-5	0.1	%	---	---	---	---	117
4-Bromofluorobenzene	460-00-4	0.1	%	---	---	---	---	111

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			D10-2 0.3-0.5	D10-3 0.8-1.0	D10-4 1.2-1.4	E1-1 0.2-0.3	E1-2 0.4-0.6
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-083	EB1210561-084	EB1210561-085	EB1210561-087	EB1210561-088
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	17.2	12.1	30.0	18.7	16.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	8	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	7	9	6	2	<2
Copper	7440-50-8	5	mg/kg	69	26	9	<5	<5
Lead	7439-92-1	5	mg/kg	2000	255	18	25	<5
Nickel	7440-02-0	2	mg/kg	15	10	5	<2	<2
Zinc	7440-66-6	5	mg/kg	851	181	35	37	8
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	<0.1	<0.1	0.2	0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.6	<0.5	---	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	1.6	1.0	<0.5	---	<0.5
Pyrene	129-00-0	0.5	mg/kg	1.6	1.1	<0.5	---	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	1.1	0.8	<0.5	---	<0.5
Chrysene	218-01-9	0.5	mg/kg	1.0	0.6	<0.5	---	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.2	1.0	<0.5	---	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.9	0.9	<0.5	---	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.4	1.3	<0.5	---	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	0.8	0.7	<0.5	---	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.0	0.9	<0.5	---	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	10.6	8.9	<0.5	---	<0.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	92.1	87.3	108	---	110
2-Chlorophenol-D4	93951-73-6	0.1	%	106	98.9	123	---	121
2,4,6-Tribromophenol	118-79-6	0.1	%	77.0	88.3	99.8	---	89.3
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	96.3	98.4	107	---	106

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				D10-2 0.3-0.5	D10-3 0.8-1.0	D10-4 1.2-1.4	E1-1 0.2-0.3	E1-2 0.4-0.6
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-083	EB1210561-084	EB1210561-085	EB1210561-087	EB1210561-088
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	99.3	75.2	81.0	---	81.8
4-Terphenyl-d14	1718-51-0	0.1	%	99.4	66.8	76.6	---	75.9

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			E1-3 0.8-1.0	E3-1 0.1-0.3	E3-2 0.4-0.5	E3-3 0.6-0.8	E3-4 1.0-1.2
Client sampling date / time				18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-089	EB1210561-090	EB1210561-091	EB1210561-092	EB1210561-093
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	11.3	10.0	11.7	14.5	20.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	10	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	8	3	7	3
Copper	7440-50-8	5	mg/kg	<5	17	14	18	<5
Lead	7439-92-1	5	mg/kg	<5	29	270	231	12
Nickel	7440-02-0	2	mg/kg	<2	4	3	4	<2
Zinc	7440-66-6	5	mg/kg	8	76	137	214	9
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.5	0.2	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	---
Acenaphthylene	208-96-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	---
Acenaphthene	83-32-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	---
Fluorene	86-73-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	---
Phenanthrene	85-01-8	0.5	mg/kg	---	<0.5	4.6	<0.5	---
Anthracene	120-12-7	0.5	mg/kg	---	<0.5	0.9	<0.5	---
Fluoranthene	206-44-0	0.5	mg/kg	---	<0.5	4.7	0.6	---
Pyrene	129-00-0	0.5	mg/kg	---	<0.5	4.6	0.5	---
Benzo(a)anthracene	56-55-3	0.5	mg/kg	---	<0.5	2.3	<0.5	---
Chrysene	218-01-9	0.5	mg/kg	---	<0.5	1.9	<0.5	---
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	---	<0.5	2.5	<0.5	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	---	<0.5	2.2	<0.5	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	---	<0.5	3.2	<0.5	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	---	<0.5	1.6	<0.5	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	---	<0.5	2.0	<0.5	---
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	---	<0.5	30.5	1.1	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	---	<10	---	---
C10 - C14 Fraction	---	50	mg/kg	---	---	<50	---	---
C15 - C28 Fraction	---	100	mg/kg	---	---	150	---	---
C29 - C36 Fraction	---	100	mg/kg	---	---	110	---	---
C10 - C36 Fraction (sum)	---	50	mg/kg	---	---	260	---	---

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	E1-3 0.8-1.0	E3-1 0.1-0.3	E3-2 0.4-0.5	E3-3 0.6-0.8	E3-4 1.0-1.2
Client sampling date / time					18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-089	EB1210561-090	EB1210561-091	EB1210561-092	EB1210561-093
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	---	10	mg/kg		---	---	<10	---	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg		---	---	<10	---	---
>C10 - C16 Fraction	---	50	mg/kg		---	---	<50	---	---
>C16 - C34 Fraction	---	100	mg/kg		---	---	230	---	---
>C34 - C40 Fraction	---	100	mg/kg		---	---	<100	---	---
>C10 - C40 Fraction (sum)	---	50	mg/kg		---	---	230	---	---
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		---	---	<0.2	---	---
Toluene	108-88-3	0.5	mg/kg		---	---	<0.5	---	---
Ethylbenzene	100-41-4	0.5	mg/kg		---	---	<0.5	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		---	---	<0.5	---	---
ortho-Xylene	95-47-6	0.5	mg/kg		---	---	<0.5	---	---
EP080: BTEXN									
Sum of BTEX	---	0.2	mg/kg		---	---	<0.2	---	---
Total Xylenes	1330-20-7	0.5	mg/kg		---	---	<0.5	---	---
Naphthalene	91-20-3	1	mg/kg		---	---	<1	---	---
EP075(SIM): Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		---	99.2	95.6	97.8	---
2-Chlorophenol-D4	93951-73-6	0.1	%		---	109	103	101	---
2,4,6-Tribromophenol	118-79-6	0.1	%		---	68.2	98.7	84.1	---
EP075(SIM): PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		---	98.7	96.8	96.7	---
Anthracene-d10	1719-06-8	0.1	%		---	71.8	76.4	75.6	---
4-Terphenyl-d14	1718-51-0	0.1	%		---	66.6	69.5	66.8	---
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		---	---	106	---	---
Toluene-D8	2037-26-5	0.1	%		---	---	98.2	---	---
4-Bromofluorobenzene	460-00-4	0.1	%		---	---	101	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				E5-1 0-0.2	E5-2 0.4-0.6	E6-1 0-0.2	E6-2 0.3-0.5	E6-3 0.6-0.7
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-095	EB1210561-096	EB1210561-098	EB1210561-099	EB1210561-100
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	11.5	15.7	13.0	15.0	18.9
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	6	3	7	5	4
Copper	7440-50-8	5	mg/kg	38	<5	32	11	5
Lead	7439-92-1	5	mg/kg	106	48	499	62	16
Nickel	7440-02-0	2	mg/kg	36	2	7	3	3
Zinc	7440-86-6	5	mg/kg	131	27	198	136	49
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.4	0.1	0.2	0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	5.6	<0.5	<0.5	<0.5	---
Acenaphthylene	208-96-8	0.5	mg/kg	8.3	0.6	<0.5	<0.5	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Fluorene	86-73-7	0.5	mg/kg	0.7	<0.5	<0.5	<0.5	---
Phenanthrene	85-01-8	0.5	mg/kg	16.2	0.6	<0.5	<0.5	---
Anthracene	120-12-7	0.5	mg/kg	5.8	<0.5	<0.5	<0.5	---
Fluoranthene	206-44-0	0.5	mg/kg	93.6	3.3	<0.5	0.6	---
Pyrene	129-00-0	0.5	mg/kg	95.7	3.7	<0.5	0.6	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	52.7	3.5	<0.5	<0.5	---
Chrysene	218-01-9	0.5	mg/kg	38.8	2.7	<0.5	<0.5	---
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	51.7	4.4	<0.5	<0.5	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	38.6	4.3	<0.5	<0.5	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	63.4	5.4	0.5	<0.5	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	37.0	3.6	<0.5	<0.5	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	19.0	1.2	<0.5	<0.5	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	34.6	3.1	<0.5	<0.5	---
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	562	36.4	0.5	1.2	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	<10	---	---	<10	---
C10 - C14 Fraction	---	50	mg/kg	<50	---	---	<50	---
C15 - C28 Fraction	---	100	mg/kg	1870	---	---	<100	---
C29 - C36 Fraction	---	100	mg/kg	1340	---	---	<100	---
C10 - C36 Fraction (sum)	---	50	mg/kg	3210	---	---	<50	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				E5-1 0-0.2	E5-2 0.4-0.6	E6-1 0-0.2	E6-2 0.3-0.5	E6-3 0.6-0.7
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-095	EB1210561-096	EB1210561-098	EB1210561-099	EB1210561-100
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C5 - C10 Fraction	---	10	mg/kg	<10	---	---	<10	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	---	---	<10	---
>C10 - C16 Fraction	---	50	mg/kg	60	---	---	<50	---
>C16 - C34 Fraction	---	100	mg/kg	2940	---	---	<100	---
>C34 - C40 Fraction	---	100	mg/kg	510	---	---	<100	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	3510	---	---	<50	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	---	---	<0.2	---
Toluene	108-88-3	0.5	mg/kg	<0.5	---	---	<0.5	---
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	---	---	<0.5	---
meta- & para-Xylene	106-38-3 106-42-3	0.5	mg/kg	<0.5	---	---	<0.5	---
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	---	---	<0.5	---
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	<0.2	---	---	<0.2	---
Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	---	---	<0.5	---
Naphthalene	91-20-3	1	mg/kg	2	---	---	<1	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	92.6	95.8	89.9	77.2	---
2-Chlorophenol-D4	93951-73-6	0.1	%	102	96.5	92.2	83.4	---
2,4,6-Tribromophenol	118-79-6	0.1	%	106	77.0	88.9	59.6	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	104	96.0	95.7	100	---
Anthracene-d10	1719-06-8	0.1	%	80.4	73.6	74.7	77.2	---
4-Terphenyl-d14	1718-51-0	0.1	%	83.1	65.5	67.4	71.0	---
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	113	---	---	99.7	---
Toluene-D8	2037-26-5	0.1	%	105	---	---	94.5	---
4-Bromofluorobenzene	460-00-4	0.1	%	103	---	---	94.9	---

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	E6-4 0.9-1.0	E7-1 0-0.2	E7-2 0.3-0.5	E8-1 0-0.1	E8-2 0.3-0.4
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LQR	Unit		EB1210561-101	EB1210561-103	EB1210561-104	EB1210561-106	EB1210561-107
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	---	1.0	%		15.7	14.4	19.7	14.3	12.8
EG005T: Total Metals by ICP-AES									
Arsenic	7440-39-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		<2	4	<2	<2	<2
Copper	7440-50-8	5	mg/kg		<5	67	<5	51	27
Lead	7439-92-1	5	mg/kg		8	1840	15	232	149
Nickel	7440-02-0	2	mg/kg		<2	6	<2	7	8
Zinc	7440-66-8	5	mg/kg		7	506	11	631	306
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	0.4	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		---	<0.5	---	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		---	<0.5	---	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		---	<0.5	---	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		---	<0.5	---	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		---	0.6	---	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		---	<0.5	---	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		---	1.1	---	1.0	1.6
Pyrene	129-00-0	0.5	mg/kg		---	1.1	---	1.0	1.8
Benz(a)anthracene	56-55-3	0.5	mg/kg		---	0.6	---	0.8	1.5
Chrysene	218-01-9	0.5	mg/kg		---	0.6	---	0.7	1.3
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		---	1.3	---	1.5	2.4
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		---	0.8	---	0.9	1.8
Benzo(a)pyrene	50-32-8	0.5	mg/kg		---	1.5	---	1.5	2.7
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		---	1.0	---	1.1	1.6
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		---	<0.5	---	<0.5	0.6
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		---	1.3	---	1.2	1.9
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg		---	9.9	---	9.7	17.2
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	10	mg/kg		---	<10	---	<10	---
C10 - C14 Fraction	---	50	mg/kg		---	<50	---	<50	---
C15 - C28 Fraction	---	100	mg/kg		---	170	---	<100	---
C29 - C36 Fraction	---	100	mg/kg		---	140	---	<100	---
C10 - C36 Fraction (sum)	---	50	mg/kg		---	310	---	<50	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID		E6-4 0.9-1.0	E7-1 0-0.2	E7-2 0.3-0.5	E8-1 0-0.1	E8-2 0.3-0.4
Client sampling date / time						17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit			EB1210561-101	EB1210561-103	EB1210561-104	EB1210561-106	EB1210561-107
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft										
C6 - C10 Fraction	---	10	mg/kg			---	10	---	<10	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg			---	10	---	<10	---
>C10 - C16 Fraction	---	50	mg/kg			---	<50	---	<50	---
>C16 - C34 Fraction	---	100	mg/kg			---	280	---	<100	---
>C34 - C40 Fraction	---	100	mg/kg			---	<100	---	<100	---
>C10 - C40 Fraction (sum)	---	50	mg/kg			---	280	---	<50	---
EP080: BTEX										
Benzene	71-43-2	0.2	mg/kg			---	<0.2	---	<0.2	---
Toluene	108-88-3	0.5	mg/kg			---	<0.5	---	<0.5	---
Ethylbenzene	100-41-4	0.5	mg/kg			---	<0.5	---	<0.5	---
meta- & para-Xylene	108-38-3	0.5	mg/kg			---	<0.5	---	<0.5	---
ortho-Xylene	95-47-6	0.5	mg/kg			---	<0.5	---	<0.5	---
EP080: BTEXN										
Sum of BTEX	---	0.2	mg/kg			---	<0.2	---	<0.2	---
Total Xylenes	1330-20-7	0.5	mg/kg			---	<0.5	---	<0.5	---
Naphthalene	91-20-3	1	mg/kg			---	<1	---	<1	---
EP075(SIM)S: Phenolic Compound Surrogates										
Phenol-d6	13127-88-3	0.1	%			---	77.3	---	78.2	89.4
2-Chlorophenol-D4	93951-73-6	0.1	%			---	86.0	---	88.6	100
2,4,6-Tribromophenol	118-79-6	0.1	%			---	68.0	---	87.1	79.2
EP075(SIM)T: PAH Surrogates										
2-Fluorobiphenyl	321-60-8	0.1	%			---	99.5	---	96.6	93.4
Anthracene-d10	1719-06-8	0.1	%			---	74.9	---	73.8	73.8
4-Terphenyl-d14	1718-51-0	0.1	%			---	71.1	---	66.6	76.1
EP080S: TPH(V)/BTEX Surrogates										
1,2-Dichloroethane-D4	17080-07-0	0.1	%			---	111	---	105	---
Toluene-D8	2037-26-5	0.1	%			---	94.9	---	99.0	---
4-Bromofluorobenzene	460-00-4	0.1	%			---	99.8	---	99.3	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL	Client sample ID			E8-3 0.8-1.0	E9-1 0-0.1	E9-2 0.3-0.5	E9-3 0.8-1.0	E10-1 0-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-108	EB1210561-111	EB1210561-112	EB1210561-113	EB1210561-115
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	20.7	16.4	14.1	22.2	12.3
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	4	3	2	<2
Copper	7440-50-8	5	mg/kg	<5	26	28	<5	20
Lead	7439-92-1	5	mg/kg	24	265	204	11	140
Nickel	7440-02-0	2	mg/kg	<2	3	7	<2	2
Zinc	7440-66-6	5	mg/kg	10	339	344	<5	148
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	---	3.0
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.7	---	8.0
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	---	0.8
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.7	---	17.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	---	6.6
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.8	3.8	---	81.6
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.9	4.1	---	41.2
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.6	4.0	---	37.3
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.6	3.4	---	29.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	1.1	6.3	---	40.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	0.7	3.9	---	28.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.2	7.2	---	50.8
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.8	5.6	---	26.9
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	1.4	---	12.6
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.9	5.9	---	26.9
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	7.6	47.0	---	411
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	<10	---	---	<10
C10 - C14 Fraction	---	50	mg/kg	---	<50	---	---	<50
C15 - C28 Fraction	---	100	mg/kg	---	<100	---	---	1300
C29 - C36 Fraction	---	100	mg/kg	---	140	---	---	720
C10 - C36 Fraction (sum)	---	50	mg/kg	---	140	---	---	2020

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				E8-3 0.8-1.0	E9-1 0-0.1	E9-2 0.3-0.5	E9-3 0.8-1.0	E10-1 0-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-108	EB1210561-111	EB1210561-112	EB1210561-113	EB1210561-115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	<10	---	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	<10	---	---	<10
>C10 - C16 Fraction	---	50	mg/kg	---	<50	---	---	<50
>C16 - C34 Fraction	---	100	mg/kg	---	200	---	---	1880
>C34 - C40 Fraction	---	100	mg/kg	---	110	---	---	320
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	310	---	---	2200
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	---	<0.2
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	---	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	---	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	<0.5	---	---	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	---	<0.5
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	<0.2	---	---	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg	---	<0.5	---	---	<0.5
Naphthalene	91-20-3	1	mg/kg	---	<1	---	---	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	91.3	86.6	99.5	---	83.1
2-Chlorophenol-D4	93951-73-6	0.1	%	105	98.1	111	---	94.9
2,4,6-Tribromophenol	118-79-6	0.1	%	111	106	109	---	101
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	106	107	119	---	101
Anthracene-d10	1719-06-8	0.1	%	86.4	82.4	94.7	---	78.2
4-Terphenyl-d14	1718-51-0	0.1	%	76.8	73.8	89.4	---	72.2
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	113	---	---	102
Toluene-D8	2037-26-5	0.1	%	---	105	---	---	98.0
4-Bromofluorobenzene	460-00-4	0.1	%	---	103	---	---	99.6

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	E10-2 0.3-0.5	E10-3 0.6-0.8	E10-4 1.3-1.5	F3-1 0.2-0.4	F3-2 0.6-0.8
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-116	EB1210561-117	EB1210561-118	EB1210561-120	EB1210561-121
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	---	1.0	%		12.5	15.3	27.3	8.5	18.8
EG005T: Total Metals by ICP-AES									
Arsenic	7440-39-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		<2	<2	2	3	4
Copper	7440-50-8	5	mg/kg		67	16	5	5	25
Lead	7439-92-1	5	mg/kg		326	126	13	11	302
Nickel	7440-02-0	2	mg/kg		4	4	<2	<2	4
Zinc	7440-66-8	5	mg/kg		191	162	12	50	251
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	---	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		0.8	<0.5	---	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	---	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	---	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		6.7	<0.5	---	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		2.0	<0.5	---	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		12.7	0.7	---	<0.5	1.4
Pyrene	129-00-0	0.5	mg/kg		11.6	0.8	---	<0.5	1.4
Benzo(a)anthracene	56-55-3	0.5	mg/kg		8.2	0.6	---	<0.5	0.8
Chrysene	218-01-9	0.5	mg/kg		6.3	0.5	---	<0.5	0.8
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		10.4	1.1	---	<0.5	1.3
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		6.0	0.8	---	<0.5	0.9
Benzo(a)pyrene	50-32-8	0.5	mg/kg		9.8	1.2	---	<0.5	1.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		6.2	1.0	---	<0.5	1.0
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		1.9	<0.5	---	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		5.8	1.1	---	<0.5	1.2
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg		88.4	7.8	---	<0.5	10.3
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	10	mg/kg		---	<10	---	<10	---
C10 - C14 Fraction	---	50	mg/kg		---	<50	---	<50	---
C15 - C28 Fraction	---	100	mg/kg		---	<100	---	<100	---
C29 - C36 Fraction	---	100	mg/kg		---	<100	---	<100	---
C10 - C36 Fraction (sum)	---	50	mg/kg		---	<50	---	<50	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				E10-2 0.3-0.5	E10-3 0.6-0.8	E10-4 1.3-1.5	F3-1 0.2-0.4	F3-2 0.6-0.8
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-116	EB1210561-117	EB1210561-118	EB1210561-120	EB1210561-121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	<10	---	<10	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	<10	---	<10	---
>C10 - C16 Fraction	---	50	mg/kg	---	<50	---	<50	---
>C16 - C34 Fraction	---	100	mg/kg	---	<100	---	<100	---
>C34 - C40 Fraction	---	100	mg/kg	---	<100	---	<100	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	<50	---	<50	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	<0.2	---	<0.2	---
Toluene	108-88-3	0.5	mg/kg	---	<0.5	---	<0.5	---
Ethylbenzene	100-41-4	0.5	mg/kg	---	<0.5	---	<0.5	---
meta- & para-Xylene	108-38-3	106-42-3	0.5	mg/kg	<0.5	---	<0.5	---
ortho-Xylene	95-47-6	0.5	mg/kg	---	<0.5	---	<0.5	---
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	---	<0.2	---	<0.2	---
Total Xylenes	1330-20-7	0.5	mg/kg	---	<0.5	---	<0.5	---
Naphthalene	91-20-3	1	mg/kg	---	<1	---	<1	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-68-3	0.1	%	75.9	99.8	---	99.1	101
2-Chlorophenol-D4	93951-73-6	0.1	%	83.2	113	---	94.1	114
2,4,6-Tribromophenol	118-79-6	0.1	%	77.0	83.4	---	78.9	99.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	94.7	104	---	105	101
Anthracene-d10	1719-06-8	0.1	%	78.0	78.8	---	85.7	78.3
4-Terphenyl-d14	1718-51-0	0.1	%	71.1	73.0	---	76.8	71.6
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	107	---	104	---
Toluene-D8	2037-26-5	0.1	%	---	102	---	98.9	---
4-Bromofluorobenzene	460-00-4	0.1	%	---	102	---	100	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				F3-3 1.2-1.4	F4-1 0.2-0.3	F4-2 0.4-0.6	F4-3 0.8-1.0	F4-4 1.1-1.2
Client sampling date / time				18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-122	EB1210561-124	EB1210561-125	EB1210561-126	EB1210561-127
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	21.1	9.7	14.2	14.3	21.7
EG0057: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	13	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	2	3	<2	<2
Copper	7440-50-8	5	mg/kg	<5	8	46	20	<5
Lead	7439-92-1	5	mg/kg	12	65	523	558	31
Nickel	7440-02-0	2	mg/kg	<2	<2	3	2	<2
Zinc	7440-66-6	5	mg/kg	<5	104	251	227	19
EG0357: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.3	0.2	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	---	---	<0.05	---	---
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	---	---	<0.05	---	---
beta-BHC	319-85-7	0.05	mg/kg	---	---	<0.05	---	---
gamma-BHC	58-89-9	0.05	mg/kg	---	---	<0.05	---	---
delta-BHC	319-86-8	0.05	mg/kg	---	---	<0.05	---	---
Heptachlor	76-44-8	0.05	mg/kg	---	---	<0.05	---	---
Aldrin	309-00-2	0.05	mg/kg	---	---	<0.05	---	---
Heptachlor epoxide	1024-57-3	0.05	mg/kg	---	---	<0.05	---	---
trans-Chlordane	5103-74-2	0.05	mg/kg	---	---	<0.05	---	---
alpha-Endosulfan	959-98-8	0.05	mg/kg	---	---	<0.05	---	---
cis-Chlordane	5103-71-9	0.05	mg/kg	---	---	<0.05	---	---
Dieldrin	60-57-1	0.05	mg/kg	---	---	<0.05	---	---
4,4'-DDE	72-55-9	0.05	mg/kg	---	---	<0.05	---	---
Endrin	72-20-8	0.05	mg/kg	---	---	<0.05	---	---
beta-Endosulfan	33213-65-9	0.05	mg/kg	---	---	<0.05	---	---
4,4'-DDD	72-54-8	0.05	mg/kg	---	---	<0.05	---	---
Endrin aldehyde	7421-93-4	0.05	mg/kg	---	---	<0.05	---	---
Endosulfan sulfate	1031-07-8	0.05	mg/kg	---	---	<0.05	---	---
4,4'-DDT	50-29-3	0.2	mg/kg	---	---	<0.2	---	---
Endrin ketone	53494-70-5	0.05	mg/kg	---	---	<0.05	---	---
Methoxychlor	72-43-5	0.2	mg/kg	---	---	<0.2	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			F3-3 1.2-1.4	F4-1 0.2-0.3	F4-2 0.4-0.6	F4-3 0.8-1.0	F4-4 1.1-1.2
Client sampling date / time				18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-122	EB1210561-124	EB1210561-125	EB1210561-126	EB1210561-127
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.6	<0.5	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.6	1.8	<0.5	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.6	1.8	<0.5	---
Benzo(a)anthracene	58-55-3	0.5	mg/kg	<0.5	<0.5	1.0	<0.5	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.8	<0.5	---
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	1.4	0.6	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.7	<0.5	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	1.5	0.6	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.8	<0.5	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	1.0	0.6	---
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	1.2	11.4	1.7	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	---	---	<10	---
C10 - C14 Fraction	---	50	mg/kg	---	---	---	<50	---
C15 - C28 Fraction	---	100	mg/kg	---	---	---	<100	---
C29 - C36 Fraction	---	100	mg/kg	---	---	---	<100	---
C10 - C36 Fraction (sum)	---	50	mg/kg	---	---	---	<50	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	---	---	---	<10	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	---	---	---	<10	---
>C10 - C16 Fraction	---	50	mg/kg	---	---	---	<50	---
>C16 - C34 Fraction	---	100	mg/kg	---	---	---	<100	---
>C34 - C40 Fraction	---	100	mg/kg	---	---	---	<100	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	---	---	<50	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	---	---	<0.2	---
Toluene	108-88-3	0.5	mg/kg	---	---	---	<0.5	---
Ethylbenzene	100-41-4	0.5	mg/kg	---	---	---	<0.5	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	---	---	<0.5	---
ortho-Xylene	95-47-6	0.5	mg/kg	---	---	---	<0.5	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				F3-3 1.2-1.4	F4-1 0.2-0.3	F4-2 0.4-0.6	F4-3 0.8-1.0	F4-4 1.1-1.2
Client sampling date / time				18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-122	EB1210561-124	EB1210561-125	EB1210561-126	EB1210561-127
EP080: BTEXN								
Sum of BTEX	—	0.2	mg/kg	—	—	—	<0.2	—
Total Xylenes	1330-20-7	0.5	mg/kg	—	—	—	<0.5	—
Naphthalene	91-20-3	1	mg/kg	—	—	—	<1	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	90.1	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	98.4	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	72.2	96.2	103	98.2	—
2-Chlorophenol-D4	93951-73-6	0.1	%	81.7	97.7	106	98.5	—
2,4,6-Tribromophenol	118-79-8	0.1	%	55.7	53.0	83.6	78.8	—
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	72.5	94.7	102	98.1	—
Anthracene-d10	1719-06-8	0.1	%	53.9	71.2	80.6	71.6	—
4-Terphenyl-d14	1718-51-0	0.1	%	56.2	75.3	74.6	76.5	—
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	—	—	110	—
Toluene-D8	2037-26-5	0.1	%	—	—	—	102	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	—	—	103	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL	Client sample ID			F5-1 0.1-0.3	F5-2 0.4-0.6	F5-3 0.8-1.0	F5-4 1.3-1.5	F7-1 0-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-130	EB1210561-131	EB1210561-132	EB1210561-133	EB1210561-135
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	12.7	12.0	19.0	19.3	15.7
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	3	<1	6
Chromium	7440-47-3	2	mg/kg	3	<2	8	<2	<2
Copper	7440-50-8	5	mg/kg	13	16	52	<5	30
Lead	7439-92-1	5	mg/kg	75	159	1490	16	1060
Nickel	7440-02-0	2	mg/kg	2	2	8	<2	4
Zinc	7440-66-8	5	mg/kg	103	133	789	36	6040
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	1.0	0.7	0.6	---	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	---	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	2.3	1.5	2.0	---	<0.5
Pyrene	129-00-0	0.5	mg/kg	2.2	1.5	2.0	---	<0.5
Benzo(a)anthracene	56-55-3	0.5	mg/kg	1.2	0.7	1.8	---	<0.5
Chrysene	218-01-9	0.5	mg/kg	1.0	0.6	1.6	---	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.4	0.9	3.8	---	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	1.5	0.7	2.6	---	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	2.0	1.1	4.5	---	<0.5
Indeno(1,2,3-cd)pyrene	193-39-6	0.5	mg/kg	1.1	0.6	3.6	---	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	1.0	---	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.4	0.8	4.2	---	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	15.1	9.1	27.7	---	<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	---	130	---	<100
C29 - C36 Fraction	---	100	mg/kg	110	---	160	---	<100
C10 - C36 Fraction (sum)	---	50	mg/kg	110	---	290	---	<50

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				F5-1 0.1-0.3	F5-2 0.4-0.6	F5-3 0.8-1.0	F5-4 1.3-1.5	F7-1 0-0.2
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-130	EB1210561-131	EB1210561-132	EB1210561-133	EB1210561-135
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	---	10	mg/kg	<10	---	<10	---	<10
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	---	<10	---	<10
>C10 - C16 Fraction	---	50	mg/kg	<50	---	<50	---	<50
>C16 - C34 Fraction	---	100	mg/kg	180	---	260	---	<100
>C34 - C40 Fraction	---	100	mg/kg	<100	---	110	---	<100
>C10 - C40 Fraction (sum)	---	50	mg/kg	180	---	370	---	<50
EP080: BTEX								
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	108-38-3 106-42-3	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
EP080: BTEXN								
Sum of BTEX	---	0.2	mg/kg	<0.2	---	<0.2	---	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	---	<0.5	---	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	---	<1	---	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	112	93.2	89.6	---	92.0
2-Chlorophenol-D4	93951-73-6	0.1	%	108	92.0	97.2	---	97.4
2,4,6-Tribromophenol	118-79-6	0.1	%	49.4	75.4	108	---	93.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	104	91.2	99.0	---	95.3
Anthracene-d10	1719-06-8	0.1	%	86.0	74.2	78.0	---	73.6
4-Terphenyl-d14	1718-51-0	0.1	%	78.0	68.1	72.3	---	70.0
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	118	---	109	---	108
Toluene-D8	2037-26-5	0.1	%	111	---	106	---	103
4-Bromofluorobenzene	460-00-4	0.1	%	113	---	105	---	105

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL	Client sample ID			F7-2 0.4-0.6	F7-3 0.8-1.0	F10-1 0-0.1	F10-2 0.3-0.5	F10-3 0.7-0.8
Client sampling date / time				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1210561-136	EB1210561-137	EB1210561-139	EB1210561-140	EB1210561-141
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	—	1.0	%	22.9	21.7	12.5	20.2	17.8
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	<2	3	<2	2
Copper	7440-50-8	5	mg/kg	7	<5	65	12	12
Lead	7439-92-1	5	mg/kg	23	7	932	131	230
Nickel	7440-02-0	2	mg/kg	2	<2	6	4	3
Zinc	7440-66-6	5	mg/kg	688	203	558	52	141
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.3	0.2	0.2
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.05	—	—
alpha-Endosulfan	959-99-8	0.05	mg/kg	—	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	—	—	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.2	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	—	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	F7-2 0.4-0.6	F7-3 0.8-1.0	F10-1 0-0.1	F10-2 0.3-0.5	F10-3 0.7-0.8
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-136	EB1210561-137	EB1210561-139	EB1210561-140	EB1210561-141
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	---	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	---	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	---	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	---	2.7	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	---	0.6	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	---	5.6	1.2	1.2
Pyrene	129-00-0	0.5	mg/kg		<0.5	---	5.3	1.3	1.2
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	---	3.0	1.3	0.7
Chrysene	218-01-9	0.5	mg/kg		<0.5	---	2.9	1.2	0.7
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	---	5.0	2.4	1.0
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	---	3.2	1.6	0.7
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	---	5.5	2.4	1.2
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		<0.5	---	3.0	1.5	0.7
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	---	0.7	0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	---	3.8	1.7	0.9
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg		<0.5	---	41.3	15.1	8.3
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-ODE	21655-73-2	0.1	%		---	---	83.4	---	---
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-49-8	0.1	%		---	---	84.5	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		76.2	---	91.7	91.3	110
2-Chlorophenol-D4	93951-73-6	0.1	%		88.5	---	106	105	128
2,4,6-Tribromophenol	118-79-6	0.1	%		84.4	---	102	80.6	91.0
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		85.8	---	97.9	105	110
Anthracene-d10	1719-06-8	0.1	%		69.6	---	76.1	75.3	89.7
4-Terphenyl-d14	1718-51-0	0.1	%		69.6	---	71.3	71.6	92.1

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID		F10-4 1.3-1.5		DUP03		DUP05		DUP07		DUP09	
Client sampling date / time				17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00		17-APR-2012 15:00	
Compound	CAS Number	LQR	Unit	EB1210561-142		EB1210561-145		EB1210561-146		EB1210561-147		EB1210561-148			
EA055: Moisture Content															
Moisture Content (dried @ 103°C)	—	1.0	%	28.0		7.5		9.3		11.2		10.5			
EG005T: Total Metals by ICP-AES															
Arsenic	7440-38-2	5	mg/kg	<5		<5		<5		<5		<5			
Cadmium	7440-43-9	1	mg/kg	<1		<1		<1		<1		<1			
Chromium	7440-47-3	2	mg/kg	3		<2		<2		3		3			
Copper	7440-50-8	5	mg/kg	5		6		<5		11		25			
Lead	7439-92-1	5	mg/kg	33		30		17		143		344			
Nickel	7440-02-0	2	mg/kg	<2		2		3		<2		3			
Zinc	7440-66-6	5	mg/kg	14		66		29		140		256			
EG035T: Total Recoverable Mercury by FIMS															
Mercury	7439-97-6	0.1	mg/kg	<0.1		<0.1		<0.1		0.3		0.2			
EP068A: Organochlorine Pesticides (OC)															
alpha-BHC	319-84-6	0.05	mg/kg	—		—		<0.05		—		—			
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—		—		<0.05		—		—			
beta-BHC	319-85-7	0.05	mg/kg	—		—		<0.05		—		—			
gamma-BHC	58-89-9	0.05	mg/kg	—		—		<0.05		—		—			
delta-BHC	319-86-8	0.05	mg/kg	—		—		<0.05		—		—			
Heptachlor	76-44-8	0.05	mg/kg	—		—		<0.05		—		—			
Aldrin	309-00-2	0.05	mg/kg	—		—		<0.05		—		—			
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—		—		<0.05		—		—			
trans-Chlordane	5103-74-2	0.05	mg/kg	—		—		<0.05		—		—			
alpha-Endosulfan	959-98-8	0.05	mg/kg	—		—		<0.05		—		—			
cis-Chlordane	5103-71-9	0.05	mg/kg	—		—		<0.05		—		—			
Dieldrin	60-57-1	0.05	mg/kg	—		—		<0.05		—		—			
4,4'-DDE	72-55-9	0.05	mg/kg	—		—		<0.05		—		—			
Endrin	72-20-8	0.05	mg/kg	—		—		<0.05		—		—			
beta-Endosulfan	33213-65-9	0.05	mg/kg	—		—		<0.05		—		—			
4,4'-DDD	72-54-8	0.05	mg/kg	—		—		<0.05		—		—			
Endrin aldehyde	7421-83-4	0.05	mg/kg	—		—		<0.05		—		—			
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—		—		<0.05		—		—			
4,4'-DDT	50-29-3	0.2	mg/kg	—		—		<0.2		—		—			
Endrin ketone	53494-70-5	0.05	mg/kg	—		—		<0.05		—		—			
Methoxychlor	72-43-5	0.2	mg/kg	—		—		<0.2		—		—			
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons															
Naphthalene	91-20-3	0.5	mg/kg	<0.5		<0.5		<0.5		<0.5		<0.5			

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	F10-4 1.3-1.5	DUP03	DUP05	DUP07	DUP09
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-142	EB1210561-145	EB1210561-146	EB1210561-147	EB1210561-148
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	1.3	0.9	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	1.3	1.0	<0.5
Benzo(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	0.8	0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	0.8	0.6	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	1.0	0.7	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	0.9	0.6	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	1.2	0.9	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	0.6	0.6	<0.5
Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg		<0.5	<0.5	8.4	5.3	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	—	10	mg/kg		—	—	—	<10	<10
C10 - C14 Fraction	—	50	mg/kg		—	—	—	<50	<50
C15 - C28 Fraction	—	100	mg/kg		—	—	—	<100	<100
C29 - C36 Fraction	—	100	mg/kg		—	—	—	<100	<100
C10 - C36 Fraction (sum)	—	50	mg/kg		—	—	—	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	—	10	mg/kg		—	—	—	<10	<10
C6 - C10 Fraction minus BTEX (F1)	—	10	mg/kg		—	—	—	<10	<10
>C10 - C16 Fraction	—	50	mg/kg		—	—	—	<50	<50
>C16 - C34 Fraction	—	100	mg/kg		—	—	—	<100	<100
>C34 - C40 Fraction	—	100	mg/kg		—	—	—	<100	<100
>C10 - C40 Fraction (sum)	—	50	mg/kg		—	—	—	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		—	—	—	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		—	—	—	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		—	—	—	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		—	—	—	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		—	—	—	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	F10-4 1.3-1.5	DUP03	DUP05	DUP07	DUP09
Client sampling date / time					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1210561-142	EB1210561-145	EB1210561-146	EB1210561-147	EB1210561-148
EP080: BTEXN									
Sum of BTEX	—	0.2	mg/kg		—	—	—	<0.2	<0.2
Total Xylenes	1330-20-7	0.5	mg/kg		—	—	—	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		—	—	—	<1	<1
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		—	—	85.2	—	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		—	—	68.8	—	—
EP075(SIMS): Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		88.6	90.7	91.3	89.2	93.7
2-Chlorophenol-D4	93951-73-6	0.1	%		103	108	106	105	108
2,4,6-Tribromophenol	118-79-6	0.1	%		78.9	71.7	61.1	41.1	63.8
EP075(SIM): PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		82.4	95.4	93.2	90.0	95.3
Anthracene-d10	1719-06-8	0.1	%		68.9	69.2	73.6	74.9	70.0
4-Terphenyl-d14	1718-51-0	0.1	%		68.3	67.6	69.3	76.3	69.8
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		—	—	—	114	108
Toluene-D8	2037-26-5	0.1	%		—	—	—	103	104
4-Bromofluorobenzene	460-00-4	0.1	%		—	—	—	105	101

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	DUP15	---	---	---	---
				Client sampling date / time	18-APR-2012 15:00	---	---	---	---
Compound	CAS Number	LOR	Unit	EB1210561-151	---	---	---	---	---
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	---	1.0	%	14.2	---	---	---	---	---
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	<5	---	---	---	---	---
Cadmium	7440-43-9	1	mg/kg	<1	---	---	---	---	---
Chromium	7440-47-3	2	mg/kg	<2	---	---	---	---	---
Copper	7440-50-8	5	mg/kg	<5	---	---	---	---	---
Lead	7439-92-1	5	mg/kg	6	---	---	---	---	---
Nickel	7440-02-0	2	mg/kg	<2	---	---	---	---	---
Zinc	7440-66-6	5	mg/kg	5	---	---	---	---	---
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	0.2	---	---	---	---	---

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Analytical Results

Sub-Matrix: WATER		Client sample ID		TB180412	---	---	---	---
		Client sampling date / time		18-APR-2012 15:00	---	---	---	---
Compound	CAS Number	LOR	Unit	EB1210561-152	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	20	µg/L	<20	---	---	---	---
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	---	---	---	---
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	108-38-3 106-42-3	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	---	---	---	---
Napthalene	91-20-3	5	µg/L	<5	---	---	---	---
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.5	---	---	---	---
Toluene-D8	2037-26-5	0.1	%	93.4	---	---	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	89.5	---	---	---	---

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Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	138
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	22.8	134.5
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	34.8	154.5
2-Chlorophenol-D4	93951-73-6	41.9	152.8
2,4,6-Tribromophenol	118-79-6	26.0	156.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	33.8	156.5
Anthracene-d10	1719-06-8	36.9	153.1
4-Terphenyl-d14	1718-51-0	41.8	172.2
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	126.6
Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	66.1	137.9
Toluene-D8	2037-26-5	79.2	119.6
4-Bromofluorobenzene	460-00-4	74.2	118.0

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QUALITY CONTROL REPORT

Work Order	: EB1210561	Page	: 1 of 30
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Perso	Contact	: Customer Services
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 07 38523800	Telephone	: +61 7 3243 7222
Facsimile	: +61 07 38523808	Facsimile	: +61 7 3243 7218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Bowen Hills RNA	Date Samples Received	: 19-APR-2012
C-Q-C number	: 011-165C/1	Issue Date	: 02-MAY-2012
Sampler	: sch4p4(6)	No. of samples received	: 152
Order number	: 5479	No. of samples analysed	: 117
Quote number	: BN/205/12		

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

sch4p4(6) P

Metals Production Chemist
Senior Organic Chemist
Senior Organic Chemist

Brisbane Inorganics
Brisbane Inorganics
Brisbane Organics

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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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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 QM-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: 2270015)									
EB1210561-005	A4-1 0.2-0.4	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	11.2	10.8	3.1	0% - 50%
EB1210561-014	A6-2 0.5-0.8	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	9.6	11.2	15.0	0% - 50%
EA055: Moisture Content (QC Lot: 2270016)									
EB1210561-031	B6-3 1.0-1.1	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	21.9	21.3	2.7	0% - 20%
EB1210561-040	B6-3 0.8-0.9	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	13.6	13.1	3.5	0% - 50%
EA055: Moisture Content (QC Lot: 2270017)									
EB1210561-055	C8-2 0.3-0.5	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	12.5	13.0	4.2	0% - 50%
EB1210561-065	D1-3 0.8-1.0	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	19.7	17.5	11.9	0% - 50%
EA055: Moisture Content (QC Lot: 2270018)									
EB1210561-080	D6-3 0.8-1.0	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	24.6	23.8	3.5	0% - 20%
EA055: Moisture Content (QC Lot: 2270019)									
EB1210561-085	D10-4 1.2-1.4	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	30.0	29.7	1.0	0% - 20%
EB1210561-093	E3-4 1.0-1.2	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	20.4	20.4	0.0	0% - 20%
EA055: Moisture Content (QC Lot: 2270020)									
EB1210561-112	E9-2 0.3-0.5	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	14.1	14.0	0.0	0% - 50%
EB1210561-121	F3-2 0.6-0.8	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	18.8	18.8	0.0	0% - 50%
EA055: Moisture Content (QC Lot: 2270021)									
EB1210561-139	F10-1 0-0.1	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	12.5	12.4	1.1	0% - 50%
EB1210561-148	DUP09	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	10.5	10.5	0.0	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2270329)									
EB1210561-001	A2-1 0.2-0.3	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	7	20.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	19	13.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	168	235	# 33.2	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	245	240	2.4	0% - 20%
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	4	5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	9	10	13.2	No Limit
EB1210561-014	A6-2 0.5-0.8	EG005T: Arsenic	7440-38-2	5	mg/kg	7	9	24.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	25	5.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	26	20.5	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	72	81	10.9	0% - 50%
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	4	5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	9	10	13.2	No Limit

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Sub-Matrix: SOIL			Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Combound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 2270331)									
EB1210561-027	B5-3 0.8-1.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	4	4	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	5	5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	14	33.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	6	8	21.0	No Limit
EB1210561-040	B8-3 0.8-0.9	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	4	3	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	6	20.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	16	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	261	313	17.9	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	195	227	14.8	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 2270334)									
EB1210561-052	C7-3 0.7-0.87	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	7	5	28.5	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	16	12	31.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	30	30	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	168	194	14.4	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	234	218	6.9	0% - 20%
EB1210561-065	D1-3 0.8-1.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	7	20.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	8	9	15.3	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2270336)									
EB1210561-077	D7-4 1.0-1.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	7	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	4	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	5	21.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	15	12	19.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	23	22	7.4	No Limit
EB1210561-089	E1-3 0.8-1.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	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 (%)
EG005T: Total Metals by ICP-AES (QC Lot: 2270336) - continued									
EB1210561-089	E1-3 0.8-1.0	EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	8	7	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2270339)									
EB1210530-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
EB1210561-115	E10-1 0-0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	3	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	20	14	36.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	140	84	# 50.8	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	148	92	# 46.6	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2270341)									
EB1210561-127	F4-4 1.1-1.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	31	13	53.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	19	7	94.6	No Limit
EB1210561-141	F10-3 0.7-0.8	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	2	3	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	8	84.8	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	12	37	98.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	230	896	# 118	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	141	443	# 104	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270330)									
EB1210561-001	A2-1 0.2-0.3	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.4	1.6	# 122	0% - 50%
EB1210561-014	A6-2 0.5-0.8	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270332)									
EB1210561-027	B5-3 0.8-1.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1210561-040	B8-3 0.8-0.9	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	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 (%)
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270335)								
EB1210561-052	C7-3 0.7-0.87	EG035T: Mercury	7439-97-6	0.1	mg/kg	1.0	0.7	40.8
EB1210561-065	D1-3 0.8-1.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270337)								
EB1210561-077	D7-4 1.0-1.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0
EB1210561-089	E1-3 0.8-1.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270340)								
EB1210530-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0
EB1210561-115	E10-1 0-0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270342)								
EB1210561-127	F4-4 1.1-1.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0
EB1210561-141	F10-3 0.7-0.8	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.5	100
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2270092)								
EB1210561-005	AA-1 0.2-0.4	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0
EB1210561-146	DUP05	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0

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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 (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2270092) - continued									
EB1210561-146	DUP05	EP068: Heptachlor epoxide	1024-67-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270099)									
EB1210561-001	A2-1 0.2-0.3	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.5	0.9	50.2	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.6	0.9	45.1	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	0.8	1.0	26.6	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.6	0.7	26.6	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	2.5	4.0	46.2	No Limit
EB1210561-018	B2-2 0.5-0.6	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

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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 (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270099) - continued									
EB1210561-018	B2-2 0.5-0.6	EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270100)									
EB1210561-035	B7-3 0.6-0.8	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.9	1.2	27.3	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	1.0	1.3	24.8	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.6	0.8	29.6	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.6	0.7	20.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.6	2.1	27.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	1.3	1.7	27.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.0	1.3	20.9	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	0.5	0.6	22.2	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	0.6	0.7	21.8	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	8.1	10.4	# 24.9	0% - 20%
EB1210561-050	C7-1 0.0-0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.6	1.5	87.5	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.6	1.6	91.3	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.7	30.8	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	0.6	21.2	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 (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270100) - continued									
EB1210561-050	C7-1 0.0-0.2	EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	0.8	1.7	70.3	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.7	1.4	70.3	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.3	89.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.6	21.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	2.7	9.9	# 114	0% - 50%
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270107)									
EB1210561-066	D5-1 0.2-0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1210561-082	D10-1 0-0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

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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 (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270107) - continued									
EB1210561-082	D10-1 0-0.1	EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270110)									
EB1210561-099	E6-2 0.3-0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.6	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.6	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	1.2	<0.5	82.4	No Limit
EB1210561-117	E10-3 0.6-0.8	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.1	71.9	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.7	2.0	95.9	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.8	2.0	87.6	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.6	1.1	58.2	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.5	1.0	56.5	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.1	1.7	40.6	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.8	1.2	43.4	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.2	2.0	45.5	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	1.0	1.4	36.4	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.1	1.7	44.0	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 (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270110) - continued									
EB1210561-117	E10-3 0.6-0.8	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	7.8	15.2	# 64.3	0% - 20%
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2270125)									
EB1210530-002	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1210561-148	DUP09	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2269224)									

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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 Petroleum Hydrocarbons (QC Lot: 2269224) - continued									
EB1210561-001	A2-1 0.2-0.3	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EB1210561-047	C5-1 0-0.2	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2269225)									
EB1210561-091	E3-2 0.4-0.5	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EB1210561-130	F5-1 0.1-0.3	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2270098)									
EB1210561-001	A2-1 0.2-0.3	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: 2270101)									
EB1210561-035	B7-3 0.6-0.8	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: 2270108)									
EB1210561-066	D5-1 0.2-0.5	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: 2270111)									
EB1210561-099	E6-2 0.3-0.5	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: 2270124)									
EB1210530-002	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: 2269224)									
EB1210561-001	A2-1 0.2-0.3	EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EB1210561-047	C5-1 0-0.2	EP080: C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EB1210561-047	C5-1 0-0.2	EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2269225)									
EB1210561-091	E3-2 0.4-0.5	EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EB1210561-130	F5-1 0.1-0.3	EP080: C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	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 (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2269225) - continued									
EB1210561-130	F5-1 0.1-0.3	EP080: C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2270098)									
EB1210561-001	A2-1 0.2-0.3	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2270101)									
EB1210561-035	B7-3 0.6-0.8	EP071: >C16 - C34 Fraction	---	100	mg/kg	110	120	13.2	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2270108)									
EB1210561-066	D5-1 0.2-0.5	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2270111)									
EB1210561-099	E6-2 0.3-0.5	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2270124)									
EB1210530-002	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
EP080: BTEXN (QC Lot: 2269224)									
EB1210561-001	A2-1 0.2-0.3	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	---	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: Total Xylenes	1330-20-7	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: Sum of BTEX	---	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EB1210561-047	C5-1 0-0.2	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: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	---	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

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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: BTEXN (QC Lot: 2269224) - continued									
EB1210561-047	C5-1 0-0.2	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2269225)									
EB1210561-091	E3-2 0.4-0.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	---	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: Total Xylenes	1330-20-7	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
EB1210561-130	F5-1 0.1-0.3	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	---	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: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2272645)									
EB1210223-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	400	370	7.5	0% - 50%
EB1210440-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2272645)									
EB1210223-001	Anonymous	EP080: C6 - C10 Fraction	---	20	µg/L	900	830	8.2	0% - 20%
		EP080: C6 - C10 Fraction minus BTEX (F1)	---	20	µg/L	620	560	9.0	0% - 20%
EB1210440-001	Anonymous	EP080: C6 - C10 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	---	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 2272645)									
EB1210223-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	42	39	7.8	0% - 20%
		EP080: Sum of BTEX	---	1	µg/L	282	265	6.2	0% - 20%
		EP080: Toluene	108-88-3	2	µg/L	138	130	6.2	0% - 20%
		EP080: Ethylbenzene	100-41-4	2	µg/L	13	12	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	56	53	5.7	0% - 20%
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	33	31	6.1	0% - 50%
		EP080: Total Xylenes	1330-20-7	2	µg/L	89	84	5.8	0% - 20%
		EP080: Naphthalene	91-20-3	5	µg/L	28	37	28.8	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: 2272645) - continued									
EB1210440-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Sum of BTEX	---	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	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

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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

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High
EG005T: Total Metals by ICP-AES (QCLot: 2270329)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	106	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	87.8	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	100	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	98.3	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	88.1	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	95.2	86	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	102	86	124
EG005T: Total Metals by ICP-AES (QCLot: 2270331)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	94.5	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	83.7	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	93.1	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	92.8	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	85.4	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	88.0	86	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	98.6	86	124
EG005T: Total Metals by ICP-AES (QCLot: 2270334)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	99.2	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	90.7	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	93.6	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	91.9	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	90.7	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	102	86	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	91.5	86	124
EG005T: Total Metals by ICP-AES (QCLot: 2270336)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	103	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	90.1	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	91.5	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	89.4	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	87.7	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	101	86	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	88.9	86	124
EG005T: Total Metals by ICP-AES (QCLot: 2270339)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	96.0	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.2 mg/kg	100	82	124

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Sub-Matrix: SOIL

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High
EG005T: Total Metals by ICP-AES (QCLot: 2270339) - continued								
EG005T: Chromium	7440-47-3	2	mg/kg	<2	45 mg/kg	96.3	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	45 mg/kg	95.7	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	101	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	11 mg/kg	102	86	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	95 mg/kg	90.3	86	124
EG005T: Total Metals by ICP-AES (QCLot: 2270341)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	95.1	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	82.2	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	45 mg/kg	97.7	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	45 mg/kg	98.1	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	103	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	11 mg/kg	104	86	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	95 mg/kg	91.5	86	124
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270330)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	74.8	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270332)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	79.7	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270335)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	82.4	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270337)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	83.7	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270340)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	74.8	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270342)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	74.8	73	127
EP068A: Organochlorine Pesticides (OC) (QCLot: 2270092)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	58.4	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	57.7	107
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	59.3	116
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	59.1	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	51	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	110	54	119
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	110	52	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	104	51	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	106	51	114
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	107	53	120
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	105	50	113
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	104	58.8	115



Sub-Matrix: SOIL

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EP068A: Organochlorine Pesticides (OC) (QCLot: 2270092) - continued								
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	61.2	116
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.3	47	133
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	58.5	117
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	58.4	118
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	40	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	47	120
EP068: 4,4'-DDT	50-29-3	0.05	mg/kg	—	0.5 mg/kg	99.2	52.6	129
		0.2	mg/kg	<0.2	—	—	—	—
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	60	124
EP068: Methoxychlor	72-43-5	0.05	mg/kg	—	0.5 mg/kg	90.0	52.4	131
		0.2	mg/kg	<0.2	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270099)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	101	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	97.8	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	97.9	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	110	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	83.6	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	92.0	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	91.8	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	86.7	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	85.9	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	81.7	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	86.6	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	109	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	98.5	50	116
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	91.6	47	130
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	92.0	41	129
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	93.8	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270100)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	102	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	98.3	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	102	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	101	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	# 115	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	102	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	108	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	106	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	97.1	56	115



Sub-Matrix: SOIL

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270100) - continued								
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	98.8	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	92.8	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	98.1	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	107	50	116
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	114	47	130
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	110	41	129
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	112	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270107)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	105	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	108	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	95.2	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	# 122	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	# 115	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	99.3	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	89.7	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	89.0	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	82.9	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	85.8	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	97.5	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	88.6	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	99.9	50	116
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	104	47	130
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	105	41	129
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	111	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270110)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	103	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	107	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	94.2	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	106	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	86.5	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	76.8	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	70.3	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	69.2	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	66.1	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	64.2	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	110	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	94.1	48	124



Sub-Matrix: SOIL

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270110) - continued								
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	104	50	116
EP075(SIM): Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	122	47	130
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	# 129	41	129
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	118	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270125)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	110	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	112	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	99.3	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	110	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	97.1	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	85.3	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	78.0	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	77.6	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	65.4	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	76.9	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	81.8	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	108	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	96.5	50	116
EP075(SIM): Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	93.1	47	130
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	87.7	41	129
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	108	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2269224)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	16 mg/kg	92.8	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2269225)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	16 mg/kg	119	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270098)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	312 mg/kg	102	65	112
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	500 mg/kg	103	76.2	122
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270101)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	312 mg/kg	101	65	112
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	500 mg/kg	102	76.2	122
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270108)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	312 mg/kg	97.7	65	112
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	500 mg/kg	97.2	76.2	122



Sub-Matrix: SOIL

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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270108) - continued								
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270111)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	312 mg/kg	99.0	65	112
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	500 mg/kg	99.8	76.2	122
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270124)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	312 mg/kg	103	65	112
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	500 mg/kg	112	76.2	122
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2269224)								
EP080: C6 - C10 Fraction	---	10	mg/kg	<10	18.5 mg/kg	99.2	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2269225)								
EP080: C6 - C10 Fraction	---	10	mg/kg	<10	18.5 mg/kg	123	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270098)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	413 mg/kg	108	63	112
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	360 mg/kg	93.1	74	122
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270101)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	413 mg/kg	107	63	112
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	360 mg/kg	92.0	74	122
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270108)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	413 mg/kg	101	63	112
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	360 mg/kg	91.9	74	122
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270111)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	413 mg/kg	105	63	112
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	360 mg/kg	90.0	74	122
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270124)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	413 mg/kg	109	63	112
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	360 mg/kg	89.2	74	122
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080: BTEXN (QCLot: 2269224)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	86.3	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	88.5	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	86.4	72	119



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP080: BTEXN (QCLot: 2269224) - continued								
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	87.5	61	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	89.2	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	80.0	77.1	117
EP080: BTEXN (QCLot: 2269225)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	103	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	119	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	103	72	119
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	102	61	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	105	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	110	77.1	117

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound		CAS Number	LOR		Unit	Result	Spike Concentration	Spike Recovery (%) LCS
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2272645)								
EP080: C6 - C9 Fraction	—	20	µg/L	<20	160 µg/L	91.8	69	135
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2272645)								
EP080: C6 - C10 Fraction	—	20	µg/L	<20	185 µg/L	90.7	64	136
EP080: C6 - C10 Fraction minus BTEX (F1)	—	20	µg/L	<20	—	—	—	—
EP080: BTEXN (QCLot: 2272645)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	96.3	76	124
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	91.9	71	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	89.8	73	125
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	92.2	70.4	129
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	90.2	72	124
EP080: Total Xylenes	1330-20-7	2	µg/L	<2	—	—	—	—
EP080: Sum of BTEX	—	1	µg/L	<1	—	—	—	—
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	101	77	119



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

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2270329)							
EB1210561-002	A2-2 0.4-0.6	EG005T: Arsenic	7440-38-2	50 mg/kg	96.6	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	91.5	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	100	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	94.9	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	# 176	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	90.3	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	# Not Determined	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2270331)							
EB1210561-029	B6-1 0-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	86.8	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	89.9	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.9	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	87.2	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	# Not Determined	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	88.9	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	# Not Determined	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2270334)							
EB1210561-053	C7-4 1.0-1.2	EG005T: Arsenic	7440-38-2	50 mg/kg	76.0	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	81.0	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	79.3	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	78.7	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	84.1	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	78.3	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	83.0	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2270336)							
EB1210561-078	D8-1 0-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	73.0	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	79.2	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	77.6	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	91.4	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	# 208	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	78.2	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	84.1	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2270339)							
EB1210561-101	E6-4 0.9-1.0	EG005T: Arsenic	7440-38-2	50 mg/kg	73.0	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	86.5	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	82.6	70	130

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Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2270339) - continued							
EB1210561-101	E6-4 0.9-1.0	EG005T: Copper	7440-50-8	50 mg/kg	81.9	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	73.0	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	85.9	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	84.2	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2270341)							
EB1210561-130	F5-1 0.1-0.3	EG005T: Arsenic	7440-38-2	50 mg/kg	126	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	# 131	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	127	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	127	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	# 158	70	130
		EG005T: Nickel	7440-02-0	15 mg/kg	# 431	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	# 145	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270330)							
EB1210561-002	A2-2 0.4-0.6	EG035T: Mercury	7439-97-6	5.0 mg/kg	75.0	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270332)							
EB1210561-029	B6-1 0-0.2	EG035T: Mercury	7439-97-6	5.0 mg/kg	79.4	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270335)							
EB1210561-053	C7-4 1.0-1.2	EG035T: Mercury	7439-97-6	5.0 mg/kg	70.8	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270337)							
EB1210561-078	D8-1 0-0.2	EG035T: Mercury	7439-97-6	5.0 mg/kg	76.0	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270340)							
EB1210561-101	E6-4 0.9-1.0	EG035T: Mercury	7439-97-6	5.0 mg/kg	71.7	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270342)							
EB1210561-130	F5-1 0.1-0.3	EG035T: Mercury	7439-97-6	5.0 mg/kg	94.6	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2270092)							
EB1210561-014	A6-2 0.5-0.8	EP068: gamma-BHC	58-89-9	0.5 mg/kg	74.1	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	94.0	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	102	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	91.3	70	130
		EP068: Endrin	72-20-8	2 mg/kg	88.2	70	130
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	# 56.8	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270099)							
EB1210561-002	A2-2 0.4-0.6	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	114	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	99.5	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270100)							
EB1210561-035	B7-3 0.6-0.8	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	118	70	130

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Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270100) - continued							
EB1210561-035	B7-3 0.6-0.8	EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	# 156	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270107)							
EB1210561-065	D1-3 0.8-1.0	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	108	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	111	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270110)							
EB1210561-099	E6-2 0.3-0.5	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	109	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	86.9	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270125)							
EB1210561-135	F7-1 0-0.2	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	111	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	87.6	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2269224)							
EB1210561-002	A2-2 0.4-0.6	EP080: C6 - C9 Fraction	---	8 mg/kg	84.3	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2269225)							
EB1210561-095	E5-1 0-0.2	EP080: C6 - C9 Fraction	---	8 mg/kg	74.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270098)							
EB1210561-002	A2-2 0.4-0.6	EP071: C10 - C14 Fraction	---	312 mg/kg	102	70	130
		EP071: C15 - C28 Fraction	---	500 mg/kg	101	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270101)							
EB1210561-047	C5-1 0-0.2	EP071: C10 - C14 Fraction	---	312 mg/kg	98.7	70	130
		EP071: C15 - C28 Fraction	---	500 mg/kg	99.5	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270108)							
EB1210561-071	D6-2 0.4-0.6	EP071: C10 - C14 Fraction	---	312 mg/kg	92.4	70	130
		EP071: C15 - C28 Fraction	---	500 mg/kg	98.4	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270111)							
EB1210561-103	E7-1 0-0.2	EP071: C10 - C14 Fraction	---	312 mg/kg	99.6	70	130
		EP071: C15 - C28 Fraction	---	500 mg/kg	95.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270124)							
EB1210561-135	F7-1 0-0.2	EP071: C10 - C14 Fraction	---	312 mg/kg	106	70	130
		EP071: C15 - C28 Fraction	---	500 mg/kg	113	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2269224)							
EB1210561-002	A2-2 0.4-0.6	EP080: C6 - C10 Fraction	---	8 mg/kg	96.9	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2269225)							
EB1210561-095	E5-1 0-0.2	EP080: C6 - C10 Fraction	---	8 mg/kg	76.4	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270098)							

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Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270098) - continued							
EB1210561-002	A2-2 0.4-0.6	EP071: >C10 - C16 Fraction	---	413 mg/kg	108	70	130
		EP071: >C16 - C34 Fraction	---	360 mg/kg	88.5	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270101)							
EB1210561-047	C5-1 0-0.2	EP071: >C10 - C16 Fraction	---	413 mg/kg	105	70	130
		EP071: >C16 - C34 Fraction	---	360 mg/kg	89.7	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270108)							
EB1210561-071	D6-2 0.4-0.6	EP071: >C10 - C16 Fraction	---	413 mg/kg	99.9	70	130
		EP071: >C16 - C34 Fraction	---	360 mg/kg	88.5	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270111)							
EB1210561-103	E7-1 0-0.2	EP071: >C10 - C16 Fraction	---	413 mg/kg	105	70	130
		EP071: >C16 - C34 Fraction	---	360 mg/kg	77.4	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270124)							
EB1210561-135	F7-1 0-0.2	EP071: >C10 - C16 Fraction	---	413 mg/kg	128	70	130
		EP071: >C16 - C34 Fraction	---	360 mg/kg	89.8	70	130
EP080: BTEXN (QCLot: 2269224)							
EB1210561-002	A2-2 0.4-0.6	EP080: Benzene	71-43-2	2 mg/kg	83.3	70	130
		EP080: Toluene	108-88-3	2 mg/kg	83.3	70	130
EP080: BTEXN (QCLot: 2269225)							
EB1210561-095	E5-1 0-0.2	EP080: Benzene	71-43-2	2 mg/kg	118	70	130
		EP080: Toluene	108-88-3	2 mg/kg	114	70	130

Sub-Matrix: WATER

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					MS	Low	High
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number				
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2272645)							
EB1210340-001	Anonymous	EP080: C6 - C9 Fraction	—	40 µg/L	94.4	70 130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2272645)							
EB1210340-001	Anonymous	EP080: C6 - C10 Fraction	—	40 µg/L	99.7	70 130	
EP080: BTEXN (QCLot: 2272645)							
EB1210340-001	Anonymous	EP080: Benzene	71-43-2	10 µg/L	112	70 130	
		EP080: Toluene	108-88-3	10 µg/L	108	70 130	

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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

Sub-Matrix: SOIL

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report			
Spike	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)

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Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
EG005T: Total Metals by ICP-AES (QCLot: 2270329)										
EB1210561-002	A2-2 0.4-0.6	EG005T: Arsenic	7440-38-2	50 mg/kg	96.6	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	91.5	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	100	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	94.9	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	# 176	---	70	130	---	---
		EG005T: Nickel	7440-02-0	50 mg/kg	90.3	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	# Not Determined	---	70	130	---	---
EG005T: Total Metals by ICP-AES (QCLot: 2270331)										
EB1210561-029	B6-1 0-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	86.8	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	89.9	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	98.9	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	87.2	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	# Not Determined	---	70	130	---	---
		EG005T: Nickel	7440-02-0	50 mg/kg	88.9	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	# Not Determined	---	70	130	---	---
EG005T: Total Metals by ICP-AES (QCLot: 2270334)										
EB1210561-053	C7-4 1.0-1.2	EG005T: Arsenic	7440-38-2	50 mg/kg	76.0	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	81.0	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	79.3	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	78.7	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	84.1	---	70	130	---	---
		EG005T: Nickel	7440-02-0	50 mg/kg	78.3	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	83.0	---	70	130	---	---
EG005T: Total Metals by ICP-AES (QCLot: 2270336)										
EB1210561-078	D8-1 0-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	73.0	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	79.2	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	77.6	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	91.4	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	# 208	---	70	130	---	---
		EG005T: Nickel	7440-02-0	50 mg/kg	78.2	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	84.1	---	70	130	---	---
EG005T: Total Metals by ICP-AES (QCLot: 2270339)										
EB1210561-101	E6-4 0.9-1.0	EG005T: Arsenic	7440-38-2	50 mg/kg	73.0	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	86.5	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	82.6	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	81.9	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	73.0	---	70	130	---	---
		EG005T: Nickel	7440-02-0	50 mg/kg	85.9	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	84.2	---	70	130	---	---

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Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
				Concentration	MS	MSD	Low	High	Value	Control Limit
EG005T: Total Metals by ICP-AES (QCLot: 2270341)										
EB1210561-130	F5-1 0.1-0.3	EG005T: Arsenic	7440-38-2	50 mg/kg	126	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	# 131	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	127	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	127	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	# 158	---	70	130	---	---
		EG005T: Nickel	7440-02-0	15 mg/kg	# 431	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	# 145	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270330)										
EB1210561-002	A2-2 0.4-0.6	EG035T: Mercury	7439-97-6	5.0 mg/kg	75.0	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270332)										
EB1210561-029	B6-1 0-0.2	EG035T: Mercury	7439-97-6	5.0 mg/kg	79.4	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270335)										
EB1210561-053	C7-4 1.0-1.2	EG035T: Mercury	7439-97-6	5.0 mg/kg	70.8	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270337)										
EB1210561-078	D8-1 0-0.2	EG035T: Mercury	7439-97-6	5.0 mg/kg	76.0	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270340)										
EB1210561-101	E6-4 0.9-1.0	EG035T: Mercury	7439-97-6	5.0 mg/kg	71.7	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270342)										
EB1210561-130	F5-1 0.1-0.3	EG035T: Mercury	7439-97-6	5.0 mg/kg	94.6	---	70	130	---	---
EP068A: Organochlorine Pesticides (OC) (QCLot: 2270092)										
EB1210561-014	A6-2 0.5-0.8	EP068: gamma-BHC	58-89-9	0.5 mg/kg	74.1	---	70	130	---	---
		EP068: Heptachlor	76-44-8	0.5 mg/kg	94.0	---	70	130	---	---
		EP068: Aldrin	309-00-2	0.5 mg/kg	102	---	70	130	---	---
		EP068: Dieldrin	60-57-1	0.5 mg/kg	91.3	---	70	130	---	---
		EP068: Endrin	72-20-8	2 mg/kg	88.2	---	70	130	---	---
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	# 56.8	---	70	130	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270099)										
EB1210561-002	A2-2 0.4-0.6	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	114	---	70	130	---	---
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	99.5	---	70	130	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270100)										
EB1210561-035	B7-3 0.6-0.8	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	118	---	70	130	---	---
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	# 156	---	70	130	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270107)										
EB1210561-065	D1-3 0.8-1.0	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	108	---	70	130	---	---
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	111	---	70	130	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270110)										
EB1210561-099	E6-2 0.3-0.5	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	109	---	70	130	---	---

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 Work Order : EB1210561
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270110) - continued										
EB1210561-099	E6-2 0.3-0.5	EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	86.9	---	70	130	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2270125)										
EB1210561-135	F7-1 0-0.2	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	111	---	70	130	---	---
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	87.6	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2269224)										
EB1210561-002	A2-2 0.4-0.6	EP080: C6 - C9 Fraction	---	8 mg/kg	84.3	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2269225)										
EB1210561-095	E5-1 0-0.2	EP080: C6 - C9 Fraction	---	8 mg/kg	74.8	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270098)										
EB1210561-002	A2-2 0.4-0.6	EP071: C10 - C14 Fraction	---	312 mg/kg	102	---	70	130	---	---
		EP071: C15 - C28 Fraction	---	500 mg/kg	101	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270101)										
EB1210561-047	C5-1 0-0.2	EP071: C10 - C14 Fraction	---	312 mg/kg	98.7	---	70	130	---	---
		EP071: C15 - C28 Fraction	---	500 mg/kg	99.5	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270108)										
EB1210561-071	D6-2 0.4-0.6	EP071: C10 - C14 Fraction	---	312 mg/kg	92.4	---	70	130	---	---
		EP071: C15 - C28 Fraction	---	500 mg/kg	98.4	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270111)										
EB1210561-103	E7-1 0-0.2	EP071: C10 - C14 Fraction	---	312 mg/kg	99.6	---	70	130	---	---
		EP071: C15 - C28 Fraction	---	500 mg/kg	95.8	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2270124)										
EB1210561-135	F7-1 0-0.2	EP071: C10 - C14 Fraction	---	312 mg/kg	106	---	70	130	---	---
		EP071: C15 - C28 Fraction	---	500 mg/kg	113	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2269224)										
EB1210561-002	A2-2 0.4-0.6	EP080: C6 - C10 Fraction	---	8 mg/kg	96.9	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2269225)										
EB1210561-095	E5-1 0-0.2	EP080: C6 - C10 Fraction	---	8 mg/kg	76.4	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270098)										
EB1210561-002	A2-2 0.4-0.6	EP071: >C10 - C16 Fraction	---	413 mg/kg	108	---	70	130	---	---
		EP071: >C16 - C34 Fraction	---	360 mg/kg	88.5	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270101)										
EB1210561-047	C5-1 0-0.2	EP071: >C10 - C16 Fraction	---	413 mg/kg	105	---	70	130	---	---
		EP071: >C16 - C34 Fraction	---	360 mg/kg	89.7	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270108)										
EB1210561-071	D6-2 0.4-0.6	EP071: >C10 - C16 Fraction	---	413 mg/kg	99.9	---	70	130	---	---
		EP071: >C16 - C34 Fraction	---	360 mg/kg	88.5	---	70	130	---	---

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 Client : BUTLER PARTNERS PTY LTD
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Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number							
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270111)										
EB1210561-103	E7-1 0-0.2	EP071: >C10 - C16 Fraction	---	413 mg/kg	105	---	70	130	---	---
		EP071: >C16 - C34 Fraction	---	360 mg/kg	77.4	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2270124)										
EB1210561-135	F7-1 0-0.2	EP071: >C10 - C16 Fraction	---	413 mg/kg	128	---	70	130	---	---
		EP071: >C16 - C34 Fraction	---	360 mg/kg	89.8	---	70	130	---	---
EP080: BTEXN (QCLot: 2269224)										
EB1210561-002	A2-2 0.4-0.6	EP080: Benzene	71-43-2	2 mg/kg	83.3	---	70	130	---	---
		EP080: Toluene	108-88-3	2 mg/kg	83.3	---	70	130	---	---
EP080: BTEXN (QCLot: 2269225)										
EB1210561-095	E5-1 0-0.2	EP080: Benzene	71-43-2	2 mg/kg	118	---	70	130	---	---
		EP080: Toluene	108-88-3	2 mg/kg	114	---	70	130	---	---

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2272645)										
EB1210340-001	Anonymous	EP080: C6 - C9 Fraction	—	40 µg/L	94.4	—	70	130	—	—
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2272645)										
EB1210340-001	Anonymous	EP080: C6 - C10 Fraction	—	40 µg/L	99.7	—	70	130	—	—
EP080: BTEXN (QCLot: 2272645)										
EB1210340-001	Anonymous	EP080: Benzene	71-43-2	10 µg/L	112	—	70	130	—	—
		EP080: Toluene	108-88-3	10 µg/L	108	—	70	130	—	—

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB1210561	Page	: 1 of 17
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal	Contact	: Customer Services
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 07 38523800	Telephone	: +61 7 3243 7222
Facsimile	: +61 07 38523808	Facsimile	: +61 7 3243 7218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Bowen Hills RNA	Date Samples Received	: 19-APR-2012
C-O-C number	: 011-165C/1	Issue Date	: 02-MAY-2012
Sampler	: sch4p4(6) Pe	No. of samples received	: 152
Order number	: 5479	No. of samples analysed	: 117
Quote number	: BN/205/12		

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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 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



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

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Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content - Continued								
A2-1 - 0.2-0.3, A2-3 - 0.8-1.0, A4-2 - 0.6-0.7, A5-1 - 0.2-0.4, A5-3 - 1.0-1.2, A6-2 - 0.5-0.8, B2-1 - 0.2-0.4, B2-3 - 0.8-1.0, B3-1 - 0.2-0.4, B3-2 - 0.6-0.7, B5-1 - 0.2-0.4, B5-3 - 0.8-1.0, B7-1 - 0-0.1, B7-3 - 0.6-0.8, B8-1 - 0-0.2, B8-3 - 0.8-0.9, C5-2 - 0.4-0.5, C8-1 - 0-0.2, C8-3 - 0.9-1.0, C9-1 - 0-0.2, C9-3 - 0.6-0.8, D5-2 - 0.4-0.6, D6-1 - 0-0.2, D6-3 - 0.7-0.8, D7-2 - 0.1-0.3, D7-4 - 1.0-1.2, D8-2 - 0.3-0.5, D10-1 - 0-0.1, D10-3 - 0.8-1.0, E5-1 - 0-0.2, E6-1 - 0-0.2, E6-3 - 0.6-0.7, E7-1 - 0-0.2, E8-1 - 0-0.1, E8-3 - 0.8-1.0, E9-2 - 0.3-0.5, E10-1 - 0-0.2, E10-3 - 0.6-0.8, F5-1 - 0.1-0.3, F5-3 - 0.8-1.0, F7-1 - 0-0.2, F7-3 - 0.8-1.0, F10-2 - 0.3-0.5, F10-4 - 1.3-1.5, DUP05, DUP09	A2-2 - 0.4-0.6, A4-1 - 0.2-0.4, A4-3 - 1.0-1.2, A5-2 - 0.6-0.8, A6-1 - 0-0.2, A6-3 - 1.0-1.2, B2-2 - 0.5-0.6, B6-1 - 0-0.2, B3-3 - 1.0-1.2, B5-2 - 0.5-0.6, B6-2 - 0.5-0.7, B6-3 - 1.0-1.1, B7-2 - 0.3-0.5, B7-4 - 1.0-1.1, B8-2 - 0.3-0.5, C5-1 - 0-0.2, C5-3 - 0.7-1.0, C8-2 - 0.3-0.5, C8-4 - 1.0-1.2, C9-2 - 0.3-0.4, D5-1 - 0.2-0.5, D5-4 - 1.3-1.4, D6-2 - 0.4-0.6, D7-1 - 0-0.1, D7-3 - 0.5-0.7, D8-1 - 0-0.2, D8-3 - 0.8-1.0, D10-2 - 0.3-0.5, D10-4 - 1.2-1.4, E5-2 - 0.4-0.6, E6-2 - 0.3-0.5, E6-4 - 0.9-1.0, E7-2 - 0.3-0.5, E8-2 - 0.3-0.4, E9-1 - 0-0.1, E9-3 - 0.8-1.0, E10-2 - 0.3-0.5, E10-4 - 1.3-1.5, F5-2 - 0.4-0.6, F5-4 - 1.3-1.5, F7-2 - 0.4-0.6, F10-1 - 0-0.1, F10-3 - 0.7-0.8, DUP03, DUP07,	17-APR-2012	---	---	---	23-APR-2012	01-MAY-2012	✔

Soil Glass Jar - Unpreserved (EA055-103)

Soil Glass Jar - Unpreserved (EA055-103)

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Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content - Continued								
C1-1 - 0.1-0.2, C2-1 - 0.2-0.4, C7-1 - 0.0-0.2, C7-3 - 0.7-0.87, D1-1 - 0.1-0.2, E1-1 - 0.2-0.3, E1-3 - 0.8-1.0, E3-2 - 0.4-0.5, E3-4 - 1.0-1.2, F3-2 - 0.6-0.8, F4-1 - 0.2-0.3, F4-3 - 0.8-1.0,	C1-2 - 0.3-0.5, C2-2 - 0.6-0.8, C7-2 - 0.3-0.5, C7-4 - 1.0-1.2, D1-3 - 0.8-1.0, E1-2 - 0.4-0.6, E3-1 - 0.1-0.3, DUP15, E3-3 - 0.6-0.8, F3-1 - 0.2-0.4, F3-3 - 1.2-1.4, F4-2 - 0.4-0.6, F4-4 - 1.1-1.2	18-APR-2012	----	—	—	23-APR-2012	02-MAY-2012	✔

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 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Matrix: SOIL

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

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
E6-4 - 0.9-1.0, E7-2 - 0.3-0.5, E8-2 - 0.3-0.4, E9-1 - 0-0.1, E9-3 - 0.8-1.0, E10-2 - 0.3-0.5, E10-4 - 1.3-1.5, F5-2 - 0.4-0.6, F5-4 - 1.3-1.5, F7-2 - 0.4-0.6, F10-1 - 0-0.1, F10-3 - 0.7-0.8, DUP03, DUP07,	E7-1 - 0-0.2, E8-1 - 0-0.1, E8-3 - 0.8-1.0, E9-2 - 0.3-0.5, E10-1 - 0-0.2, E10-3 - 0.6-0.8, F5-1 - 0.1-0.3, F5-3 - 0.8-1.0, F7-1 - 0-0.2, F7-3 - 0.8-1.0, F10-2 - 0.3-0.5, F10-4 - 1.3-1.5, DUP05, DUP09	17-APR-2012	26-APR-2012	14-OCT-2012	✓	01-MAY-2012	14-OCT-2012	✓
Soil Glass Jar - Unpreserved (EG005T)								
C8-1 - 0-0.2, C8-3 - 0.9-1.0, C9-1 - 0-0.2, C9-3 - 0.6-0.8, D5-2 - 0.4-0.6, D6-1 - 0-0.2, D6-3 - 0.7-0.8, D7-2 - 0.1-0.3, D7-4 - 1.0-1.2, D8-2 - 0.3-0.5, D10-1 - 0-0.1, D10-3 - 0.8-1.0, E5-1 - 0-0.2, E6-1 - 0-0.2, E6-3 - 0.6-0.7	C8-2 - 0.3-0.5, C8-4 - 1.0-1.2, C9-2 - 0.3-0.4, D5-1 - 0.2-0.5, D5-4 - 1.3-1.4, D6-2 - 0.4-0.6, D7-1 - 0-0.1, D7-3 - 0.5-0.7, D8-1 - 0-0.2, D8-3 - 0.8-1.0, D10-2 - 0.3-0.5, D10-4 - 1.2-1.4, E5-2 - 0.4-0.6, E6-2 - 0.3-0.5	17-APR-2012	26-APR-2012	14-OCT-2012	✓	27-APR-2012	14-OCT-2012	✓
Soil Glass Jar - Unpreserved (EG005T)								

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 Work Order : EB1210561
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Matrix: SOIL

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

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG005T: Total Metals by ICP-AES - Continued								
A2-1 - 0.2-0.3, A2-3 - 0.8-1.0, A4-2 - 0.6-0.7, A5-1 - 0.2-0.4, A5-3 - 1.0-1.2, A6-2 - 0.5-0.8, B2-1 - 0.2-0.4, B2-3 - 0.8-1.0, B3-1 - 0.2-0.4, B3-2 - 0.6-0.7, B5-1 - 0.2-0.4, B5-3 - 0.8-1.0, B7-1 - 0-0.1, B7-3 - 0.6-0.8, B8-1 - 0-0.2, B8-3 - 0.8-0.9, C5-2 - 0.4-0.5,	A2-2 - 0.4-0.6, A4-1 - 0.2-0.4, A4-3 - 1.0-1.2, A5-2 - 0.6-0.8, A6-1 - 0-0.2, A6-3 - 1.0-1.2, B2-2 - 0.5-0.6, B6-1 - 0-0.2, B3-3 - 1.0-1.2, B5-2 - 0.5-0.6, B6-2 - 0.5-0.7, B7-2 - 0.3-0.5, B7-4 - 1.0-1.1, B8-2 - 0.3-0.5, C5-1 - 0-0.2, C5-3 - 0.7-1.0, B6-3 - 1.0-1.1,	17-APR-2012	26-APR-2012	14-OCT-2012	✓	30-APR-2012	14-OCT-2012	✓
Soil Glass Jar - Unpreserved (EG005T)	F3-2 - 0.6-0.8, F4-1 - 0.2-0.3, F4-3 - 0.8-1.0, DUP15	18-APR-2012	26-APR-2012	15-OCT-2012	✓	01-MAY-2012	15-OCT-2012	✓
Soil Glass Jar - Unpreserved (EG005T)	C7-4 - 1.0-1.2, D1-3 - 0.8-1.0, E1-2 - 0.4-0.6, E3-1 - 0.1-0.3, E3-3 - 0.6-0.8,	18-APR-2012	26-APR-2012	15-OCT-2012	✓	27-APR-2012	15-OCT-2012	✓
Soil Glass Jar - Unpreserved (EG005T)	C1-2 - 0.3-0.5, C2-2 - 0.6-0.8, C7-2 - 0.3-0.5	18-APR-2012	26-APR-2012	15-OCT-2012	✓	30-APR-2012	15-OCT-2012	✓

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 Work Order : EB1210561
 Client : BUTLER PARTNERS PTY LTD
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Matrix: SOIL

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

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)	E7-1 - 0-0.2, E8-1 - 0-0.1, E8-3 - 0.8-1.0, E9-2 - 0.3-0.5, E10-1 - 0-0.2, E10-3 - 0.6-0.8, F5-1 - 0.1-0.3, F5-3 - 0.8-1.0, F7-1 - 0-0.2, F7-3 - 0.8-1.0, F10-2 - 0.3-0.5, F10-4 - 1.3-1.5, DUP05, DUP09	17-APR-2012	26-APR-2012	15-MAY-2012	✓	01-MAY-2012	15-MAY-2012	✓
E6-4 - 0.9-1.0, E7-2 - 0.3-0.5, E8-2 - 0.3-0.4, E9-1 - 0-0.1, E9-3 - 0.8-1.0, E10-2 - 0.3-0.5, E10-4 - 1.3-1.5, F5-2 - 0.4-0.6, F5-4 - 1.3-1.5, F7-2 - 0.4-0.6, F10-1 - 0-0.1, F10-3 - 0.7-0.8, DUP03, DUP07,								
Soil Glass Jar - Unpreserved (EG035T)	A2-2 - 0.4-0.6, A4-1 - 0.2-0.4, A4-3 - 1.0-1.2, A5-2 - 0.6-0.8, A6-1 - 0-0.2, A6-3 - 1.0-1.2, B2-2 - 0.5-0.6, B6-1 - 0-0.2, B3-3 - 1.0-1.2, B5-2 - 0.5-0.6, B6-2 - 0.5-0.7, B6-3 - 1.0-1.1, B7-2 - 0.3-0.5, B7-4 - 1.0-1.1, B8-2 - 0.3-0.5, C5-1 - 0-0.2, C5-3 - 0.7-1.0, C8-2 - 0.3-0.5, C8-4 - 1.0-1.2, C9-2 - 0.3-0.4, D5-1 - 0.2-0.5, D5-4 - 1.3-1.4, D6-2 - 0.4-0.6, D7-1 - 0-0.1, D7-3 - 0.5-0.7, D8-1 - 0-0.2, D8-3 - 0.8-1.0, D10-2 - 0.3-0.5, D10-4 - 1.2-1.4, E5-2 - 0.4-0.6, E6-2 - 0.3-0.5,	17-APR-2012	26-APR-2012	15-MAY-2012	✓	30-APR-2012	15-MAY-2012	✓
A2-1 - 0.2-0.3, A2-3 - 0.8-1.0, A4-2 - 0.6-0.7, A5-1 - 0.2-0.4, A5-3 - 1.0-1.2, A6-2 - 0.5-0.8, B2-1 - 0.2-0.4, B2-3 - 0.8-1.0, B3-1 - 0.2-0.4, B3-2 - 0.6-0.7, B5-1 - 0.2-0.4, B5-3 - 0.8-1.0, B7-1 - 0-0.1, B7-3 - 0.6-0.8, B8-1 - 0-0.2, B8-3 - 0.8-0.9, C5-2 - 0.4-0.5, C8-1 - 0-0.2, C8-3 - 0.9-1.0, C9-1 - 0-0.2, C9-3 - 0.6-0.8, D5-2 - 0.4-0.6, D6-1 - 0-0.2, D6-3 - 0.7-0.8, D7-2 - 0.1-0.3, D7-4 - 1.0-1.2, D8-2 - 0.3-0.5, D10-1 - 0-0.1, D10-3 - 0.8-1.0, E5-1 - 0-0.2, E6-1 - 0-0.2, E6-3 - 0.6-0.7								

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Matrix: SOIL

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

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG035T: Total Recoverable Mercury by FIMS - Continued								
Soil Glass Jar - Unpreserved (EG035T) F3-1 - 0.2-0.4, F3-3 - 1.2-1.4, F4-2 - 0.4-0.6, F4-4 - 1.1-1.2,	F3-2 - 0.6-0.8, F4-1 - 0.2-0.3, F4-3 - 0.8-1.0, DUP15	18-APR-2012	26-APR-2012	16-MAY-2012	✓	01-MAY-2012	16-MAY-2012	✓
Soil Glass Jar - Unpreserved (EG035T) C1-1 - 0.1-0.2, C2-1 - 0.2-0.4, C7-1 - 0.0-0.2, C7-3 - 0.7-0.87, D1-1 - 0.1-0.2, E1-1 - 0.2-0.3, E1-3 - 0.8-1.0, E3-2 - 0.4-0.5, E3-4 - 1.0-1.2	C1-2 - 0.3-0.5, C2-2 - 0.6-0.8, C7-2 - 0.3-0.5, C7-4 - 1.0-1.2, D1-3 - 0.8-1.0, E1-2 - 0.4-0.6, E3-1 - 0.1-0.3, E3-3 - 0.6-0.8,	18-APR-2012	26-APR-2012	16-MAY-2012	✓	30-APR-2012	16-MAY-2012	✓
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068) A4-1 - 0.2-0.4, B3-1 - 0.2-0.4, C5-1 - 0-0.2, D7-2 - 0.1-0.3, DUP05	A6-2 - 0.5-0.8, B8-2 - 0.3-0.5, C9-2 - 0.3-0.4, F10-1 - 0-0.1,	17-APR-2012	24-APR-2012	01-MAY-2012	✓	27-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP068) C2-1 - 0.2-0.4,	F4-2 - 0.4-0.6	18-APR-2012	24-APR-2012	02-MAY-2012	✓	27-APR-2012	03-JUN-2012	✓

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Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Petroleum Hydrocarbons									
Soil Glass Jar - Unpreserved (EP071) D5-1 - 0.2-0.5, D7-2 - 0.1-0.3, E5-1 - 0-0.2		D6-2 - 0.4-0.6, D10-1 - 0-0.1,	17-APR-2012	24-APR-2012	01-MAY-2012	✓	25-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) E6-2 - 0.3-0.5, E8-1 - 0-0.1, E10-1 - 0-0.2, F5-1 - 0.1-0.3,		E7-1 - 0-0.2, E9-1 - 0-0.1, E10-3 - 0.6-0.8, F5-3 - 0.8-1.0	17-APR-2012	24-APR-2012	01-MAY-2012	✓	26-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) A2-1 - 0.2-0.3, A5-1 - 0.2-0.4, B2-2 - 0.5-0.6, B5-2 - 0.5-0.6, B7-1 - 0-0.1, C5-1 - 0-0.2, C8-3 - 0.9-1.0, F7-1 - 0-0.2, DUP09		A2-2 - 0.4-0.6, A6-1 - 0-0.2, B3-2 - 0.6-0.7, B6-2 - 0.5-0.7, B7-3 - 0.6-0.8, C8-1 - 0-0.2, C9-2 - 0.3-0.4, DUP07,	17-APR-2012	26-APR-2012	01-MAY-2012	✓	26-APR-2012	05-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) E3-2 - 0.4-0.5			18-APR-2012	24-APR-2012	02-MAY-2012	✓	25-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) F3-1 - 0.2-0.4,		F4-3 - 0.8-1.0	18-APR-2012	24-APR-2012	02-MAY-2012	✓	26-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) C7-1 - 0.0-0.2,		C7-3 - 0.7-0.87	18-APR-2012	26-APR-2012	02-MAY-2012	✓	26-APR-2012	05-JUN-2012	✓

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Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) D5-1 - 0.2-0.5, D6-2 - 0.4-0.6, D7-2 - 0.1-0.3, D8-1 - 0-0.2, D10-1 - 0-0.1, D10-3 - 0.8-1.0, E5-1 - 0-0.2, D6-1 - 0-0.2, D7-1 - 0-0.1, D7-3 - 0.5-0.7, D8-2 - 0.3-0.5, D10-2 - 0.3-0.5, D10-4 - 1.2-1.4, E5-2 - 0.4-0.6		17-APR-2012	24-APR-2012	01-MAY-2012	✓	24-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) E6-1 - 0-0.2, E7-1 - 0-0.2, E8-2 - 0.3-0.4, E9-1 - 0-0.1, E10-1 - 0-0.2, E10-3 - 0.6-0.8, F5-2 - 0.4-0.6, E6-2 - 0.3-0.5, E8-1 - 0-0.1, E8-3 - 0.8-1.0, E9-2 - 0.3-0.5, E10-2 - 0.3-0.5, F5-1 - 0.1-0.3, F5-3 - 0.8-1.0		17-APR-2012	24-APR-2012	01-MAY-2012	✓	26-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) A2-1 - 0.2-0.3, A2-3 - 0.8-1.0, A4-2 - 0.6-0.7, A5-2 - 0.6-0.8, A6-2 - 0.5-0.8, B2-2 - 0.5-0.6, B3-2 - 0.6-0.7, B5-1 - 0.2-0.4, B6-2 - 0.5-0.7, B6-3 - 1.0-1.1, B7-2 - 0.3-0.5, B8-1 - 0-0.2, B8-3 - 0.8-0.9, C5-2 - 0.4-0.5, C8-2 - 0.3-0.5, C9-1 - 0-0.2, C9-3 - 0.6-0.8, A2-2 - 0.4-0.6, A4-1 - 0.2-0.4, A5-1 - 0.2-0.4, A6-1 - 0-0.2, B2-1 - 0.2-0.4, B3-1 - 0.2-0.4, B3-3 - 1.0-1.2, B6-1 - 0-0.2, B5-2 - 0.5-0.6, B7-1 - 0-0.1, B7-3 - 0.6-0.8, B8-2 - 0.3-0.5, C5-1 - 0-0.2, C8-1 - 0-0.2, C8-3 - 0.9-1.0, C9-2 - 0.3-0.4,		17-APR-2012	26-APR-2012	01-MAY-2012	✓	26-APR-2012	05-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) F7-1 - 0-0.2, F10-1 - 0-0.1, F10-3 - 0.7-0.8, DUP03, DUP07, F7-2 - 0.4-0.6, F10-2 - 0.3-0.5, F10-4 - 1.3-1.5, DUP05, DUP09		17-APR-2012	26-APR-2012	01-MAY-2012	✓	27-APR-2012	05-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) D1-1 - 0.1-0.2, E1-2 - 0.4-0.6, E3-2 - 0.4-0.5, D1-3 - 0.8-1.0, E3-1 - 0.1-0.3, E3-3 - 0.6-0.8		18-APR-2012	24-APR-2012	02-MAY-2012	✓	24-APR-2012	03-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) F3-1 - 0.2-0.4, F3-3 - 1.2-1.4, F4-2 - 0.4-0.6, F3-2 - 0.6-0.8, F4-1 - 0.2-0.3, F4-3 - 0.8-1.0		18-APR-2012	24-APR-2012	02-MAY-2012	✓	26-APR-2012	03-JUN-2012	✓



Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Soil Glass Jar - Unpreserved (EP075(SIM))								
C1-1 - 0.1-0.2, C2-1 - 0.2-0.4, C7-2 - 0.3-0.5, C7-4 - 1.0-1.2	C1-2 - 0.3-0.5, C7-1 - 0.0-0.2, C7-3 - 0.7-0.87,	18-APR-2012	26-APR-2012	02-MAY-2012	✓	26-APR-2012	05-JUN-2012	✓
EP080: BTEX								
Soil Glass Jar - Unpreserved (EP080)								
A2-1 - 0.2-0.3, A5-1 - 0.2-0.4, B2-2 - 0.5-0.6, B5-2 - 0.5-0.6, B7-1 - 0-0.1, C5-1 - 0-0.2, C8-3 - 0.9-1.0, D5-1 - 0.2-0.5, D7-2 - 0.1-0.3, E5-1 - 0-0.2, E7-1 - 0-0.2, E9-1 - 0-0.1, E10-3 - 0.6-0.8, F5-3 - 0.8-1.0, DUP07,	A2-2 - 0.4-0.6, A6-1 - 0-0.2, B3-2 - 0.6-0.7, B6-2 - 0.5-0.7, B7-3 - 0.6-0.8, C8-1 - 0-0.2, C9-2 - 0.3-0.4, D6-2 - 0.4-0.6, D10-1 - 0-0.1, E6-2 - 0.3-0.5, E8-1 - 0-0.1, E10-1 - 0-0.2, F5-1 - 0.1-0.3, F7-1 - 0-0.2, DUP09	17-APR-2012	23-APR-2012	01-MAY-2012	✓	27-APR-2012	01-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080)								
C7-1 - 0.0-0.2, E3-2 - 0.4-0.5, F4-3 - 0.8-1.0	C7-3 - 0.7-0.87, F3-1 - 0.2-0.4,	18-APR-2012	23-APR-2012	02-MAY-2012	✓	27-APR-2012	02-MAY-2012	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
A2-1 - 0.2-0.3, A5-1 - 0.2-0.4, B2-2 - 0.5-0.6, B5-2 - 0.5-0.6, B7-1 - 0-0.1, C5-1 - 0-0.2, C8-3 - 0.9-1.0, D5-1 - 0.2-0.5, D7-2 - 0.1-0.3, E5-1 - 0-0.2, E7-1 - 0-0.2, E9-1 - 0-0.1, E10-3 - 0.6-0.8, F5-3 - 0.8-1.0, DUP07,	A2-2 - 0.4-0.6, A6-1 - 0-0.2, B3-2 - 0.6-0.7, B6-2 - 0.5-0.7, B7-3 - 0.6-0.8, C8-1 - 0-0.2, C9-2 - 0.3-0.4, D6-2 - 0.4-0.6, D10-1 - 0-0.1, E6-2 - 0.3-0.5, E8-1 - 0-0.1, E10-1 - 0-0.2, F5-1 - 0.1-0.3, F7-1 - 0-0.2, DUP09	17-APR-2012	23-APR-2012	01-MAY-2012	✓	27-APR-2012	01-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080)								
C7-1 - 0.0-0.2, E3-2 - 0.4-0.5, F4-3 - 0.8-1.0	C7-3 - 0.7-0.87, F3-1 - 0.2-0.4,	18-APR-2012	23-APR-2012	02-MAY-2012	✓	27-APR-2012	02-MAY-2012	✓

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Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
Soil Glass Jar - Unpreserved (EP080)		17-APR-2012	23-APR-2012	01-MAY-2012	✓	27-APR-2012	01-MAY-2012	✓
A2-1 - 0.2-0.3, A5-1 - 0.2-0.4, B2-2 - 0.5-0.6, B5-2 - 0.5-0.6, B7-1 - 0-0.1, C5-1 - 0-0.2, C8-3 - 0.9-1.0, D5-1 - 0.2-0.5, D7-2 - 0.1-0.3, E5-1 - 0-0.2, E7-1 - 0-0.2, E9-1 - 0-0.1, E10-3 - 0.6-0.8, F5-3 - 0.8-1.0, DUP07,		A2-2 - 0.4-0.6, A6-1 - 0-0.2, B3-2 - 0.6-0.7, B6-2 - 0.5-0.7, B7-3 - 0.6-0.8, C8-1 - 0-0.2, C9-2 - 0.3-0.4, D6-2 - 0.4-0.6, D10-1 - 0-0.1, E6-2 - 0.3-0.5, E8-1 - 0-0.1, E10-1 - 0-0.2, F5-1 - 0.1-0.3, F7-1 - 0-0.2, DUP09						
Soil Glass Jar - Unpreserved (EP080)		18-APR-2012	23-APR-2012	02-MAY-2012	✓	27-APR-2012	02-MAY-2012	✓
C7-1 - 0.0-0.2, E3-2 - 0.4-0.5, F4-3 - 0.8-1.0		C7-3 - 0.7-0.87, F3-1 - 0.2-0.4,						

Matrix: WATER

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080) TB180412		18-APR-2012	27-APR-2012	02-MAY-2012	✓	27-APR-2012	02-MAY-2012	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
Amber VOC Vial - Sulfuric Acid (EP080) TB180412		18-APR-2012	27-APR-2012	02-MAY-2012	✓	27-APR-2012	02-MAY-2012	✓



Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)		Evaluation	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	13	116	11.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	10	93	10.8	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	8	25.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	12	117	10.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	12	117	10.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	5	38	13.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	4	35	11.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	5	93	5.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	6	117	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	6	117	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	5	38	13.2	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	35	5.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	5	93	5.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	6	117	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	6	117	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	5	38	13.2	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	35	5.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	5	93	5.4	5.0	✓	ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	6	117	5.1	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	6	117	5.1	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	5	38	13.2	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	35	5.7	5.0	✓	ALS QCS3 requirement

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
TPH Volatiles/BTEX	EP080	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							

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Matrix: **WATER**

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

Matrix: WATER							
Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
TPH Volatiles/BTEX	EP080	1	20	5.0	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
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)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
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
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na ₂ SO ₄ and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.
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.



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
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	EB1210561-001	A2-1 0.2-0.3	Lead	7439-92-1	33.2 %	0-20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1210561-115	E10-1 0-0.2	Lead	7439-92-1	50.8 %	0-20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1210561-141	F10-3 0.7-0.8	Lead	7439-92-1	118 %	0-20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1210561-115	E10-1 0-0.2	Zinc	7440-66-6	46.6 %	0-20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1210561-141	F10-3 0.7-0.8	Zinc	7440-66-6	104 %	0-20%	RPD exceeds LOR based limits
EG035T: Total Recoverable Mercury by FIMS	EB1210561-001	A2-1 0.2-0.3	Mercury	7439-97-6	122 %	0-50%	RPD exceeds LOR based limits
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	EB1210561-035	B7-3 0.6-0.8	Sum of polycyclic aromatic hydrocarbons	---	24.9 %	0-20%	RPD exceeds LOR based limits
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	EB1210561-117	E10-3 0.6-0.8	Sum of polycyclic aromatic hydrocarbons	---	64.3 %	0-20%	RPD exceeds LOR based limits
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	EB1210561-050	C7-1 0.0-0.2	Sum of polycyclic aromatic hydrocarbons	---	114 %	0-50%	RPD exceeds LOR based limits
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2688511-002	---	Fluorene	86-73-7	122 %	61-111%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2688508-002	---	Phenanthrene	85-01-8	115 %	60-112%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2688511-002	---	Phenanthrene	85-01-8	115 %	60-112%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2688514-002	---	Dibenz(a,h)anthracene	53-70-3	129 %	41-129%	Recovery greater than upper control limit
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EB1210561-130	F5-1 0.1-0.3	Cadmium	7440-43-9	131 %	70-130%	Recovery greater than upper data quality objective
EG005T: Total Metals by ICP-AES	EB1210561-029	B6-1 0-0.2	Lead	7439-92-1	Not Determined	---	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005T: Total Metals by ICP-AES	EB1210561-130	F5-1 0.1-0.3	Lead	7439-92-1	158 %	70-130%	Recovery greater than upper data quality objective
EG005T: Total Metals by ICP-AES	EB1210561-002	A2-2 0.4-0.6	Lead	7439-92-1	176 %	70-130%	Recovery greater than upper data quality objective
EG005T: Total Metals by ICP-AES	EB1210561-078	D8-1 0-0.2	Lead	7439-92-1	208 %	70-130%	Recovery greater than upper data quality objective
EG005T: Total Metals by ICP-AES	EB1210561-130	F5-1 0.1-0.3	Nickel	7440-02-0	431 %	70-130%	Recovery greater than upper data quality objective
EG005T: Total Metals by ICP-AES	EB1210561-002	A2-2 0.4-0.6	Zinc	7440-66-6	Not Determined	---	MS recovery not determined, background level greater than or equal to 4x spike level.



Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries - Continued							
EG005T: Total Metals by ICP-AES	EB1210561-029	B6-1 0-0.2	Zinc	7440-66-6	Not Determined	—	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005T: Total Metals by ICP-AES	EB1210561-130	F5-1 0.1-0.3	Zinc	7440-66-6	145 %	70-130%	Recovery greater than upper data quality objective
EP068A: Organochlorine Pesticides (OC)	EB1210561-014	A6-2 0.5-0.8	4,4'-DDT	50-29-3	56.8 %	70-130%	Recovery less than lower data quality objective
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	EB1210561-035	B7-3 0.6-0.8	Pyrene	129-00-0	156 %	70-130%	Recovery greater than upper data quality objective

- For all matrices, no Method Blank value 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.

Butler Partners Pty Ltd

PO Box 2267, Fortitude Valley BC Qld 4006
(79 Doggett Street, Newstead Qld 4006)
Ph: 07 3852 3800 Fax: 07 3852 3808

Job No: 011-165C Order No: 5479
Site: Bowen Hills RNA COC No: 011-165C/1

ALS Environmental

Australian Laboratory Services Pty Ltd
32 Shand Street, STAFFORD QLD 4053

Environmental Division
Brisbane

Work Order

EB1210561



Telephone : + 61-7-3243 72

Quotation Number: BN205/12
Project Manager: sch4p4(6) Per
Sampled By:
Results To: @butlerpartners.com.au
Relinquished by:
Due Date: 27-Apr-12
Special Instructions: Standard 5 day TAT

Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled	S-2	S-4	S-5	S-6	S-7	S-8	S-9	S-12	S-13	S-16	S-19	PAH	OC Pesticides	HOLD	TCLP	Neutral (D) Le	Cr Suite	W-18
1	A2-1	0.2-0.3	soil	1	17-Apr-12	x				x													
2	A2-2	0.4-0.6	soil	1	17-Apr-12	x				x													
3	A2-3	0.8-1.0	soil	1	17-Apr-12	x																	
4	A2-4	1.3-1.5	soil	1	17-Apr-12																		
5	A4-1	0.2-0.4	soil	1	17-Apr-12	x																	
6	A4-2	0.6-0.7	soil	1	17-Apr-12	x																	
7	A4-3	1.0-1.2	soil	1	17-Apr-12	x																	
8	A4-4	1.3-1.5	soil	1	17-Apr-12																		
9	A5-1	0.2-0.4	soil	1	17-Apr-12	x				x													
10	A5-2	0.6-0.8	soil	1	17-Apr-12	x																	
11	A5-3	1.0-1.2	soil	1	17-Apr-12	x																	
12	A5-4	1.3-1.5	soil	1	17-Apr-12																		
13	A6-1	0-0.2	soil	1	17-Apr-12	x				x													
14	A6-2	0.5-0.8	soil	1	17-Apr-12	x																	
15	A6-3	1.0-1.2	soil	1	17-Apr-12	x																	
16	A6-4	1.5-1.8	soil	1	17-Apr-12																		
17	B2-1	0.2-0.4	soil	1	17-Apr-12	x																	
18	B2-2	0.5-0.6	soil	1	17-Apr-12	x				x													
19	B2-3	0.8-1.0	soil	1	17-Apr-12	x																	
20	B2-4	1.3-1.5	soil	1	17-Apr-12																		
21	B3-1	0.2-0.4	soil	1	17-Apr-12	x																	
22	B3-2	0.6-0.7	soil	1	17-Apr-12	x				x													
23	B3-3	1.0-1.2	soil	1	17-Apr-12	x																	
24				1	17-Apr-12																		

sch4p4(6) Personal information

Received By:
Date:
FF-06 - Chain of Custody - ALS Environmental - Version 2 - 1

9/04/12 14:25 Organisation:
Time:

Butler Partners Pty Ltd

PO Box 2267, Fortitude Valley BC Qld 4006
(79 Doggett Street, Newstead Qld 4006)
Ph: 07 3852 3800 Fax: 07 3852 3808

Job No: 011-165C Order No: 5479
Site: Bowen Hills RNA COC No. 011-165C/1

ALS Environmental

Australian Laboratory Services Pty Ltd
32 Shand Street, STAFFORD QLD 4053

Ph: 3243 7222
Fax: 3243 7218

Quotation Number: BN/205/12
Project Manager: sch4p4(6) Pers
Sampled By:
Results To: @butlerpartners.com.au)
Relinquished by:
Due Date: 27-Apr-12
Special Instructions: Standard 5 day TAT

Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled	8 metals	TPH/BTEX	TPH/BTEX/8 Metals	TPH/BTEX/Pb	TPH/BTEX/PAH	TPH/BTEX/PAH/OC/PCB/8 Metals	TPH/BTEX/VOC	OC/OP	OC/OP/PCB	TPH/BTEX/PAH/OC/OP/PCB/8 Metals	TPH/BTEX/PAH/Phenols/OC/OP/PCB/8 Metals	PAH	OC Pesticides	HOLD	TCLP:	Neutral (DI) Leach:	Cr Suite	C ₆ -C ₁₀ /BTEX
						S-2	S-4	S-5	S-6	S-7	S-8	S-9	S-12	S-13	S-16	S-19							W-18
25	B5-1	0.2-0.4	soil	1	17-Apr-12	x											x						
26	B5-2	0.5-0.6	soil	1	17-Apr-12	x				x													
27	B5-3	0.8-1.0	soil	1	17-Apr-12	x																	
28	B5-4	1.5-1.6	soil	1	17-Apr-12																		
29	B6-1	0-0.2	soil	1	17-Apr-12	x											x		x				
30	B6-2	0.5-0.7	soil	1	17-Apr-12	x				x													
31	B6-3	1.0-1.1	soil	1	17-Apr-12	x											x						
32	B6-4	1.2-1.4	soil	1	17-Apr-12														x				
33	B7-1	0-0.1	soil	1	17-Apr-12	x				x													
34	B7-2	0.3-0.5	soil	1	17-Apr-12	x											x						
35	B7-3	0.6-0.8	soil	1	17-Apr-12	x				x													
36	B7-4	1.0-1.1	soil	1	17-Apr-12	x																	
37	B7-5	1.4-1.6	soil	1	17-Apr-12														x				
38	B8-1	0-0.2	soil	1	17-Apr-12	x											x						
39	B8-2	0.3-0.5	soil	1	17-Apr-12	x											x	x					
40	B8-3	0.8-0.9	soil	1	17-Apr-12	x																	
41	B8-4	1.2-1.3	soil	1	17-Apr-12												x						
42	C1-1	0.1-0.2	soil	1	18-Apr-12	x													x				
43	C1-2	0.3-0.5	soil	1	18-Apr-12	x											x						
44	C1-3	0.8-1.0	soil	1	18-Apr-12																		
45	C2-1	0.2-0.4	soil	1	18-Apr-12	x																	
46	C2-2	0.6-0.8	soil	1	18-Apr-12	x											x	x					
47	C5-1	0-0.2	soil	1	17-Apr-12	x				x									x				
48	C5-2	0.4-0.5	soil	1	17-Apr-12	x											x						
49	C5-3	0.7-1.0	soil	1	17-Apr-12	x																	

Received By: sch4p4(6)
Date: 19/04 14:28
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Organisation:
Time:

Butler Partners Pty Ltd

PO Box 2267, Fortitude Valley BC Qld 4006
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Ph: 07 3852 3800 Fax: 07 3852 3808

Job No: 011-165C Order No: 5479
Site: Bowen Hills RNA COC No: 011-165C/1

ALS Environmental

Australian Laboratory Services Pty Ltd
32 Shand Street, STAFFORD QLD 4053

Ph: 3243 7222
Fax: 3243 7218

Quotation Number: BN/205/12
Project Manager: sch4p4(6) Per
Sampled By:
Results To:
Relinquished by:
Due Date: 27-Apr-12
Special Instructions: Standard 5 day TAT

Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled	S2	S4	S5	S6	S7	S8	S9	S12	S13	S16	S19	PAH	OC Pesticides	HOLD	TCLP	Neutral (DI) Leach	Cr Sulfate	C ₆ -C ₁₀ BTEX
80	C7-1	0.0-0.2	soil	1	18-Apr-12	x				x													
51	C7-2	0.3-0.5	soil	1	18-Apr-12	x											x						
52	C7-3	0.7-0.87	soil	1	18-Apr-12	x				x													
53	C7-4	1.0-1.2	soil	1	18-Apr-12	x											x						
54	C8-1	0-0.2	soil	1	17-Apr-12	x				x													
55	C8-2	0.3-0.5	soil	1	17-Apr-12	x											x						
56	C8-3	0.9-1.0	soil	1	17-Apr-12	x				x													
57	C8-4	1.0-1.2	soil	1	17-Apr-12	x																	
58	C8-5	1.4-1.5	soil	1	17-Apr-12														x				
59	C9-1	0-0.2	soil	1	17-Apr-12	x											x						
60	C9-2	0.3-0.4	soil	1	17-Apr-12	x				x								x					
61	C9-3	0.6-0.8	soil	1	17-Apr-12	x											x						
62	C9-4	1.3-1.5	soil	1	17-Apr-12														x				
63	D1-1	0.1-0.2	soil	1	18-Apr-12	x											x						
64	D1-2	0.4-0.6	soil	1	18-Apr-12														x				
65	D1-3	0.8-1.0	soil	1	18-Apr-12	x											x						
66	D5-1	0.2-0.5	soil	1	17-Apr-12	x				x													
67	D5-2	0.4-0.6	soil	1	17-Apr-12	x																	
68	D5-3	0.9-1.0	soil	1	17-Apr-12														x				
69	D5-4	1.3-1.4	soil	1	17-Apr-12	x																	
70	D6-1	0-0.2	soil	1	17-Apr-12	x											x						
71	D6-2	0.4-0.6	soil	1	17-Apr-12	x				x													
72	D6-3	0.7-0.8	soil	1	17-Apr-12	x																	
73	D6-4	1.0-1.2	soil	1	17-Apr-12														x				
74	D7-1	0-0.2	soil	1	17-Apr-12	x											x						

Received By:
Date:
FF-06 - Chain of Custody - ALS Environmental - Version 2 - 10/04/2012

19/04 14:25

Organisation:
Time:

Butler Partners Pty Ltd

PO Box 2267, Fortitude Valley BC Qld 4006
 79 Doggett Street, Newstead Qld 4006
 Ph: 07 3852 3800 Fax: 07 3852 3808

Job No: 011-165C Order No: 5479
 Site: Bowen Hills RNA COC No. 011-165C/1

ALS Environmental

Australian Laboratory Services Pty Ltd
 32 Shand Street, STAFFORD QLD 4053

Ph: 3243 7222
 Fax: 3243 7218

Quotation Number: BN/205/12																							
Project Manager: sch4p4(6) Person																							
Sampled By:																							
Results To:						butlerpartners.com.au)																	
Relinquished by:																							
Due Date: 27-Apr-12																							
Special Instructions: Standard 5 day TAT																							
Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled	S-2	S-4	S-5	S-6	S-7	S-8	S-9	S-12	S-13	S-16	S-19	PAH	OC Pesticides	HOLD	TCLP:	Neutral (D) Leach:	Cr Sulfide	C ₉ -C ₁₀ /BTEX
75	D7-2	0.1-0.3	soil	1	17-Apr-12	x				x								x					
76	D7-3	0.5-0.7	soil	1	17-Apr-12	x											x						
77	D7-4	1.0-1.2	soil	1	17-Apr-12	x																	
78	D8-1	0-0.2	soil	1	17-Apr-12	x											x						
79	D8-2	0.3-0.5	soil	1	17-Apr-12	x											x						
80	D8-3	0.8-1.0	soil	1	17-Apr-12	x																	
81	D8-4	1.3-1.5	soil	1	17-Apr-12														x				
82	D10-1	0-0.1	soil	1	17-Apr-12	x				x													
83	D10-2	0.3-0.5	soil	1	17-Apr-12	x											x						
84	D10-3	0.8-1.0	soil	1	17-Apr-12	x											x						
85	D10-4	1.2-1.4	soil	1	17-Apr-12	x											x						
86	D10-5	1.6-1.8	soil	1	17-Apr-12														x				
87	E1-1	0.2-0.3	soil	1	18-Apr-12	x																	
88	E1-2	0.4-0.6	soil	1	18-Apr-12	x											x						
89	E1-3	0.8-1.0	soil	1	18-Apr-12	x																	
90	E3-1	0.1-0.3	soil	1	18-Apr-12	x											x						
91	E3-2	0.4-0.5	soil	1	18-Apr-12	x				x													
92	E3-3	0.6-0.8	soil	1	18-Apr-12	x											x						
93	E3-4	1.0-1.2	soil	1	18-Apr-12	x																	
94	E3-5	1.4-1.6	soil	1	18-Apr-12														x				
95	E5-1	0-0.2	soil	1	17-Apr-12	x				x													
96	E5-2	0.4-0.6	soil	1	17-Apr-12	x											x						
97	E5-3	0.8-0.9	soil	1	17-Apr-12														x				
98	E6-1	0-0.2	soil	1	17-Apr-12	x											x						
99	E6-2	0.3-0.5	soil	1	17-Apr-12	x				x													

Received By: sch4p4(6)
 Date: 19/04 14:25
 FF-06 - Chain of Custody - ALS Environmental - Version 2 - 19/04/2012

Organisation:
 Time:

Butler Partners Pty Ltd

PO Box 2267, Fortitude Valley BC Qld 4006
(79 Doggett Street, Newstead Qld 4006)
Ph: 07 3852 3800 Fax: 07 3852 3808

Job No: 011-165C
Site: Bowen Hills RNA

Order No: 5479
COC No. 011-165C/1

ALS Environmental

Australian Laboratory Services Pty Ltd
32 Shand Street, STAFFORD QLD 4053

Ph: 3243 7222
Fax: 3243 7218

Quotation Number: BN/205/12
Project Manager: sch4p4(6) Pers
Sampled By:
Results To:
Relinquished by:
Due Date: 27-Apr-12
Special Instructions: Standard 5 day TAT

Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled	S-2	S-4	S-5	S-6	S-7	S-8	S-9	S-12	S-13	S-16	S-19	PAH	OC Pesticides	HOLD	TCLP	Neutral (DI) Leach	Cr Sulfate	C ₆ -C ₁₀ BTEX
100	E6-3	0.6-0.7	soil	1	17-Apr-12	x																	
101	E6-4	0.9-1.0	soil	1	17-Apr-12	x																	
102	E6-5	1.3-1.5	soil	1	17-Apr-12																		
103	E7-1	0-0.2	soil	1	17-Apr-12	x				x										x			
104	E7-2	0.3-0.5	soil	1	17-Apr-12	x																	
105	E7-3	0.8-0.9	soil	1	17-Apr-12																		
106	E8-1	0-0.1	soil	1	17-Apr-12	x				x										x			
107	E8-2	0.3-0.4	soil	1	17-Apr-12	x																	
108	E8-3	0.8-1.0	soil	1	17-Apr-12	x																	
109	E8-4	1.3-1.5	soil	1	17-Apr-12																		
110	E8-5	1.6-1.8	soil	1	17-Apr-12																		
111	E9-1	0-0.1	soil	1	17-Apr-12	x				x													
112	E9-2	0.3-0.5	soil	1	17-Apr-12	x																	
113	E9-3	0.8-1.0	soil	1	17-Apr-12	x																	
114	E9-4	1.3-1.5	soil	1	17-Apr-12																		
115	E10-1	0-0.2	soil	1	17-Apr-12	x				x													
116	E10-2	0.3-0.5	soil	1	17-Apr-12	x																	
117	E10-3	0.6-0.8	soil	1	17-Apr-12	x				x													
118	E10-4	1.3-1.5	soil	1	17-Apr-12	x																	
119	E10-5	1.6-1.8	soil	1	17-Apr-12																		
120	F3-1	0.2-0.4	soil	1	18-Apr-12	x				x													
121	F3-2	0.6-0.8	soil	1	18-Apr-12	x																	
122	F3-3	1.2-1.4	soil	1	18-Apr-12	x																	
123	F3-4	1.6-1.8	soil	1	18-Apr-12																		
124	F4-1	0.2-0.3	soil	1	18-Apr-12	x																	

Received By:
Date:
FF-06 - Chain of Custody - ALS Environmental - Version 2 - 18/04/2012

sch4p4(6) Pers

19/04 14:25

Organisation:
Time:

Partners Pty Ltd

100/1001, Fortitude Valley, BC Qld 4006
29 Doggett Street, Newstead Qld 4006
Ph: 07 3852 3800 Fax: 07 3852 3808

Job No: 011-165C Order No: 5479
Site: Bowen Hills RNA COC No. 011-165C/1

ALS Environmental

Australian Laboratory Services Pty Ltd
32 Shand Street, STAFFORD QLD 4053

Ph: 3243 7222
Fax: 3243 7218

Quotation Number: BN/205/12 Project Manager: sch4p4(6) Pers Sampled By: Results To: @butlerpartners.com.au Relinquished by: Due Date: 27-Apr-12 Special Instructions: Standard 5 day TAT																							
Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled	S-2	S-4	S-5	S-6	S-7	S-8	S-9	S-12	S-13	S-16	S-19	PAH	OC Pesticides	HOLD	TCLP:	Neutra (DI) Leach:	Cr-Suite	C ₆ -C ₁₀ BTEX
125	F4-2	0.4-0.6	soil	1	18-Apr-12	x											x	x					
126	F4-3	0.8-1.0	soil	1	18-Apr-12	x				x													
127	F4-4	1.1-1.2	soil	1	18-Apr-12	x																	
128	F4-5	1.4-1.6	soil	1	18-Apr-12														x				
129	F4-6	1.8-2.0	soil	1	18-Apr-12														x				
130	F5-1	0.1-0.3	soil	1	17-Apr-12	x				x													
131	F5-2	0.4-0.6	soil	1	17-Apr-12	x											x						
132	F5-3	0.8-1.0	soil	1	17-Apr-12	x				x													
133	F5-4	1.3-1.5	soil	1	17-Apr-12	x																	
134	F5-5	1.8-2.0	soil	1	17-Apr-12														x				
135	F7-1	0-0.2	soil	1	17-Apr-12	x				x													
136	F7-2	0.4-0.6	soil	1	17-Apr-12	x											x						
137	F7-3	0.8-1.0	soil	1	17-Apr-12	x																	
138	F7-4	1.3-1.5	soil	1	17-Apr-12														x				
139	F10-1	0-0.1	soil	1	17-Apr-12	x											x	x					
140	F10-2	0.3-0.5	soil	1	17-Apr-12	x											x						
141	F10-3	0.7-0.8	soil	1	17-Apr-12	x											x						
142	F10-4	1.3-1.5	soil	1	17-Apr-12	x											x						
143	F10-5	1.8-2.0	soil	1	17-Apr-12														x				
144	DUP01	-	soil	1	17-Apr-12														x				
145	DUP03	-	soil	1	17-Apr-12	x											x						
146	DUP05	-	soil	1	17-Apr-12	x											x	x					
147	DUP07	-	soil	1	17-Apr-12	x				x													
148	DUP09	-	soil	1	17-Apr-12	x				x													
149	DUP11	-	soil	1	17-Apr-12														x				

Received By: sch4p4(6) F
 Date: 19/04 14:25
 FF-06 - Chain of Custody - ALS Environmental - Version 2 - 19/04/2012

Organization:
Time:

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : EB1210561

Client : BUTLER PARTNERS PTY LTD
Contact : sch4p4(6) Person
Address : P O BOX 2267
 FORTITUDE VALLEY BC QLD,
 AUSTRALIA 4006

Laboratory : Environmental Division Brisbane
Contact : Customer Services
Address : 32 Shand Street Stafford QLD Australia
 4053

E-mail : sch4p4@butlerpartners.com.au
Telephone : +61 07 38523800
Facsimile : +61 07 38523808

E-mail : Brisbane.Enviro.Services@alsglobal.com
Telephone : +61 7 3243 7222
Facsimile : +61 7 3243 7218

Project : 011-165C
Order number : 5479
C-O-C number : 011-165C/1
Site : Bowen Hills RNA
Sampler : sch4p4(6) Pa

Page : 1 of 6
Quote number : EB2012BUTPAR0330 (BN/205/12)
QC Level : NEPM 1999 Schedule B(3) and ALS
 QCS3 requirement

Dates

Date Samples Received : 19-APR-2012
Client Requested Due Date : 27-APR-2012

Issue Date : 23-APR-2012 08:31
Scheduled Reporting Date : **30-APR-2012**

Delivery Details

Mode of Delivery : Carrier

Temperature : 19.6°, 15.4°C, 17.3°C - Ice bricks
 present

No. of coolers/boxes : 3 MEDIUM
Security Seal : Intact.

No. of samples received : 152
No. of samples analysed : 117

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Turnaround times have been extended due to laboratory capacity. If you would like a preliminary report prior to this date please contact Client Services
- **Samples received in appropriately pretreated and preserved containers.**
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Sample E8-3 0.8-1.0 (ALS #108) is marked on the Chain of Custody for S-2 8 metals, PAH as well as being on HOLD. It has been logged to be analysed for 8 metals and PAH. If this is incorrect, please contact client services.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: SOIL

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EP068A (solids) Organochlorine Pesticides by GC/MS	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 & Metals (incl. Digestion)	SOIL - S-07 TPH/BTEX/PAH (SIM)
EB1210561-001	17-APR-2012 15:00	A2-1 0.2-0.3				✓	✓
EB1210561-002	17-APR-2012 15:00	A2-2 0.4-0.6				✓	✓
EB1210561-003	17-APR-2012 15:00	A2-3 0.8-1.0			✓	✓	
EB1210561-004	17-APR-2012 15:00	A2-4 1.3-1.5	✓				
EB1210561-005	17-APR-2012 15:00	A4-1 0.2-0.4		✓	✓	✓	
EB1210561-006	17-APR-2012 15:00	A4-2 0.6-0.7			✓	✓	
EB1210561-007	17-APR-2012 15:00	A4-3 1.0-1.2				✓	
EB1210561-008	17-APR-2012 15:00	A4-4 1.3-1.5	✓				
EB1210561-009	17-APR-2012 15:00	A5-1 0.2-0.4				✓	✓
EB1210561-010	17-APR-2012 15:00	A5-2 0.6-0.8			✓	✓	
EB1210561-011	17-APR-2012 15:00	A5-3 1.0-1.2				✓	
EB1210561-012	17-APR-2012 15:00	A5-4 1.3-1.5	✓				
EB1210561-013	17-APR-2012 15:00	A6-1 0-0.2				✓	✓
EB1210561-014	17-APR-2012 15:00	A6-2 0.5-0.8		✓	✓	✓	
EB1210561-015	17-APR-2012 15:00	A6-3 1.0-1.2				✓	
EB1210561-016	17-APR-2012 15:00	A6-4 1.5-1.8	✓				
EB1210561-017	17-APR-2012 15:00	B2-1 0.2-0.4			✓	✓	
EB1210561-018	17-APR-2012 15:00	B2-2 0.5-0.6				✓	✓
EB1210561-019	17-APR-2012 15:00	B2-3 0.8-1.0				✓	
EB1210561-020	17-APR-2012 15:00	B2-4 1.3-1.5	✓				
EB1210561-021	17-APR-2012 15:00	B3-1 0.2-0.4		✓	✓	✓	
EB1210561-022	17-APR-2012 15:00	B3-2 0.6-0.7				✓	✓
EB1210561-023	17-APR-2012 15:00	B3-3 1.0-1.2			✓	✓	
EB1210561-024	17-APR-2012 15:00	B3-4 1.4-1.6	✓				
EB1210561-025	17-APR-2012 15:00	B5-1 0.2-0.4			✓	✓	
EB1210561-026	17-APR-2012 15:00	B5-2 0.5-0.6				✓	✓
EB1210561-027	17-APR-2012 15:00	B5-3 0.8-1.0				✓	
EB1210561-028	17-APR-2012 15:00	B5-4 1.5-1.6	✓				
EB1210561-029	17-APR-2012 15:00	B6-1 0-0.2			✓	✓	
EB1210561-030	17-APR-2012 15:00	B6-2 0.5-0.7				✓	✓
EB1210561-031	17-APR-2012 15:00	B6-3 1.0-1.1			✓	✓	
EB1210561-032	17-APR-2012 15:00	B6-4 1.2-1.4	✓				
EB1210561-033	17-APR-2012 15:00	B7-1 0-0.1				✓	✓
EB1210561-034	17-APR-2012 15:00	B7-2 0.3-0.5			✓	✓	
EB1210561-035	17-APR-2012 15:00	B7-3 0.6-0.8				✓	✓

Issue Date : 23-APR-2012 08:31
Page : 3 of 6
Work Order : EB1210561
Client : BUTLER PARTNERS PTY LTD



			(On Hold) SOIL No analysis requested	SOIL - EP068A (solids) Organochlorine Pesticides by GCMS	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 & Metals (incl. Digestion)	SOIL - S-07 TPH/BTEX/PAH (SIM)
EB1210561-036	17-APR-2012 15:00	B7-4 1.0-1.1				✓	
EB1210561-037	17-APR-2012 15:00	B7-5 1.4-1.6	✓				
EB1210561-038	17-APR-2012 15:00	B8-1 0-0.2			✓	✓	
EB1210561-039	17-APR-2012 15:00	B8-2 0.3-0.5		✓	✓		
EB1210561-040	17-APR-2012 15:00	B8-3 0.8-0.9			✓	✓	
EB1210561-041	17-APR-2012 15:00	B8-4 1.2-1.3	✓				
EB1210561-042	18-APR-2012 15:00	C1-1 0.1-0.2			✓	✓	
EB1210561-043	18-APR-2012 15:00	C1-2 0.3-0.5			✓	✓	
EB1210561-044	18-APR-2012 15:00	C1-3 0.8-1.0	✓				
EB1210561-045	18-APR-2012 15:00	C2-1 0.2-0.4		✓	✓	✓	
EB1210561-046	18-APR-2012 15:00	C2-2 0.6-0.8				✓	
EB1210561-047	17-APR-2012 15:00	C5-1 0-0.2		✓		✓	✓
EB1210561-048	17-APR-2012 15:00	C5-2 0.4-0.5			✓	✓	
EB1210561-049	17-APR-2012 15:00	C5-3 0.7-1.0				✓	
EB1210561-050	18-APR-2012 15:00	C7-1 0.0-0.2				✓	✓
EB1210561-051	18-APR-2012 15:00	C7-2 0.3-0.5			✓	✓	
EB1210561-052	18-APR-2012 15:00	C7-3 0.7-0.87				✓	✓
EB1210561-053	18-APR-2012 15:00	C7-4 1.0-1.2			✓	✓	
EB1210561-054	17-APR-2012 15:00	C8-1 0-0.2				✓	✓
EB1210561-055	17-APR-2012 15:00	C8-2 0.3-0.5			✓	✓	
EB1210561-056	17-APR-2012 15:00	C8-3 0.9-1.0				✓	✓
EB1210561-057	17-APR-2012 15:00	C8-4 1.0-1.2				✓	
EB1210561-058	17-APR-2012 15:00	C8-5 1.4-1.5	✓				
EB1210561-059	17-APR-2012 15:00	C9-1 0-0.2			✓	✓	
EB1210561-060	17-APR-2012 15:00	C9-2 0.3-0.4		✓		✓	✓
EB1210561-061	17-APR-2012 15:00	C9-3 0.6-0.8			✓	✓	
EB1210561-062	17-APR-2012 15:00	C9-4 1.3-1.5	✓				
EB1210561-063	18-APR-2012 15:00	D1-1 0.1-0.2			✓	✓	
EB1210561-064	18-APR-2012 15:00	D1-2 0.4-0.6	✓				
EB1210561-065	18-APR-2012 15:00	D1-3 0.8-1.0			✓	✓	
EB1210561-066	17-APR-2012 15:00	D5-1 0.2-0.5				✓	✓
EB1210561-067	17-APR-2012 15:00	D5-2 0.4-0.6				✓	
EB1210561-068	17-APR-2012 15:00	D5-3 0.9-1.0	✓				
EB1210561-069	17-APR-2012 15:00	D5-4 1.3-1.4				✓	
EB1210561-070	17-APR-2012 15:00	D6-1 0-0.2			✓	✓	
EB1210561-071	17-APR-2012 15:00	D6-2 0.4-0.6				✓	✓
EB1210561-072	17-APR-2012 15:00	D6-3 0.7-0.8				✓	
EB1210561-073	17-APR-2012 15:00	D6-4 1.0-1.2	✓				
EB1210561-074	17-APR-2012 15:00	D7-1 0-0.1			✓	✓	
EB1210561-075	17-APR-2012 15:00	D7-2 0.1-0.3		✓		✓	✓
EB1210561-076	17-APR-2012 15:00	D7-3 0.5-0.7			✓	✓	



			(On Hold) SOIL No analysis requested	SOIL - EP068A (solids) Organochlorine Pesticides by GCMS	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-07 TPH/BTEX/PAH (SIM)
EB1210561-077	17-APR-2012 15:00	D7-4 1.0-1.2				✓	
EB1210561-078	17-APR-2012 15:00	D8-1 0-0.2			✓	✓	
EB1210561-079	17-APR-2012 15:00	D8-2 0.3-0.5			✓	✓	
EB1210561-080	17-APR-2012 15:00	D8-3 0.8-1.0				✓	
EB1210561-081	17-APR-2012 15:00	D8-4 1.3-1.5	✓				
EB1210561-082	17-APR-2012 15:00	D10-1 0-0.1				✓	✓
EB1210561-083	17-APR-2012 15:00	D10-2 0.3-0.5			✓	✓	
EB1210561-084	17-APR-2012 15:00	D10-3 0.8-1.0			✓	✓	
EB1210561-085	17-APR-2012 15:00	D10-4 1.2-1.4			✓	✓	
EB1210561-086	17-APR-2012 15:00	D10-5 1.6-1.8	✓				
EB1210561-087	18-APR-2012 15:00	E1-1 0.2-0.3				✓	
EB1210561-088	18-APR-2012 15:00	E1-2 0.4-0.6			✓	✓	
EB1210561-089	18-APR-2012 15:00	E1-3 0.8-1.0				✓	
EB1210561-090	18-APR-2012 15:00	E3-1 0.1-0.3			✓	✓	
EB1210561-091	18-APR-2012 15:00	E3-2 0.4-0.5				✓	✓
EB1210561-092	18-APR-2012 15:00	E3-3 0.6-0.8			✓	✓	
EB1210561-093	18-APR-2012 15:00	E3-4 1.0-1.2				✓	
EB1210561-094	18-APR-2012 15:00	E3-5 1.4-1.6	✓				
EB1210561-095	17-APR-2012 15:00	E5-1 0-0.2				✓	✓
EB1210561-096	17-APR-2012 15:00	E5-2 0.4-0.6			✓	✓	
EB1210561-097	17-APR-2012 15:00	E5-3 0.8-0.9	✓				
EB1210561-098	17-APR-2012 15:00	E6-1 0-0.2			✓	✓	
EB1210561-099	17-APR-2012 15:00	E6-2 0.3-0.5				✓	✓
EB1210561-100	17-APR-2012 15:00	E6-3 0.6-0.7				✓	
EB1210561-101	17-APR-2012 15:00	E6-4 0.9-1.0				✓	
EB1210561-102	17-APR-2012 15:00	E6-5 1.3-1.5	✓				
EB1210561-103	17-APR-2012 15:00	E7-1 0-0.2				✓	✓
EB1210561-104	17-APR-2012 15:00	E7-2 0.3-0.5				✓	
EB1210561-105	17-APR-2012 15:00	E7-3 0.8-0.9	✓				
EB1210561-106	17-APR-2012 15:00	E8-1 0-0.1				✓	✓
EB1210561-107	17-APR-2012 15:00	E8-2 0.3-0.4			✓	✓	
EB1210561-108	17-APR-2012 15:00	E8-3 0.8-1.0			✓	✓	
EB1210561-109	17-APR-2012 15:00	E8-4 1.3-1.5	✓				
EB1210561-110	17-APR-2012 15:00	E8-5 1.6-1.8	✓				
EB1210561-111	17-APR-2012 15:00	E9-1 0-0.1				✓	✓
EB1210561-112	17-APR-2012 15:00	E9-2 0.3-0.5			✓	✓	
EB1210561-113	17-APR-2012 15:00	E9-3 0.8-1.0				✓	
EB1210561-114	17-APR-2012 15:00	E9-4 1.3-1.5	✓				
EB1210561-115	17-APR-2012 15:00	E10-1 0-0.2				✓	✓
EB1210561-116	17-APR-2012 15:00	E10-2 0.3-0.5			✓	✓	
EB1210561-117	17-APR-2012 15:00	E10-3 0.6-0.8				✓	✓

Issue Date : 23-APR-2012 08:31
Page : 5 of 6
Work Order : EB1210561
Client : BUTLER PARTNERS PTY LTD



			(On Hold) SOIL No analysis requested	SOIL - EP068A (solids) Organochlorine Pesticides by GCMS	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-07 TPH/BTEX/PAH (SIM)
EB1210561-118	17-APR-2012 15:00	E10-4 1.3-1.5				✓	
EB1210561-119	17-APR-2012 15:00	E10-5 1.6-1.8	✓				
EB1210561-120	18-APR-2012 15:00	F3-1 0.2-0.4				✓	✓
EB1210561-121	18-APR-2012 15:00	F3-2 0.6-0.8			✓	✓	
EB1210561-122	18-APR-2012 15:00	F3-3 1.2-1.4			✓	✓	
EB1210561-123	18-APR-2012 15:00	F3-4 1.6-1.8	✓				
EB1210561-124	18-APR-2012 15:00	F4-1 0.2-0.3			✓	✓	
EB1210561-125	18-APR-2012 15:00	F4-2 0.4-0.6		✓	✓	✓	
EB1210561-126	18-APR-2012 15:00	F4-3 0.8-1.0				✓	✓
EB1210561-127	18-APR-2012 15:00	F4-4 1.1-1.2				✓	
EB1210561-128	18-APR-2012 15:00	F4-5 1.4-1.6	✓				
EB1210561-129	18-APR-2012 15:00	F4-6 1.8-2.0	✓				
EB1210561-130	17-APR-2012 15:00	F5-1 0.1-0.3				✓	✓
EB1210561-131	17-APR-2012 15:00	F5-2 0.4-0.6			✓	✓	
EB1210561-132	17-APR-2012 15:00	F5-3 0.8-1.0				✓	✓
EB1210561-133	17-APR-2012 15:00	F5-4 1.3-1.5				✓	
EB1210561-134	17-APR-2012 15:00	F5-5 1.8-2.0	✓				
EB1210561-135	17-APR-2012 15:00	F7-1 0-0.2				✓	✓
EB1210561-136	17-APR-2012 15:00	F7-2 0.4-0.6			✓	✓	
EB1210561-137	17-APR-2012 15:00	F7-3 0.8-1.0				✓	
EB1210561-138	17-APR-2012 15:00	F7-4 1.3-1.5	✓				
EB1210561-139	17-APR-2012 15:00	F10-1 0-0.1		✓	✓	✓	
EB1210561-140	17-APR-2012 15:00	F10-2 0.3-0.5			✓	✓	
EB1210561-141	17-APR-2012 15:00	F10-3 0.7-0.8			✓	✓	
EB1210561-142	17-APR-2012 15:00	F10-4 1.3-1.5			✓	✓	
EB1210561-143	17-APR-2012 15:00	F10-5 1.8-2.0	✓				
EB1210561-144	17-APR-2012 15:00	DUP01	✓				
EB1210561-145	17-APR-2012 15:00	DUP03			✓	✓	
EB1210561-146	17-APR-2012 15:00	DUP05		✓	✓	✓	
EB1210561-147	17-APR-2012 15:00	DUP07				✓	✓
EB1210561-148	17-APR-2012 15:00	DUP09				✓	✓
EB1210561-149	17-APR-2012 15:00	DUP11	✓				
EB1210561-150	18-APR-2012 15:00	DUP13	✓				
EB1210561-151	18-APR-2012 15:00	DUP15				✓	

Issue Date : 23-APR-2012 08:31
Page : 6 of 6
Work Order : EB1210561
Client : BUTLER PARTNERS PTY LTD



Matrix: WATER

Laboratory sample ID	Client sampling date / time	Client sample ID	
EB1210561-152	18-APR-2012 15:00	TB180412	✓

WATER - W-18
TPH(C6 - C9)/BTEX

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

sch4p4(6) Personal

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)

Email
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sch4p4(6) Butlerpartners.com.au
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butlerpartners.com.au
butlerpartners.com.au

sch4p4(6) Personal

- *AU Certificate of Analysis - NATA (COA)
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- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)

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butlerpartners.com.au

sch4p4(6) Personal information

- A4 - AU Tax Invoice (INV)

Email

sch4p4(6) Personal information Butlerpartners.com.au

CERTIFICATE OF ANALYSIS

Work Order	: EB1211541	Page	: 1 of 7
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal in	Contact	: Customer Services
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 07 38523800	Telephone	: +61 7 3243 7222
Facsimile	: +61 07 38523808	Facsimile	: +61 7 3243 7218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 5372	Date Samples Received	: 01-MAY-2012
C-O-C number	: 011-165C/1	Issue Date	: 10-MAY-2012
Sampler	: sch4p4(6) Pe	No. of samples received	: 8
Site	: Bowen Hills RNA	No. of samples analysed	: 8
Quote number	: BN/205/12		

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
sch4p4(6) Per	Senior Inorganic Chemist	Brisbane Inorganics
	Senior Organic Chemist	Brisbane Organics

Page : 2 of 7
Work Order : EB1211541
Client : BUTLER PARTNERS PTY LTD
Project : 011-165C



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

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 Work Order : EB1211541
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				B3-2	B8-3	C8-2	D6-2	E5-1
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1211541-001	EB1211541-002	EB1211541-003	EB1211541-004	EB1211541-005
EN33: TCLP Leach								
Initial pH	---	0.1	pH Unit	7.6	7.6	7.8	7.1	8.4
After HCl pH	---	0.1	pH Unit	1.6	1.6	1.7	1.7	1.6
Extraction Fluid Number	---	1	-	1	1	1	1	1
Final pH	---	0.1	pH Unit	5.1	5.0	5.1	5.0	5.0

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 Work Order : EB1211541
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Analytical Results

Sub-Matrix: SOIL

				Client sample ID				
				Client sampling date / time	E9-2	E10-1	F10-1	
					17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	
Compound	CAS Number	LOR	Unit		EB1211541-006	EB1211541-007	EB1211541-008	
EN33: TCLP Leach								
Initial pH	---	0.1	pH Unit		7.3	9.7	7.5	---
After HCl pH	---	0.1	pH Unit		1.8	1.7	1.6	---
Extraction Fluid Number	---	1	-		1	1	1	---
Final pH	---	0.1	pH Unit		5.0	5.0	5.0	---

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Page : 5 of 7
 Work Order : EB1211541
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Analytical Results

Sub-Matrix: TCLP LEACHATE

				Client sample ID	B3-2	B8-3	C8-2	D6-2	E5-1
				Client sampling date / time	02-MAY-2012 14:00	02-MAY-2012 14:00	02-MAY-2012 14:00	02-MAY-2012 14:00	02-MAY-2012 14:00
Compound	CAS Number	LOR	Unit		EB1211541-001	EB1211541-002	EB1211541-003	EB1211541-004	EB1211541-005
EG005C: Leachable Metals by ICPAES									
Lead	7439-92-1	0.1	mg/L		—	—	0.9	—	—
Zinc	7440-66-6	0.1	mg/L		—	—	6.7	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	1.3
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	9.2
Anthracene	120-12-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	1.7
Fluoranthene	206-44-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	8.0
Pyrene	129-00-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	6.4
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(b)fluoranthene	205-99-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.6	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	—	0.5	µg/L		<0.5	<0.5	<0.5	<0.6	26.6
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		35.0	38.0	32.8	31.4	33.0
2-Chlorophenol-D4	93951-73-6	0.1	%		84.0	91.0	78.4	76.6	78.2
2,4,6-Tribromophenol	118-79-6	0.1	%		95.3	103	89.3	86.5	87.3
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		90.9	97.0	85.9	85.5	86.4
Anthracene-d10	1719-06-8	0.1	%		98.5	104	92.4	94.1	94.3
4-Terphenyl-d14	1718-51-0	0.1	%		97.7	104	94.4	95.8	96.6

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 Work Order : EB1211541
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Analytical Results

Sub-Matrix: TCLP LEACHATE

Client sample ID

Client sampling date / time

				E9-2	E10-1	F10-1	---	---
				02-MAY-2012 14:00	02-MAY-2012 14:00	02-MAY-2012 14:00	---	---
Compound	CAS Number	LOR	Unit	EB1211541-006	EB1211541-007	EB1211541-008	---	---
EG005C: Leachable Metals by ICPAES								
Lead	7439-92-1	0.1	mg/L	---	---	0.8	---	---
Zinc	7440-66-6	0.1	mg/L	---	---	6.5	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	<0.5	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	<1.0	---	---
Sum of polycyclic aromatic hydrocarbons	---	0.5	µg/L	<0.5	<0.5	<0.5	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	35.8	37.1	35.4	---	---
2-Chlorophenol-D4	93951-73-6	0.1	%	83.2	83.6	83.5	---	---
2,4,6-Tribromophenol	118-79-6	0.1	%	91.4	91.1	92.0	---	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	89.0	90.6	90.1	---	---
Anthracene-d10	1719-06-8	0.1	%	93.8	93.2	98.5	---	---
4-Terphenyl-d14	1718-51-0	0.1	%	98.0	96.3	103	---	---

Page : 7 of 7
Work Order : EB1211541
Client : BUTLER PARTNERS PTY LTD
Project : 011-165C



Surrogate Control Limits

Sub-Matrix: TCLP LEACHATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10.0	71.9
2-Chlorophenol-D4	93951-73-6	26.8	130.2
2,4,6-Tribromophenol	118-79-6	19.3	180.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	13.9	146.1
Anthracene-d10	1719-06-8	34.6	137.4
4-Terphenyl-d14	1718-51-0	36.2	154.2

QUALITY CONTROL REPORT

Work Order	: EB1211541	Page	: 1 of 5
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal	Contact	: Customer Services
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 07 38523800	Telephone	: +61 7 3243 7222
Facsimile	: +61 07 38523808	Facsimile	: +61 7 3243 7218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Bowen Hills RNA	Date Samples Received	: 01-MAY-2012
C-O-C number	: 011-165C/1	Issue Date	: 10-MAY-2012
Sampler	: sch4p4(6) Per	No. of samples received	: 8
Order number	: 5372	No. of samples analysed	: 8
Quote number	: BN/205/12		

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



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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

sch4p4(6) Per

Senior Inorganic Chemist
Senior Organic Chemist

Brisbane Inorganics
Brisbane Organics

Page : 2 of 5
Work Order : EB1211541
Client : BUTLER PARTNERS PTY LTD
Project : 011-165C



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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Page : 3 of 5
 Work Order : EB1211541
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



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: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005C: Leachable Metals by ICPAES (QC Lot: 2287708)									
EB1210869-001	Anonymous	EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Zinc	7440-66-6	0.1	mg/L	50.3	50.7	0.6	0% - 20%

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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: WATER

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
Method: Compound	CAS Number	LOR	Unit					
EG005C: Leachable Metals by ICPAES (QCLot: 2287708)								
EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	1.0 mg/L	109	77	125
EG005C: Zinc	7440-66-6	0.1	mg/L	<0.1	1.0 mg/L	115	87	127
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2286095)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	10 µg/L	79.8	47	120
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	10 µg/L	84.3	46	127
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	10 µg/L	78.6	50	123
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	10 µg/L	82.9	50	126
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	10 µg/L	83.3	49	115
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	10 µg/L	80.9	44	120
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	10 µg/L	83.3	46	122
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	10 µg/L	84.0	46	122
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	10 µg/L	94.8	48	125
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	10 µg/L	80.2	43	119
EP075(SIM): Benzo(b)fluoranthene	205-99-2	1	µg/L	<1.0	10 µg/L	94.0	43	138
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	10 µg/L	101	38	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	10 µg/L	94.2	39	125
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	1	µg/L	<1.0	10 µg/L	93.1	40	137
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	1	µg/L	<1.0	10 µg/L	95.5	42	140
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	1	µg/L	<1.0	10 µg/L	92.1	37	136
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	1	µg/L	<1.0	—	—	—	—

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 Work Order : EB1211541
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



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: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG005C: Leachable Metals by ICPAES (QCLot: 2287708)							
EB1210953-007	Anonymous	EG005C: Lead	7439-92-1	1.00 mg/L	112	70	130
		EG005C: Zinc	7440-66-6	1.00 mg/L	110	70	130

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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

Sub-Matrix: WATER

Sub-Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
				Concentration	MS	MSD	Low	High	Value	Control Limit
EG005C: Leachable Metals by ICPAES (QCLot: 2287708)										
EB1210953-007	Anonymous	EG005C: Lead	7439-92-1	1.00 mg/L	112	---	70	130	---	---
		EG005C: Zinc	7440-66-6	1.00 mg/L	110	---	70	130	---	---

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB1211541	Page	: 1 of 5
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Persona	Contact	: Customer Services
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 07 38523800	Telephone	: +61 7 3243 7222
Facsimile	: +61 07 38523808	Facsimile	: +61 7 3243 7218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Bowen Hills RNA	Date Samples Received	: 01-MAY-2012
C-O-C number	: 011-165C/1	Issue Date	: 10-MAY-2012
Sampler	: sch4p4(6) Pe	No. of samples received	: 8
Order number	: 5372	No. of samples analysed	: 8
Quote number	: BN/205/12		

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



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		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005C: Leachable Metals by ICPAES								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C) C8-2,	F10-1	02-MAY-2012	05-MAY-2012	29-OCT-2012	✓	05-MAY-2012	29-OCT-2012	✓
EN33: TCLP Leach								
LabSplit: Leach for organics and other tests (EN33a) B8-3, D6-2, E9-2, F10-1	C8-2, E5-1, E10-1,	17-APR-2012	---	01-MAY-2012	---	02-MAY-2012	01-MAY-2012	✗
LabSplit: Leach for organics and other tests (EN33a) B3-2		17-APR-2012	---	01-MAY-2012	---	01-MAY-2012	01-MAY-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP075(SIM)) B3-2, C8-2, E5-1, E10-1,	B8-3, D6-2, E9-2, F10-1	02-MAY-2012	04-MAY-2012	09-MAY-2012	✓	09-MAY-2012	13-JUN-2012	✓



Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)		Evaluation	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Leachable Metals by ICPAES	EG005C	1	6	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Leachable Metals by ICPAES	EG005C	1	6	16.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	19	5.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Leachable Metals by ICPAES	EG005C	1	6	16.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	19	5.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Leachable Metals by ICPAES	EG005C	1	6	16.7	5.0	✓	ALS QCS3 requirement



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Leachable Metals by ICPAES	EG005C	SOIL	APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	SOIL	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	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)
TCLP for Non & Semivolatile Analytes	EN33a	SOIL	(USEPA SW846-1311, ALS QWI-EN/33) The TCLP procedure is designed to determine the mobility of both organic and inorganic analytes present in wastes. The standard TCLP leach is for non-volatile and Semivolatile test parameters.
Separatory Funnel Extraction of Liquids	ORG14	SOIL	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.



Summary of Outliers

Outliers : Quality Control Samples

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

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

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

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

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

Matrix: SOIL

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EN33: TCLP Leach							
LabSplit: Leach for organics and other tests							
B8-3, D6-2, E9-2, F10-1	C8-2, E5-1, E10-1,	—	—	—	02-MAY-2012	01-MAY-2012	1

Outliers : Frequency of Quality Control Samples

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

- No Quality Control Sample Frequency Outliers exist.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EB1211541**

Client : **BUTLER PARTNERS PTY LTD**
 Contact : **sch4p4(6) Persona**
 Address : **P O BOX 2267
 FORTITUDE VALLEY BC QLD,
 AUSTRALIA 4006**
 E-mail : **sch4p4(6)@butlerpartners.com.au**
 Telephone : **+61 38523800**
 Facsimile : **+61 07 38523808**
 Project : **011-165C**
 Order number : **5372**
 C-O-C number : **011-165C/1**
 Site : **Bowen Hills RNA**
 Sampler : **sch4p4(6) Per**

Laboratory : **Environmental Division Brisbane**
 Contact : **Customer Services**
 Address : **32 Shand Street Stafford QLD Australia
 4053**
 E-mail : **Brisbane.Enviro.Services@alsglobal.com**
 Telephone : **+61 7 3243 7222**
 Facsimile : **+61 7 3243 7218**
 Page : **1 of 2**
 Quote number : **EB2012BUTPAR0330 (BN/205/12)**
 QC Level : **NEPM 1999 Schedule B(3) and ALS
 QCS3 requirement**

Dates

Date Samples Received : **01-MAY-2012**
 Client Requested Due Date : **10-MAY-2012**
 Issue Date : **01-MAY-2012 11:45**
 Scheduled Reporting Date : **10-MAY-2012**

Delivery Details

Mode of Delivery : **Samples on hand**
 No. of coolers/boxes : **REBATCH**
 Security Seal : **Not intact.**
 Temperature : **AMBIENT**
 No. of samples received : **8**
 No. of samples analysed : **8**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.**
- Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: SOIL

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - TCLP TCLP Leach
EB1211541-001	01-MAY-2012 15:00	B3-2	✓	
	17-APR-2012 15:00	B3-2		✓
EB1211541-002	01-MAY-2012 15:00	B8-3	✓	
	17-APR-2012 15:00	B8-3		✓
EB1211541-003	01-MAY-2012 15:00	C8-2	✓	
	17-APR-2012 15:00	C8-2		✓
EB1211541-004	01-MAY-2012 15:00	D6-2	✓	
	17-APR-2012 15:00	D6-2		✓
EB1211541-005	01-MAY-2012 15:00	E5-1	✓	
	17-APR-2012 15:00	E5-1		✓
EB1211541-006	01-MAY-2012 15:00	E9-2	✓	
	17-APR-2012 15:00	E9-2		✓
EB1211541-007	01-MAY-2012 15:00	E10-1	✓	
	17-APR-2012 15:00	E10-1		✓
EB1211541-008	01-MAY-2012 15:00	F10-1	✓	
	17-APR-2012 15:00	F10-1		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

sch4p4(6) Person

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)

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sch4p4(6) Personal

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)

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butlerpartners.com.au

sch4p4(6) Personal information

- A4 - AU Tax Invoice (INV)

Email

sch4p4(6) P butlerpartners.com.a
u

CHAIN OF CUSTODY DOCUMENTATION

CLIENT: **Butler Partners Pty Ltd**

ADDRESS / OFFICE:

PROJECT MANAGER (PM): **EB1210561 - Rebatch.**

PROJECT ID:

SITE:

P.O. NO.:

RESULTS REQUIRED (Date):

QUOTE NO.:

FOR LABORATORY USE ONLY

COOLER SEAL (circle appropriate)

Intact: Yes ☐ No ☐ N/A ☐

SAMPLE TEMPERATURE:

CHILLED: Yes ☐ No ☐

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

please see
attached
email.

Notes: e.g. Highly contaminated samples
e.g. "High PAHs expected".
Extra volume for QC or trace LORs etc.

SAMPLE INFORMATION (note: S = Soil, W=Water)

CONTAINER INFORMATION

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles
1	B3-2	S	17-4-12			
2	B8-3	S				
3	C8-2	S				
4	D6-2	S				
5	E5-1	S				
6	E9-2	S				
7	E10-1	S				
8	E10-1	S	17-4-12			

Environmental Division
Brisbane
Work Order

B1211541



Telephone : + 61-7-3243 7222

URGENT

RELINQUISHED BY:

RECEIVED BY:

METHOD OF SHIPMENT

Name: sch4p4 (6) Personal inform
Of:
Name:
Of:

Date: 1-5-12
Time: 10 30 am
Date:
Time:

Name:
Of:
Name:
Of:

Date:
Time:
Date:
Time:

Con' Note No:
Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;
V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS LABORATORY GROUP

COC Page ___ of ___

CERTIFICATE OF ANALYSIS

Work Order	: EB1211719	Page	: 1 of 11
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal	Contact	: sch4p4(6) Personal
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: sch4p4(6) Personal@alsenviro.com
Telephone	: +61 07 38523800	Telephone	: 61-7-32437222
Facsimile	: +61 07 38523808	Facsimile	: 61-7-32437218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 5372	Date Samples Received	: 02-MAY-2012
C-O-C number	: 011-165C/1	Issue Date	: 14-MAY-2012
Sampler	: sch4p4(6) Personal	No. of samples received	: 20
Site	: Bowen Hills RNA	No. of samples analysed	: 20
Quote number	: BN/205/12		

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

sch4p4(6) Personal

Position

Inorganic Coordinator
Laboratory Coordinator
Laboratory Coordinator
Senior Inorganic Chemist

Accreditation Category

Brisbane Inorganics
Brisbane Inorganics
Brisbane Organics
Brisbane Inorganics

Page : 2 of 11
Work Order : EB1211719
Client : BUTLER PARTNERS PTY LTD
Project : 011-165C



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

Published on DES Disclosure Log
RTI Act 2009



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	B7-5	B8-4	E5-3	A6-3	C2-2
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00
				EB1211719-001	EB1211719-002	EB1211719-003	EB1211719-004	EB1211719-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	26.3	19.9	18.9	22.1	23.6
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	11	---	---	---	---
Cadmium	7440-43-9	1	mg/kg	<1	---	---	---	---
Chromium	7440-47-3	2	mg/kg	11	---	---	---	---
Copper	7440-50-8	5	mg/kg	12	---	---	---	---
Lead	7439-92-1	5	mg/kg	34	---	---	---	---
Nickel	7440-02-0	2	mg/kg	4	---	---	---	---
Zinc	7440-66-6	5	mg/kg	350	---	---	---	---
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	---	<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
Chrysene	218-01-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	---	<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
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	---	<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
^ Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	---	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	10	mg/kg	---	---	<10	---	---
C10 - C14 Fraction	---	50	mg/kg	---	---	<50	---	---
C15 - C28 Fraction	---	100	mg/kg	---	---	<100	---	---
C29 - C36 Fraction	---	100	mg/kg	---	---	<100	---	---
^ C10 - C36 Fraction (sum)	---	50	mg/kg	---	---	<50	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								

Page : 4 of 11
 Work Order : EB1211719
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				B7-5	B8-4	E5-3	A6-3	C2-2
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1211719-001	EB1211719-002	EB1211719-003	EB1211719-004	EB1211719-005
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft - Continued								
C6 - C10 Fraction	---	10	mg/kg	---	---	<10	---	---
>C10 - C16 Fraction	---	50	mg/kg	---	---	<50	---	---
>C16 - C34 Fraction	---	100	mg/kg	---	---	<100	---	---
>C34 - C40 Fraction	---	100	mg/kg	---	---	<100	---	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	---	---	<50	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	---	68.4	95.5	79.5	92.5
2-Chlorophenol-D4	93951-73-6	0.1	%	---	91.6	95.8	81.6	94.0
2,4,6-Tribromophenol	118-79-6	0.1	%	---	57.5	81.8	66.0	67.5
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	---	57.5	56.0	50.4	53.7
Anthracene-d10	1719-06-8	0.1	%	---	153	69.5	67.0	90.0
4-Terphenyl-d14	1718-51-0	0.1	%	---	77.4	82.9	74.5	78.0
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	---	91.0	---	---
Toluene-D8	2037-26-5	0.1	%	---	---	102	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	---	---	98.1	---	---



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				C8-4	D6-3	E5-2	E7-2	E9-3
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit	EB1211719-006	EB1211719-007	EB1211719-008	EB1211719-009	EB1211719-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	—	1.0	%	19.0	21.2	12.8	19.4	23.7
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<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
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<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
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<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
^ Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	—	—	<10	—	—
C10 - C14 Fraction	—	50	mg/kg	—	—	<50	—	—
C15 - C28 Fraction	—	100	mg/kg	—	—	<100	—	—
C29 - C36 Fraction	—	100	mg/kg	—	—	<100	—	—
^ C10 - C36 Fraction (sum)	—	50	mg/kg	—	—	<50	—	—
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	—	10	mg/kg	—	—	<10	—	—
>C10 - C16 Fraction	—	50	mg/kg	—	—	<50	—	—
>C16 - C34 Fraction	—	100	mg/kg	—	—	<100	—	—
>C34 - C40 Fraction	—	100	mg/kg	—	—	<100	—	—
^ >C10 - C40 Fraction (sum)	—	50	mg/kg	—	—	<50	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	83.6	86.0	—	81.1	94.5
2-Chlorophenol-D4	93951-73-6	0.1	%	85.0	87.0	—	92.5	108
2,4,6-Tribromophenol	118-79-6	0.1	%	49.4	56.3	—	118	151
EP075(SIM)T: PAH Surrogates								

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 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Analytical Results

Sub-Matrix: SOIL

				Client sample ID	C8-4	D6-3	E5-2	E7-2	E9-3
				Client sampling date / time	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1211719-006	EB1211719-007	EB1211719-008	EB1211719-009	EB1211719-010
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.1	%		50.7	51.7	—	107	104
Anthracene-d10	1719-06-8	0.1	%		87.3	89.4	—	72.2	79.2
4-Terphenyl-d14	1718-51-0	0.1	%		88.8	92.5	—	64.0	70.0
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		—	—	95.2	—	—
Toluene-D8	2037-26-5	0.1	%		—	—	112	—	—
4-Bromofluorobenzene	460-00-4	0.1	%		—	—	104	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	E10-4	F5-4	B5-2	B8-2	C2-1
				17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	18-APR-2012 15:00
				EB1211719-011	EB1211719-012	EB1211719-013	EB1211719-014	EB1211719-015
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	---	1.0	%	27.3	21.4	---	---	---
EN33: TCLP Leach								
Initial pH	---	0.1	pH Unit	---	---	8.8	7.7	9.7
After HCl pH	---	0.1	pH Unit	---	---	1.7	1.7	1.7
Extraction Fluid Number	---	1	-	---	---	1	1	1
Final pH	---	0.1	pH Unit	---	---	5.0	4.9	6.3
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	---	---	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	---	---	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	---	---	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	---	---	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	---	---	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	---	---	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	---	---	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	---	---	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	---	---	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	---	---	---
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	---	---	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	---	---	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	---	---	---
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	---	---	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	---	---	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	---	---	---
^ Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	85.0	95.0	---	---	---
2-Chlorophenol-D4	93951-73-6	0.1	%	97.1	108	---	---	---
2,4,6-Tribromophenol	118-79-6	0.1	%	120	125	---	---	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	100	108	---	---	---
Anthracene-d10	1719-06-8	0.1	%	73.8	75.8	---	---	---
4-Terphenyl-d14	1718-51-0	0.1	%	65.3	66.6	---	---	---

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 Project : 011-165C



Analytical Results

Sub-Matrix: SOIL

				Client sample ID	C701	D10-2	E7-1	F5-3	F7-1
				Client sampling date / time	18-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00	17-APR-2012 15:00
Compound	CAS Number	LOR	Unit		EB1211719-016	EB1211719-017	EB1211719-018	EB1211719-019	EB1211719-020
EN33: TCLP Leach									
Initial pH	---	0.1	pH Unit		7.6	8.4	7.9	8.7	7.6
After HCl pH	---	0.1	pH Unit		1.7	1.7	1.7	1.7	1.7
Extraction Fluid Number	---	1	-		1	1	1	1	1
Final pH	---	0.1	pH Unit		4.9	5.0	4.9	5.3	5.0

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Analytical Results

Sub-Matrix: TCLP LEACHATE

				Client sample ID				
				Client sampling date / time	B5-2	B8-2	C2-1	C701
					04-MAY-2012 14:00	04-MAY-2012 14:00	04-MAY-2012 14:00	04-MAY-2012 14:00
					EB1211719-013	EB1211719-014	EB1211719-015	EB1211719-016
Compound	CAS Number	LOR	Unit					
EG005C: Leachable Metals by ICPAES								
Chromium	7440-47-3	0.1	mg/L		—	—	<0.1	—
Lead	7439-92-1	0.1	mg/L		—	0.2	—	0.1
Zinc	7440-66-6	0.1	mg/L		—	2.6	—	1.1
EG035C: Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0010	mg/L		<0.0010	—	<0.0010	—

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Analytical Results

Sub-Matrix: TCLP LEACHATE

				Client sample ID				
				Client sampling date / time	E7-1	F5-3	F7-1	
					04-MAY-2012 14:00	04-MAY-2012 14:00	04-MAY-2012 14:00	
					EB1211719-018	EB1211719-019	EB1211719-020	
Compound	CAS Number	LOR	Unit					
EG005C: Leachable Metals by ICPAES								
Cadmium	7440-43-9	0.05	mg/L		---	---	0.05	---
Lead	7439-92-1	0.1	mg/L		<0.1	0.4	0.9	---
Zinc	7440-66-6	0.1	mg/L		0.7	2.8	92.0	---

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Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	34.8	154.5
2-Chlorophenol-D4	93951-73-6	41.9	152.8
2,4,6-Tribromophenol	118-79-6	26.0	156.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	33.8	156.5
Anthracene-d10	1719-06-8	36.9	153.1
4-Terphenyl-d14	1718-51-0	41.8	172.2
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	126.6

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QUALITY CONTROL REPORT

Work Order : **EB1211719** Page : 1 of 9

Client : **BUTLER PARTNERS PTY LTD** Laboratory : **Environmental Division Brisbane**

Contact : **sch4p4(6) Personal in** Contact : **sch4p4(6) Persona**

Address : **P O BOX 2267** Address : **32 Shand Street Stafford QLD Australia 4053**

FORTITUDE VALLEY BC QLD, AUSTRALIA 4006

E-mail : **sch4p4@butlerpartners.com.au** E-mail : **sch4p4(6) Personalsenviro.com**

Telephone : **+61 07 38523800** Telephone : **61-7-32437222**

Facsimile : **+61 07 38523808** Facsimile : **61-7-32437218**

Project : **011-165C** QC Level : **NEPM 1999 Schedule B(3) and ALS QCS3 requirement**

Site : **Bowen Hills RNA**

C-O-C number : **011-165C/1** Date Samples Received : **02-MAY-2012**

Sampler : **sch4p4(6) Pers** Issue Date : **14-MAY-2012**

Order number : **5372** No. of samples received : **20**

Quote number : **BN/205/12** No. of samples analysed : **20**

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
sch4p4(6) Persona	Inorganic Coordinator	Brisbane Inorganics
	Laboratory Coordinator	Brisbane Inorganics
	Laboratory Coordinator	Brisbane Organics
	Senior Inorganic Chemist	Brisbane Inorganics

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Work Order : EB1211719
Client : BUTLER PARTNERS PTY LTD
Project : 011-165C



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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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

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: 2286212)									
EB1211719-004	A6-3	EA055-103: Moisture Content (dried @ 103°C)	—	1.0	%	22.1	22.7	2.9	0% - 20%
EB1211719-011	E10-4	EA055-103: Moisture Content (dried @ 103°C)	—	1.0	%	27.3	26.7	2.4	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 2294469)									
EB1211401-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
EB1211922-005	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	7	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2294470)									
EB1211401-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1211922-005	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2285111)									
EB1211594-021	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

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 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2285111) - continued									
EB1211594-021	Anonymous	EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1211719-012	F5-4	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2285110)							
EB1211594-021	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 Petroleum Hydrocarbons (QC Lot: 2285123)									
EB1211719-003	E5-3	EP080: C6 - C9 Fraction	—	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2285110)									
EB1211594-021	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2285123)									
EB1211719-003	E5-3	EP080: C6 - C10 Fraction	—	10	mg/kg	<10	<10	0.0	No Limit
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 (%)
EG005C: Leachable Metals by ICPAES (QC Lot: 2298689)									
EB1211401-001	Anonymous	EG005C: Cadmium	7440-43-9	0.05	mg/L	<0.05	<0.05	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 (%)
EG005C: Leachable Metals by ICPAES (QC Lot: 2298689) - continued									
EB1211401-001	Anonymous	EG005C: Chromium	7440-47-3	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Zinc	7440-66-6	0.1	mg/L	0.5	0.5	0.0	No Limit
EB1211719-020	F7-1	EG005C: Cadmium	7440-43-9	0.05	mg/L	0.05	0.05	0.0	No Limit
		EG005C: Chromium	7440-47-3	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Lead	7439-92-1	0.1	mg/L	0.9	0.9	0.0	No Limit
		EG005C: Zinc	7440-66-6	0.1	mg/L	92.0	90.4	1.8	0% - 20%
EG035C: Leachable Mercury by FIMS (QC Lot: 2292343)									
EB1211588-003	Anonymous	EG035C: Mercury	7439-97-6	0.0010	mg/L	<0.0010	<0.0010	0.0	No Limit

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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

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Recovery Limits (%)
				Concentration		LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2294469)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	102	90	125
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	108	82	110
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	105	89	110
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	107	89	110
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	104	83	109
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	111	86	113
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	105	86	111
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2294470)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	83.6	73	108
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2285111)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	103	66	119
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	107	58	118
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	93.8	60	119
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	104	61	116
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	84.6	60	117
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	77.1	65	115
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	72.7	64	116
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	72.0	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	65.7	56	120
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	77.8	57	119
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	80.1	44	129
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	95.5	48	129
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	96.5	50	121
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	76.3	47	135
EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	85.6	41	134
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	87.6	45	133
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	—	0.5	mg/kg	<0.5	—	—	—	—
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2285110)								
EP071: C10 - C14 Fraction	—	50	mg/kg	<50	312 mg/kg	91.9	60	117
EP071: C15 - C28 Fraction	—	100	mg/kg	<100	500 mg/kg	97.5	71	118
EP071: C29 - C36 Fraction	—	100	mg/kg	<100	—	—	—	—
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2285123)								
EP080: C6 - C9 Fraction	—	10	mg/kg	<10	16 mg/kg	77.0	66	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285110)								

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Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285110) - continued								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	413 mg/kg	97.8	58	117
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	360 mg/kg	91.7	69	113
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285123)								
EP080: C6 - C10 Fraction	---	10	mg/kg	<10	18.5 mg/kg	79.5	66	131
Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EG005C: Leachable Metals by ICPAES (QCLot: 2298689)								
EG005C: Cadmium	7440-43-9	0.05	mg/L	<0.05	0.5 mg/L	102	86	121
EG005C: Chromium	7440-47-3	0.1	mg/L	<0.1	1.0 mg/L	103	86	122
EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	1.0 mg/L	105	83	121
EG005C: Zinc	7440-66-6	0.1	mg/L	<0.1	1.0 mg/L	108	87	127
EG035C: Leachable Mercury by FIMS (QCLot: 2292343)								
EG035C: Mercury	7439-97-6	0.001	mg/L	<0.0010	0.010 mg/L	97.1	81	117

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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

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2294469)							
EB1211405-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	85.3	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	100	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	106	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	101	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	108	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	94.2	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	# Not Determined	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2294470)							
EB1211405-001	Anonymous	EG035T: Mercury	7439-97-6	5.0 mg/kg	74.5	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2285111)							
EB1211719-002	B8-4	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	111	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	99.1	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2285110)							
EB1211719-003	E5-3	EP071: C10 - C14 Fraction	---	312 mg/kg	88.4	70	130
		EP071: C15 - C28 Fraction	---	500 mg/kg	95.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2285123)							
EB1211719-008	E5-2	EP080: C6 - C9 Fraction	---	8 mg/kg	76.0	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285110)							
EB1211719-003	E5-3	EP071: >C10 - C16 Fraction	---	413 mg/kg	97.3	70	130
		EP071: >C16 - C34 Fraction	---	360 mg/kg	87.4	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285123)							
EB1211719-008	E5-2	EP080: C6 - C10 Fraction	---	8 mg/kg	79.0	70	130
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
EG005C: Leachable Metals by ICPAES (QCLot: 2298689)							
EB1211405-001	Anonymous	EG005C: Cadmium	7440-43-9	0.5 mg/L	96.0	70	130
		EG005C: Chromium	7440-47-3	1.00 mg/L	97.9	70	130
		EG005C: Lead	7439-92-1	1.00 mg/L	98.4	70	130
		EG005C: Zinc	7440-66-6	1.00 mg/L	# Not Determined	70	130
EG035C: Leachable Mercury by FIMS (QCLot: 2292343)							
EB1211588-004	Anonymous	EG035C: Mercury	7439-97-6	0.010 mg/L	105	70	130



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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

Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Lim
EG005T: Total Metals by ICP-AES (QCLot: 2294469)										
EB1211405-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	85.3	---	70	130	---	---
		EG005T: Cadmium	7440-43-9	25 mg/kg	100	---	70	130	---	---
		EG005T: Chromium	7440-47-3	50 mg/kg	106	---	70	130	---	---
		EG005T: Copper	7440-50-8	50 mg/kg	101	---	70	130	---	---
		EG005T: Lead	7439-92-1	50 mg/kg	108	---	70	130	---	---
		EG005T: Nickel	7440-02-0	50 mg/kg	94.2	---	70	130	---	---
		EG005T: Zinc	7440-66-6	50 mg/kg	# Not Determined	---	70	130	---	---
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2294470)										
EB1211405-001	Anonymous	EG035T: Mercury	7439-97-6	5.0 mg/kg	74.5	---	70	130	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2285111)										
EB1211719-002	B8-4	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	111	---	70	130	---	---
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	99.1	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2285110)										
EB1211719-003	E5-3	EP071: C10 - C14 Fraction	---	312 mg/kg	88.4	---	70	130	---	---
		EP071: C15 - C28 Fraction	---	500 mg/kg	95.2	---	70	130	---	---
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2285123)										
EB1211719-008	E5-2	EP080: C6 - C9 Fraction	---	8 mg/kg	76.0	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285110)										
EB1211719-003	E5-3	EP071: >C10 - C16 Fraction	---	413 mg/kg	97.3	---	70	130	---	---
		EP071: >C16 - C34 Fraction	---	360 mg/kg	87.4	---	70	130	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2285123)										
EB1211719-008	E5-2	EP080: C6 - C10 Fraction	---	8 mg/kg	79.0	---	70	130	---	---

Sub-Matrix: WATER

Sub-Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Lim
EG005C: Leachable Metals by ICPAES (QCLot: 2298689)										
EB1211405-001	Anonymous	EG005C: Cadmium	7440-43-9	0.5 mg/L	96.0	---	70	130	---	---
		EG005C: Chromium	7440-47-3	1.00 mg/L	97.9	---	70	130	---	---
		EG005C: Lead	7439-92-1	1.00 mg/L	98.4	---	70	130	---	---
		EG005C: Zinc	7440-66-6	1.00 mg/L	# Not Determined	---	70	130	---	---
EG035C: Leachable Mercury by FIMS (QCLot: 2292343)										
EB1211588-004	Anonymous	EG035C: Mercury	7439-97-6	0.010 mg/L	105	---	70	130	---	---

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB1211719	Page	: 1 of 9
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal	Contact	: sch4p4(6) Personal
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@butlerpartners.com.au	E-mail	: sch4p4(6) Personal@alsenviro.com
Telephone	: +61 07 38523800	Telephone	: 61-7-32437222
Facsimile	: +61 07 38523808	Facsimile	: 61-7-32437218
Project	: 011-165C	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Bowen Hills RNA	Date Samples Received	: 02-MAY-2012
C-O-C number	: 011-165C/1	Issue Date	: 14-MAY-2012
Sampler	: sch4p4(6) Personal	No. of samples received	: 20
Order number	: 5372	No. of samples analysed	: 20
Quote number	: BN/205/12		

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



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		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
B7-5, E5-3, C8-4, E5-2, E9-3, F5-4	B8-4, A6-3, D6-3, E7-2, E10-4,	17-APR-2012	----	---	---	03-MAY-2012	01-MAY-2012	✖
Soil Glass Jar - Unpreserved (EA055-103)								
C2-2		18-APR-2012	----	---	---	03-MAY-2012	02-MAY-2012	✖
EG005C: Leachable Metals by ICPAES								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C)								
B8-2, C701, E7-1, F7-1	C2-1, D10-2, F5-3,	04-MAY-2012	11-MAY-2012	31-OCT-2012	✓	11-MAY-2012	31-OCT-2012	✓
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
B7-5		17-APR-2012	11-MAY-2012	14-OCT-2012	✓	11-MAY-2012	14-OCT-2012	✓
EG035C: Leachable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035C)								
B5-2,	C2-1	04-MAY-2012	----	---	---	08-MAY-2012	01-JUN-2012	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
B7-5		17-APR-2012	11-MAY-2012	15-MAY-2012	✓	14-MAY-2012	15-MAY-2012	✓

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Matrix: SOIL

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EN33: TCLP Leach								
Lab Split : Leach for Hg, Cr(VI) and other metal (EN33a) B5-2		17-APR-2012	---	15-MAY-2012	---	04-MAY-2012	15-MAY-2012	✓
Lab Split : Leach for Hg, Cr(VI) and other metal (EN33a) C2-1		18-APR-2012	---	16-MAY-2012	---	04-MAY-2012	16-MAY-2012	✓
Lab Split: Leach for metals excl. Hg (EN33a) B8-2, D10-2, E7-1, F5-3, F7-1		17-APR-2012	---	14-OCT-2012	---	04-MAY-2012	14-OCT-2012	✓
Lab Split: Leach for metals excl. Hg (EN33a) C701		18-APR-2012	---	15-OCT-2012	---	04-MAY-2012	15-OCT-2012	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP071) E5-3, E5-2		17-APR-2012	02-MAY-2012	01-MAY-2012	✗	02-MAY-2012	11-JUN-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) B8-4, E5-3, A6-3, C8-4, D6-3, E7-2, E9-3, E10-4, F5-4		17-APR-2012	02-MAY-2012	01-MAY-2012	✗	02-MAY-2012	11-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) C2-2		18-APR-2012	02-MAY-2012	02-MAY-2012	✓	02-MAY-2012	11-JUN-2012	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080) E5-3, E5-2		17-APR-2012	02-MAY-2012	01-MAY-2012	✗	03-MAY-2012	01-MAY-2012	✗



Quality Control Parameter Frequency Compliance

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

Matrix: SOIL

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

Quality Control Sample Type		Count		Rate (%)		Evaluation	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	3	33.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	2	50.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	2	50.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	2	50.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	9.1	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	5.0	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	3	33.3	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	2	50.0	5.0	✓	ALS QCS3 requirement

Matrix: WATER

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

Quality Control Sample Type		Count		Rate (%)		Evaluation	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Leachable Mercury by FIMS	EG035C	1	5	20.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Leachable Mercury by FIMS	EG035C	1	5	20.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Leachable Mercury by FIMS	EG035C	1	5	20.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Leachable Mercury by FIMS	EG035C	1	5	20.0	5.0	✓	ALS QCS3 requirement

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 Work Order : EB1211719
 Client : BUTLER PARTNERS PTY LTD
 Project : 011-165C



Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Matrix: WATER							
Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Leachable Metals by ICPAES	EG005C	1	20	5.0	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
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).
Leachable Metals by ICPAES	EG005C	SOIL	APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
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)
Leachable Mercury by FIMS	EG035C	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. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the TCLP solution. 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)
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)
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)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	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)
TCLP for Non & Semivolatile Analytes	EN33a	SOIL	(USEPA SW846-1311, ALS QWI-EN/33) The TCLP procedure is designed to determine the mobility of both organic and inorganic analytes present in wastes. The standard TCLP leach is for non-volatile and Semivolatile test parameters.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
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.

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Preparation Methods	Method	Matrix	Method Descriptions
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.

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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
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EB1211405-001	Anonymous	Zinc	7440-66-6	Not Determined	—	MS recovery not determined, background level greater than or equal to 4x spike level.

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005C: Leachable Metals by ICP-AES	EB1211405-001	Anonymous	Zinc	7440-66-6	Not Determined	—	MS recovery not determined, background level greater than or equal to 4x spike level.

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control 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.

Matrix: **SOIL**

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content							
Soil Glass Jar - Unpreserved							
B7-5, E5-3, C8-4, E5-2, E9-3, F5-4	B8-4, A6-3, D6-3, E7-2, E10-4,	—	—	—	03-MAY-2012	01-MAY-2012	2
Soil Glass Jar - Unpreserved							
C2-2		—	—	—	03-MAY-2012	02-MAY-2012	1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							

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Matrix: SOIL

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
B8-4,	E5-3,	02-MAY-2012	01-MAY-2012	1	—	—	—
A6-3,	C8-4,						
D6-3,	E7-2,						
E9-3,	E10-4,						
F5-4							
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved							
E5-3,	E5-2	02-MAY-2012	01-MAY-2012	1	—	—	—
Soil Glass Jar - Unpreserved							
E5-3,	E5-2	02-MAY-2012	01-MAY-2012	1	03-MAY-2012	01-MAY-2012	2
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved							
E5-3,	E5-2	02-MAY-2012	01-MAY-2012	1	—	—	—
Soil Glass Jar - Unpreserved							
E5-3,	E5-2	02-MAY-2012	01-MAY-2012	1	03-MAY-2012	01-MAY-2012	2

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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EB1211719**

Client : BUTLER PARTNERS PTY LTD
Contact : sch4p4(6) Person
Address : P O BOX 2267
 FORTITUDE VALLEY BC QLD,
 AUSTRALIA 4006
E-mail : sch4p4(6) @butlerpartners.com.au
Telephone : +61 38523800
Facsimile : +61 07 38523808
Project : 011-165C
Order number : 5372
C-O-C number : 011-165C/1
Site : Bowen Hills RNA
Sampler : sch4p4(6) Perso

Laboratory : Environmental Division Brisbane
Contact : sch4p4(6) Perso
Address : 32 Shand Street Stafford QLD Australia
 4053
E-mail : sch4p4(6) Perso@alsenviro.com
Telephone : 61-7-32437222
Facsimile : 61-7-32437218
Page : 1 of 3
Quote number : EB2012BUTPAR0330 (BN/205/12)
QC Level : NEPM 1999 Schedule B(3) and ALS
 QCS3 requirement

Dates

Date Samples Received : 02-MAY-2012
Client Requested Due Date : 14-MAY-2012
Issue Date : 02-MAY-2012 19:22
Scheduled Reporting Date : **14-MAY-2012**

Delivery Details

Mode of Delivery : Samples on hand
No. of coolers/boxes : REBATCH
Security Seal : Intact.
Temperature : CHILL
No. of samples received : 20
No. of samples analysed : 20

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: SOIL

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - EG005C Leachable Metals by ICPAES	SOIL - EG035C Leachable Mercury by FIMS	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 & Metals (incl. Digestion)	SOIL - TCLP TCLP Leach	SOIL - TPH only TPH (C6 - C36)
EB1211719-001	17-APR-2012 15:00	B7-5					✓		
EB1211719-002	17-APR-2012 15:00	B8-4	✓			✓			
EB1211719-003	17-APR-2012 15:00	E5-3				✓			✓
EB1211719-004	17-APR-2012 15:00	A6-3	✓			✓			
EB1211719-005	18-APR-2012 15:00	C2-2	✓			✓			
EB1211719-006	17-APR-2012 15:00	C8-4	✓			✓			
EB1211719-007	17-APR-2012 15:00	D6-3	✓			✓			
EB1211719-008	17-APR-2012 15:00	E5-2							✓
EB1211719-009	17-APR-2012 15:00	E7-2	✓			✓			
EB1211719-010	17-APR-2012 15:00	E9-3	✓			✓			
EB1211719-011	17-APR-2012 15:00	E10-4	✓			✓			
EB1211719-012	17-APR-2012 15:00	F5-4	✓			✓			
EB1211719-013	02-MAY-2012 15:00	B5-2			✓				
	17-APR-2012 15:00	B5-2						✓	
EB1211719-014	17-APR-2012 15:00	B8-2		✓				✓	
EB1211719-015	02-MAY-2012 15:00	C2-1		✓	✓				
	18-APR-2012 15:00	C2-1						✓	
EB1211719-016	18-APR-2012 15:00	C701		✓				✓	
EB1211719-017	17-APR-2012 15:00	D10-2		✓				✓	
EB1211719-018	17-APR-2012 15:00	E7-1		✓				✓	
EB1211719-019	17-APR-2012 15:00	F5-3		✓				✓	
EB1211719-020	17-APR-2012 15:00	F7-1		✓				✓	



Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: SOIL

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

Method		Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)	Container			Date	Evaluation	Date	Evaluation
EA055-103: Moisture Content							
A6-3	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
B7-5	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
B8-4	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
C8-4	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
D6-3	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
E10-4	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
E5-2	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
E5-3	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
E7-2	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
E9-3	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
F5-4	Soil Glass Jar - Unpreserved	----	01-MAY-2012	02-MAY-2012	✖	----	----
EP071: TPH - Semivolatile Fraction							
E5-2	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
E5-3	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
EP075(SIM): PAH/Phenols (SIM)							
A6-3	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
B8-4	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
C8-4	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
D6-3	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
E10-4	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
E5-3	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
E7-2	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
E9-3	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
F5-4	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
EP080: TPH Volatiles/BTEX							
E5-2	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----
E5-3	Soil Glass Jar - Unpreserved	01-MAY-2012	----	02-MAY-2012	✖	----	----

Requested Deliverables

sch4p4(6) Persona

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)

Email sch4p4(6) @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au

sch4p4(6) Personal

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- A4 - AU Tax Invoice (INV)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)
- EDI Format - XTab (XTAB)

Email sch4p4 @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au
Email @butlerpartners.com.au

sch4p4(6) Personal information

- A4 - AU Tax Invoice (INV)

Email sch4p4(6) Persu @butlerpartners.com.a
u

☐ For Regional Information & Filing

☒ Regional Action Required

Admin. Office: Contaminated Land Unit, Flr 8 400 George

Project No: 379808

Client No: 615179

EMR/CLR ID No: 91845

Permit No: CLEB02461811

4500m³ lined
6800m³ unlined
380m³ soil treatment

CROW No. AR 015929

Application for Disposal Permit (Contaminated Land) Checklist

App: 481527

☒	Part A and Part B application forms supplied and complete.
☒	Forms signed and dated
☒	All parts of the forms completed
☐	Letter of acceptance from Landfill etc
☐	TPR approval received (if one is appointed for the site (Contaminated Land Unit to action).



Applicant Name: Butler Partners Pty Ltd

Contact Name: sch4p4(6) Personal information

Location: 631 Gregory Tce Bowen Hills lot 701-103 on SP 219236

Third Party Reviewer: (If applicable)

Co-ordinator: Liz James

Date Received:

2 / 12 / 11

Due Date

(10 business days after application deemed valid):

16 / 12 / 11

Date Application Deemed Valid:

2 / 12 / 11

Due Date (TPR)

(5 business days after application deemed valid)

___ / ___ / ___

sch4p4(6) P

Bring Up Details Report

379808 - Movement, Treatment Or Disposal Of Contaminated Soil/631
Gregory Terrace, Bowen Hills/Butler Partners Pty Ltd

Ref:	79509	Created Date:	05-DEC-11
Status:	Submitted	Closed Date:	
Assigned To:	READY, Kelli-Jean	Due Date:	08-DEC-11
Email Address:	Kelli.Ready@derm.qld.gov.au	Reminder Date:	
Project Director:			
Project Manager:			
CC:	sch4p4(6) Personal inform		
CC:			
Subject:	Disposal Permit-App No:481527		
Comments:	<p>Disposal Permit</p> <p>Project Number: 379808 Permit Number: CLEB02461811 TPR Client: Butler Partners Pty Ltd Lot on Plan: Lot 701 & 103 on SP219236 Location: 631 Gregory Terrace, Bowen Hills Report Title: Application Date: 2/12/2011</p> <p>Dear Kelli,</p> <p>A Disposal Permit application has been received and entered into Ecotrack</p> <p>The application will be forwarded to Contaminated Land Unit on the 5/12/11.</p> <p>Regards,</p> <p>Liz James</p>		



Project Running Report

Project Ref 379808	Project Name Movement, Treatment Or Disposal Of Contaminated Soil/631 Gregory Terrace, Bowen Hills/Butler Partners Pty Ltd	Status Active	Project Director READY, Kelli-Jean	Project Manager NOT, Allocated	Office Responsible ES - TO - Contaminated Land - Southern - Bne
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Assessing Officers

Name

RITCHIE, Paul
LUCKE, Gavin

Applications: 1

Date 02-DEC-2011	Status Application Validation	Decision Level 2
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Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Butler Partners Pty Ltd	79 Doggett Street		NEWSTEAD	4006	QLD

Primary Contact

Name	Contact Number
Butler Partners Pty Ltd	07 3852 3800

Activities

Name
Movement, Treatment Or Disposal Of Contaminated Soil

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
631 Gregory Terrace, Bowen Hills					

Agency Interests/Ratings

Category	Type	Rating
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Permits: 1

Permit Ref	Permit Type	Status
CLEB02461811	Contaminated Soil Disposal Permit	Assessment



BUTLER
PARTNERS

Butler Partners Pty Ltd
ABN 14 816 574 868
79 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au

Document Transmittal

Delivered by:

Delivered to:	DERM	☒	Courier
Attention:	PALM	☐	Post
Address:	Floor 3, 400 George Street	☐	In Person
	BRISBANE QLD 4000	☐	Collected
Delivered to:		☐	Courier
Attention:		☐	Post
Address:		☐	In Person
		☐	Collected

Sub Project No:	011-165B
Project Description:	Application for Disposal Permit
Project Title:	RNA Showgrounds Redevelopment - Enabling Works
Address:	St Pauls Terrace BOWEN HILLS

Details:	<u>DISPOSAL PERMIT LETTER APPLICATION</u>	RECEIVED
	1 x Final Letter Application for Disposal Permit	02 DEC 2011
		PaLM

- | | |
|--|---|
| ☐ Project Completed | ☐ Being Returned |
| ☒ For Your Records/Information | ☐ As Requested by: |
| ☐ For Your Approval/Comments | ☐ To Be Checked and Returned |

Signed: sch4p4(6) Per

Date: 30 November 2011



Project No. 011-165B

30 November 2011

Department of Environment and Resource Management
C/- Permit and Licensing Management
GPO Box 2454
Brisbane QLD 4001

Email: paul.richie@derm.qld.gov.au

Attention: Mr P Richie

RECEIVED

02 DEC 2011

PERM

Dear Paul

**RE: APPLICATION FOR DISPOSAL PERMIT
RNA SHOWGROUNDS REDEVELOPMENT - ENABLING WORKS
ST PAULS TERRACE, BOWEN HILLS**

In accordance with the requirements of an application for disposal permit the following information is presented regarding the site.

1.0 BACKGROUND

It is understood that it is proposed to install stormwater culverts through the RNA Showgrounds site from Water Street through to St Pauls Terrace. The proposed alignment comprises an 'L' shaped linear alignment running in a north easterly direction from Water Street before turning 90 degrees and heading in a south easterly direction towards St Pauls Terrace.

Investigations on the site have previously been undertaken by Golder Associates and Butler Partners Pty Ltd (Butler Partners) to characterise site soil material within the proposed alignment requiring excavation. Results of the investigations identified fill material with concentrations of polycyclic aromatic hydrocarbons (PAH), heavy metals (cadmium, chromium, lead, mercury, nickel and zinc) and organochlorine pesticides (DDT) above the adopted clean fill criteria. Previous investigations by Golder Associates were conducted over the wider RNA site, generally outside the stormwater alignment and as such, results from Butler Partners have been used to characterise soil material for off site disposal.

2.0 REAL PROPERTY DESCRIPTION

The property description covering the area of the site in this application is Lot 701 on SP219236 and Lot 103 on SP219236.

At the time of this application both lots were listed on the Environmental Management Register (EMR).

RNA Showgrounds Redevelopment - Enabling Works
St Pauls Terrace, Bowen Hills
Project No.: 011-165B
30 November 2011

3.0 INVESTIGATION AND SAMPLING METHODS

Fieldwork was undertaken between 9 November 2011 and 17 November 2011 and comprised test pitting at twenty four test locations. Test pits were excavated using either a Cat 304 4 tonne excavator or a 35 tonne Cat excavator. Test pits were advanced to the proposed excavation depth, with strata identification and soil samples taken from materials brought to the surface in the excavator bucket. In general, soil samples were taken from each 0.5m depth interval and/or from each strata unit down the soil profile to characterise soil materials at an approximate rate of 1 sampler per 50m³. Sample locations are shown on Drawing No. 1 Rev A.

A total of one hundred and fifty four primary soil samples and eight sets of duplicate (blind and split) soils samples were collected for analysis. Samples were analysed for a selection of PAH, benzene, toluene, ethyl benzene and xylenes (BTEX), total petroleum hydrocarbons (TPH), organochlorine pesticides (OCPs) and heavy metals, with selected samples submitted for Toxicity Characteristic Leaching Procedure (TCLP).

To minimise the potential for cross contamination of samples, each sample was collected by hand using disposable gloves, which were replaced between the collection of each sample. Samples were placed immediately into laboratory prepared jars that were sealed, labelled with a unique identifier and placed into a chilled ice chest. Each sample was recorded on a chain of custody register, which was used to track the movement of the samples. The samples remained in the chilled ice chest and were transported to the analytical laboratories for analysis.

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) METHODS

All primary and duplicate soil samples were sent to Analytical Australia (AAA) and Australian Laboratory Services (ALS) with appropriate Chain of Custody forms. Duplicate samples were collected at a rate of three sets of duplicate samples for fifty seven primary samples which complies with the requirement of one set per twenty samples analysed.

Both laboratories employed accepted industry QA/QC procedures including the analysis of duplicate samples, spike samples and equipment blanks. To prevent transcription errors, the laboratory results were downloaded electronically. A copy of the laboratory results are attached to this letter.

5.0 DISPOSAL QUANTITIES

Disposal quantities have been assessed based on discussions with Veolia Environmental Services (Veolia) who have reviewed and assessed the data provided. A copy of the landfill acceptance letter is attached to this application. Soil disposal volumes have been calculated based on the lateral and vertical extent of contaminated fill material to determine an approximate volume of in-situ contamination. A bulking factor of 1.4 was then applied to the in-situ volumes to allow for calculation of ex-situ volumes.

The material has been deemed acceptable for disposal to unlined landfill located at Veolia's Wattle Glenn landfill disposal site, lined landfill at Veolia's Ti-Tree bioenergy disposal site and heavy metal treatment and lined disposal at Ti-Tree. As such, the estimated quantity for disposal of materials from the site is as follows:

RNA Showgrounds Redevelopment - Enabling Works
 St Pauls Terrace, Bowen Hills
 Project No.: 011-165B
 30 November 2011

Disposal Destination	Estimated In-situ Volume (m ³)	Estimated Bulk Volume (m ³)
Unlined Landfill Disposal (Wattle Glenn)	4,850	6,800
Lined Landfill Disposal (Ti-Tree)	3,250	4,500
Treatment (heavy metals) (Ti-Tree)	270	380
Total		11,680

On this basis, a Soil Disposal Permit for the disposal of 11,680m³ (bulk) is required.

The classification of the proposed disposal destinations are identified on Drawing No. 3 Rev A (attached), with depths of contamination indicated. In addition to the volumes presented on Drawing No. 3 Rev A, minor works conducted at the site prior to the current assessment resulted in the stockpiling of a small volume of soil material. This material has been stored in metal skip bins or in covered soil stockpiles and equates to approximately 30m³ of soil material requiring treatment, approximately 300m³ of soil material for unlined landfill disposal and approximately 200m³ of soil material for lined landfill disposal.

We trust this provides the information you require in order to review and assess this application. If you have any queries please do not hesitate to contact the undersigned.

Yours faithfully

BUTLER PARTNERS PTY LTD

sch4p4(6) Personal informa

Associate

Enc: DERM Application Forms A & B
 Current Land Titles
 Test Pit Logs with Explanatory Notes
 Table 2 - Analytical Results for Soils
 Table 3 - TCLP Results for Soils
 Laboratory Documentation
 Drawing No. 1 Rev A
 Drawing No. 3 Rev A
 Landfill Acceptance Letter

Application Form

Part A

General details for all applications

OFFICIAL USE ONLY

DATE RECEIVED

FILE REF

PROJECT REF

COMPLETE FORM

☐

ENTERED BY (SIGNATURE)

DATE

RECEIPTING DETAILS ONLY

DATE RECEIPTED

RECEIPT NUMBER

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

GUIDE

1. The applicant is the person intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the address of a person and cannot be a post office box.

If more than one applicant as part of a partnership, complete the "Joint applicant details" form and attach to this PART A form.

Important information for applicants

This form asks for general applicant details and a description of the proposed project and any associated activities. The completed form must be submitted together with relevant activity specific [Part B] forms.

Specific details must accompany this form to enable your application to be processed. The guide provided will help you complete your application correctly. If you have any difficulties completing the form, contact Permit and Licence Management on 1300 130 372. Please number all attachments alphabetically (e.g. 'Attachment A').

(Commercial and confidential information must be marked clearly. If subsequent activities are added to the project, you will be required to resubmit this application with details of the additional activity).

Tick relevant boxes below if the applicant(s) are:

- ☐ an individual or sole trader
- ☐ individuals in a partnership
- ☐ individual(s) acting on behalf of an unincorporated organisation

→ Go to Section 1

- ☒ an incorporated company
- ☐ an incorporated association
- ☐ a statutory authority
- ☐ a body politic

→ Go to Section 2

1. Individual applicant(s) details⁽¹⁾

APPLICANT'S FULL NAME		TITLE	DATE OF BIRTH
REGISTERED ADDRESS			POST CODE
TELEPHONE	FACSIMILE	E-MAIL	
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)			POST CODE

RECEIVED
02 DEC 2011
PALM

Application form – Part A

General details for all applications

Guardian details (if applicable)

A parent or legal guardian must complete the following details if an applicant is under 18 years of age.

GUARDIAN'S FULL NAME	DATE OF BIRTH
GUARDIAN'S REGISTERED ADDRESS	POST CODE
GUARDIAN'S SIGNATURE	DATE

→ Go to Section 3

2. Applicant details

2. The applicant is the registered legal entity (not a business trading name) intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the registered business address of the company making the application and cannot be a post office box.

Enter the Australian Business Number (ABN); or the Australian Company Number (ACN) of the incorporated company; or the Association Number (AN) of the incorporated association; or the title and section of the legislation that gives the statutory corporation its legal status.

REGISTERED LEGAL ENTITY NAME Butler Partners Pty Ltd		
TRADING NAME (IF APPLICABLE)		
REGISTERED ADDRESS 79 Doggett Street Newstead QLD		POST CODE 4006
TELEPHONE (07) 3852 3800	FASCIMILE (07) 3852 3808	E-MAIL/WEBSITE www.butlerpartners.com.au
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) PO BOX 2267 Fortitude Valley BC		POST CODE 4006
ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION 14 816 574 868		

Application form – Part A

General details for all applications

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME sch4p4(6) Personal information		TITLE
POSITION IN CORPORATION Associate		
TELEPHONE (07) 3852 3800	FASCIMILE (07) 3825 3808	E-MAIL/WEBSITE sch4p4(6) Pputlerpartners.co m.au
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) as above		POST CODE

Authorised signatory

The authorised signatory is the person authorised to sign an application on behalf of a corporation and in doing so declares that the corporation will be bound by the conditions associated with the granting of the licence or permit.

AUTHORIZED SIGNATORY FULL NAME sch4p4(6) Personal information	TITLE
POSITION IN CORPORATION Associate	

3. Project details

Pre-lodgement

Have you previously attended a pre-lodgement meeting or submitted a pre-lodgement form for this project?

☒ NO ☐ YES

PROJECT NUMBER (IF APPLICABLE)

Project description

Briefly describe the proposed activities, works, development or management. Attach a separate sheet if there is insufficient space below.

DESCRIPTION Stormwater culvert excavation
--

Approvals required

Please list all Part B application forms you are attaching to this form.

APPLICATION FORMS

Part B - Contaminated Soil Disposal application

Project site

Where will the activities be conducted? Provide the street address, real property description(s) of the land(s) in which the project is located and local government area. If you require more space, attach a separate sheet.

STREET ADDRESS

Lot 701 on SP219236 and Lot 103 on SP219236

LOT

as above

PLAN

as above

LOCAL GOVERNMENT AREA

Brisbane City Council

This information should at least provide enough details to allow a Department of Environment and Resource Management officer to locate the site of the proposal.

If possible, provide a specific location within a protected area, a property name or an attached map with the project area clearly delineated. Also include the map name/details.

SPECIFIC LOCATION/PROPERTY NAME

PROTECTED AREA

GEOGRAPHICAL CO-ORDINATES

Give as much information as possible to accurately locate your activity, for example maps with contextual or boundary lines on plan or GPS boundary co-ordinates.

Geographical co-ordinates can include northing/easting, longitude/latitude.

Attachments

List all attached documents, including maps containing information supporting this application in the space below. If there are no attachments mark "N/A."

Label all attachments alphabetically (e.g. 'Attachment A')

ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY – E.G. "ATTACHMENT A")

Application Form B, Application Covering Letter, Landfill acceptance letter, Drawing No. 1 Rev A, Drawing No. 3 Rev A, Table 2, Table 3, laboratory documentation, bore logs with explanatory notes, Certificates of Title, Registered Plan

4. Applicant's certification

Note: If you have not told the truth in this application you may be liable for prosecution under the relevant Acts or Regulations.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge.
- I understand that information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT(1) SIGNATURE	sch4p4(6) Personal in
------------------------	------------------------

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE 30.11.11

Complete the following checklist.

- ☒ Application form(s) signed and completed
- ☐ Permit fees paid or enclosed (if applicable)
- ☒ Supporting information attached (e.g. maps)

Please return your completed application to:

Permit and Licence Management
Implementation Support Unit
Department of Environment and Resource Management
GPO Box 2454
Brisbane Queensland 4001

Enquiries: 1300 130 372
Facsimile: (07) 3896 3342
Email: palm@derm.qld.gov.au

Application form

Environmental Protection Act

Application for contaminated soil disposal permit – Part B

This form sets out the specific details required for an application under s424 of the Environmental Protection Act 1994 for a permit to dispose of contaminated soil offsite. A contaminated soil disposal permit is required before you can proceed lawfully with your project and any associated activities.

1. Specific information requirements

1.1 Please provide details of site(s) from which soil is to be removed

If you require additional space, attach the information requested and make reference to that sheet here.

FULL STREET ADDRESS OF SITE(S) Lot 701 on SP219236 and Lot 103 on SP219236	
LOT(S) as above	PLAN(S) as above
LOCAL GOVERNMENT AREA Brisbane City Council	

1.2 Has a site investigation report been submitted to the Department of Environment and Resource Management (DERM)?

☒ NO

☐ YES

DERM PROJECT REFERENCE OR FILE NUMBER? (IF KNOWN)

1.3 Please provide a copy of the current Certificate of Title to the land

☒ ENCLOSED WITH THIS APPLICATION

☐ SUBMITTED PREVIOUSLY TO EPA AS PART OF A SITE INVESTIGATION / VALIDATION REPORT

1.4 Has the site been used for a notifiable activity as per Schedule 3 of the *Environmental Protection Act 1994*?

☐ NO

☒ YES (PLEASE SPECIFY) HAZARDOUS CONTAMINANT

1.5 Is the site presently being used for a notifiable activity?

☒ NO

☐ YES (PLEASE SPECIFY)

1.6 Is the site currently on the Environmental Management Register or Contaminated Land Register?

☒ YES ☐ NO (IF NO, YOU MUST SUBMIT A NOTIFICATION FORM TO THE DERM)

1.7 Has contaminated soil been removed from this site in the past?

☒ NO (GO TO QUESTION 19) ☐ YES

1.8 Was approval for off-site disposal obtained?

☐ NO ☐ YES

1.9 What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)?

4,500m³ for disposal to lined landfill disposal
380m³ for disposal to treatment for heavy metals

1.10 How did you calculate the volume of soil to be removed?

Based on in-situ estimate of contaminated material

1.11 What are the dates between which soil will be moved to the disposal location?

FROM DATE: 12 December 2011	TO DATE: 12 June 2012
--------------------------------	--------------------------

(In accordance with Section 424(7), permits will only be valid between dates stipulated in the disposal permit)

1.12 Justification of request?

State reason(s) why on-site treatment or management is not proposed

Material excess to site use - stormwater culvert excavation

1.13 Will validation sampling be undertaken to confirm that all soil has been removed?

☐ NO ☒ YES

1.14 Provide a description of the contamination present in the soil to be removed?

Total PAH (181.2mg/kg), benzo(a)pyrene (15.9mg/kg), DDT (0.48mg/kg), Cd (32mg/kg), Pb (3,000mg/kg), Hg (5mg/kg), Ni (110mg/kg), Zn (5,600mg/kg)

1.15 Please tick relevant boxes to indicate that you have attached the following information with this application?

- ☒ Scaled plan showing soil sampling locations and contamination source(s)
- ☒ Tabulation of soil analysis results
- ☒ Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples
- ☒ Laboratory reports and sample receipt advices for all soil analysis
- ☒ Explanation of location and depths of samples, how samples were collected, and how sample integrity was maintained

1.16 Written acceptance from owner of site receiving contaminated soil?

- (a) ☐ Soil being removed to a local government administered landfill

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

- ☐ **Written acceptance from local government authority is enclosed**

- (b) ☒ Soil being removed not going to a local government-administered landfill

- ☐ Copy of Certificate of Title for the disposal location site

LOT(S) 3 and 8	PLAN(S) SP168875 and RP24574
FULL STREET ADDRESS OF SITE(S) 55 Champions Way, Willowbank, Queensland 4306	

- ☒ Written acceptance from registered owner of site is enclosed with this application

Declaration

Note: If you do not tell the truth in this application you may be liable for prosecution under the relevant legislation.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge. I understand that it is an offence under s480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

Application form – Part B
Contaminated soil disposal permit

APPLICANT'S NAME BUTLER PARTNERS PTY LTD	PRINT NAME OF APPOINTED SIGNATORY (IF APPLICABLE) sch4p4(6) Personal
APPLICANT'S SIGNATURE / APPOINTED SIGNATORY sch4p4(6) Personal infor	DATE 30.11.11

Applicant checklist

- ☒ Application form(s) completed and signed
- ☒ Supporting information attached (if applicable)

Please return your completed application kit to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Resource Management
GPO Box 2454
Brisbane Queensland 4001

Enquiries: **1300 130 372**
Facsimile: (07) 3896 3342
palm@derm.qld.gov.au

You may apply for an exemption from disclosing information contained in a document submitted, or proposed to be submitted with this application (see Section 564 of the *Environmental Protection Act 1994*).

Application form

Environmental Protection Act

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This form sets out the specific details required for an application under s424 of the Environmental Protection Act 1994 for a permit to dispose of contaminated soil offsite. A contaminated soil disposal permit is required before you can proceed lawfully with your project and any associated activities.

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FULL STREET ADDRESS OF SITE(S) Lot 701 on SP219236 and Lot 103 on SP219236	
LOT(S) as above	PLAN(S) as above
LOCAL GOVERNMENT AREA Brisbane City Council	

1.2 Has a site investigation report been submitted to the Department of Environment and Resource Management (DERM)?

☒ NO ☐ YES DERM PROJECT REFERENCE OR FILE NUMBER? (IF KNOWN)

1.3 Please provide a copy of the current Certificate of Title to the land

☒ ENCLOSED WITH THIS APPLICATION ☐ SUBMITTED PREVIOUSLY TO EPA AS PART OF A SITE INVESTIGATION / VALIDATION REPORT

1.4 Has the site been used for a notifiable activity as per Schedule 3 of the *Environmental Protection Act 1994*?

☐ NO ☒ YES (PLEASE SPECIFY) HAZARDOUS CONTAMINANT

1.5 Is the site presently being used for a notifiable activity?

☒ NO ☐ YES (PLEASE SPECIFY)

1.6 Is the site currently on the Environmental Management Register or Contaminated Land Register?

☒ YES ☐ NO (IF NO, YOU MUST SUBMIT A NOTIFICATION FORM TO THE DERM)

1.7 Has contaminated soil been removed from this site in the past?

☒ NO (GO TO QUESTION 19) ☐ YES

1.8 Was approval for off-site disposal obtained?

☐ NO ☐ YES

1.9 What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)?

6,800m3 for disposal to unlined landfill

1.10 How did you calculate the volume of soil to be removed?

Based on in-situ estimate of contaminated material

1.11 What are the dates between which soil will be moved to the disposal location?

FROM DATE:
12 December 2011

TO DATE:
12 June 2012

(In accordance with Section 424(7), permits will only be valid between dates stipulated in the disposal permit)

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State reason(s) why on-site treatment or management is not proposed

Material excess to site use - stormwater culvert excavation

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☐ NO ☒ YES

1.14 Provide a description of the contamination present in the soil to be removed?

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- ☒ Scaled plan showing soil sampling locations and contamination source(s)
- ☒ Tabulation of soil analysis results
- ☒ Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples
- ☒ Laboratory reports and sample receipt advices for all soil analysis
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- (a) ☐ Soil being removed to a local government administered landfill

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

- ☐ **Written acceptance from local government authority is enclosed**

- (b) ☒ Soil being removed not going to a local government-administered landfill

- ☐ Copy of Certificate of Title for the disposal location site

LOT(S) 288 1	PLAN(S) S31235 RP885033
FULL STREET ADDRESS OF SITE(S) 5HALLETS RD/PATRICK ST & GREENWOOD VILLAGE RD, RED BANK PLAINS (WATTLE GLEN)	

- ☒ Written acceptance from registered owner of site is enclosed with this application

Declaration

Note: If you do not tell the truth in this application you may be liable for prosecution under the relevant legislation.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge. I understand that it is an offence under s480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

Application form – Part B
Contaminated soil disposal permit

APPLICANT'S NAME BUTLER PARTNERS PTY LTD	PRINT NAME OF APPOINTED SIGNATORY (IF APPLICABLE) sch4p4(6) Person
APPLICANT'S SIGNATURE / APPOINTED SIGNATORY sch4p4(6) Personal in	DATE 30.11.11

Applicant checklist

- ☒ Application form(s) completed and signed
- ☒ Supporting information attached (if applicable)

Please return your completed application kit to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Resource Management
GPO Box 2454
Brisbane Queensland 4001

Enquiries: **1300 130 372**
Facsimile: (07) 3896 3342
palm@derm.qld.gov.au

You may apply for an exemption from disclosing information contained in a document submitted, or proposed to be submitted with this application (see Section 564 of the *Environmental Protection Act 1994*).

Resource Recovery Services
Queensland

December 01, 2011

Ref: RRS - REM - 1031A1

Unlined Landfill Disposal

Buttler Partners Pty Ltd
79 Doggett Street
Fortitude Valley PO Box 2267

Attention: sch4p4(6) Pers

Reference: **UNLINED LANDFILL DISPOSAL AT WATTLE GLEN LANDFILL OF 6,800m³ OF
CONTAMINATED MATERIALS FROM THE RNA SHOWGROUNDS PROJECT
SITUATED AT ST PAULS TERRACE (LOT 701 ON SP219236 AND LOT 103 ON
SP219236) FORTITUDE VALLEY QLD**

Dear sch4p4(

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Buttler Partners Pty Ltd. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 6800m³ in volume (approximately), is acceptable for Unlined Landfill Disposal at our Wattle Glen Landfill Facility.

Site: Wattle Glen Landfill
Description: Hallets Road, Patrick Street and Greenwood Village Road
Redbank Plains, Queensland 4031.
RP Address: Lot 288 on S31235 and Lot 1 on RP885033,
County of Stanley, Parish of Bundamba.

DA Number: ENRE00975309, ERA 33, ERA 60 2(h) & ERA 62

Site Address: Hallets Road, Redbank Plains, Queensland 4031.
Lot 1 Plan SP231458; Lot 288 Plan SP231458; & Lot 1 Plan SP135673.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.



Veolia Environmental Services (Australia) Pty Ltd
166 Boundary Road, Rocklea, QLD 4106 - tel +61 (0) 4 3275 0111 - fax +61 (0) 4 3275 0101
www.veolia.com.au ABN 20 051 316 584





Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

sch4p4(6) Personal informati

Remediation Services Manager

Tel: 07 3275 0154

Mob: sch4p4(6) Pers

Fax: 07 3275 0101

emial: sch4p4(6) Persveolia.com.au

qld.remediation@veolia.com.au



[illegible]

converting waste into clean energy



TI TREE
bioENERGY

A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

December 01, 2011

Ref: RRS - REM - 1031A1

Lined Landfill Disposal

Buttler Partners Pty Ltd
79 Doggett Street
Fortitude Valley PO Box 2267

Attention: sch4p4(6) Pers

Reference: **LINED LANDFILL DISPOSAL AT TI TREE BIOENERGY OF 4,500m³ OF
CONTAMINATED MATERIALS FROM THE RNA SHOWGROUNDS PROJECT
SITUATED AT ST PAULS TERRACE (LOT 701 ON SP219236 AND LOT 103 ON
SP219236) FORTITUDE VALLEY QLD**

Dea sch4p4(

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Buttler Partners Pty Ltd. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 4500m³ in volume (approximately), is acceptable for Lined Landfill Disposal at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY
Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.
RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.
DA Number: ENRE01296010, ERA 60 1(d)
Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.



Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

sch4p4(6) Personal inform

Remediation Services Manager

Tel: 07 3275 0154

Mob: sch4p4(6) Pe

Fax: 07 3275 0101

emial: sch4p4(6) Persveolia.com.au

qld.remediation@veolia.com.au

[illegible]

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Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
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December 01, 2011

Ref: RRS - REM - 1031A1

Soil Treatment

Buttler Partners Pty Ltd
79 Doggett Street
Fortitude Valley PO Box 2267

Attention: sch4p4(6) Pers

Reference: **SOIL TREATMENT AT TI TREE BIOENERGY OF 380m³ OF
CONTAMINATED MATERIALS FROM THE RNA SHOWGROUNDS PROJECT
SITUATED AT ST PAULS TERRACE (LOT 701 ON SP219236 AND LOT 103 ON
SP219236) FORTITUDE VALLEY QLD**

Dear sch4p4

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Buttler Partners Pty Ltd. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 380m³ in volume (approximately), is acceptable for Soil Treatment at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY

Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.

RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: ENRE01296010, ERA 60 1(d)

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP168875; & Lot 8 Plan RP24574.

Access Code:

0

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Unmanned Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery drivers will need to unload at the site.



Acceptance is subject to the following conditions:

1. Each materials in each load are to be appropriately managed to eliminate dust generation and loss, this is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Resource Management (Qld DERM) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this processes is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the site's weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

sch4p4(6) Personal informat

Remediation Services Manager

Tel: 07 3275 0154

Mob: sch4p4(6) Pe

Fax: 07 3275 0101

emial: sch4p4(6) Pers@veolia.com.au

qld.remediation@veolia.com.au

[illegible]

Jodi Whittaker

From: sch4p4(6) Personal
Sent: Wednesday, 2 May 2012 11:58 AM
To: rebatches.brisbane
Cc: sch4p4(6) Personal inform
Subject: FW: Additional Analysis - EB1210561 - BUTPAR - urgent rebatch as HT's expire today
Attachments: EB1210561_COC.pdf

Importance: High

sch4p4(6)

Hi Guys

Can you please action this rebatch request urgently as holding times expire today for PAH – they will need to be extracted today.

WO Login Remarks	Brisbane samples are in trays: 2440 <-> 2448-S; 794-VOC
------------------	---

NB: these are different samples to yesterday's rebatch and are fine to be rebatched separately (the client has given a different PO # below)

Thanks,

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

sch4p4(6) Personal in
CLIENT SERVICES

ALS | Environmental

Address
32 Shand Street, Stafford, QLD, 4053

PHONE +61 7 3243 7222
DIRECT +61 7 3243 7110

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

Please consider the environment before printing this email.

URGENT

From: sch4p4(6) Personal inform butlerpartners.com.au
Sent: Wednesday, 2 May 2012 11:34 AM
To: sch4p4(6) Pers
Cc: sch4p4(6) F
Subject: Additional Analysis - EB1210561
Importance: High

sch4p4(6) Personal

sch4p4(6)

Can you please organise the following additional analysis from work order EB1210561.

Please quote Purchase Order 5372 for this additional work.

Total Concentrations:

- 1 B7-5 heavy metals (S-2)
- 2 B8-4 PAH
- 3 E5-3 PAH, TPH
- 4 A6-3 PAH
- 5 C2-2 PAH
- 6 C8-4 PAH
- 7 D6-3 PAH
- 8 E5-2 TPH
- 9 E7-2 PAH
- 10 E9-3 PAH
- 11 E10-4 PAH
- 12 F5-4 PAH

TCLPs:

- 13 B5-2 Hg
- 14 B8-2 Pb, Zn
- 15 C2-1 Cr, Hg —
- 16 C701 Pb, Zn —
- 17 D10-2 Pb, Zn
- 18 E7-1 Pb, Zn
- 19 F5-3 Pb, Zn
- 20 F7-1 Cd, Pb, Zn

Any questions, give me a call.

sch4p4(

Published on DES Disclosure Log
RTI Act 2009



REPORT OF ANALYSIS

Laboratory Reference: A12/1983 [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 5480
Project: Bowen Hills RNA
Sample Type: Soil
No. of Samples: 5
Date Received: 19/4/2012
Date Completed: 3/05/2012

Contact: sch4p4(6)

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Perso
Technical Enquiries:
Telephone: +61 7 3268 1228
Fax: +61 7 3268 1238
Email: brisbane@advancedanalytical.com.au
sch4p4(6) Pe advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal inform

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Accreditation No. 15109

Issue Date: 3 May 2012

Page 1 of 10

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Batch Number: A12/1983 [R00]
Project Reference: BowenHillsRNA

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	Dup04	Dup06	Dup08	Dup10
Date Sampled:	-	-	17 Apr 12	17 Apr 12	17 Apr 12	17 Apr 12
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	93.2	90.8	89.6	88.0
Trace Elements						
Arsenic	04-001	mg/kg	4.8	9.3	5.9	9.4
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	14	5.5	12	7.4
Copper	04-001	mg/kg	21	28	26	17
Lead	04-001	mg/kg	73	30	180	170
Mercury	04-002	mg/kg	<0.1	<0.1	0.56	0.25
Nickel	04-001	mg/kg	8.2	11	5.7	3.0
Zinc	04-001	mg/kg	160	78	220	160
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	<0.20
Toluene	04-021	mg/kg	[NA]	[NA]	<0.20	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	<0.20
m+p xylenes	04-021	mg/kg	[NA]	[NA]	<0.40	<0.40
o-xylene	04-021	mg/kg	[NA]	[NA]	<0.20	<0.20
Total BTEX	04-021	mg/kg	[NA]	[NA]	<1.2	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	104	102
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	96	95
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	97	100
Date Extracted	04-021	-	[NA]	[NA]	20/04/2012	20/04/2012
Date Analysed	04-021	-	[NA]	[NA]	24/04/2012	24/04/2012
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	<25	<25
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	<50	<50
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	<100	<100
TPHC29-C36	04-020	mg/kg	[NA]	[NA]	<100	<100
Surrogate Recovery	04-020	%	[NA]	[NA]	98	98
Date Extracted	04-020	-	[NA]	[NA]	23/4/12	23/4/12
Date Analysed	04-020	-	[NA]	[NA]	25/4/12	25/4/12
Polyaromatic Hydrocarbons						

Issue Date: 3 May 2012

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www.advancedanalytical.com.au



Batch Number: A12/1983 [R00]
Project Reference: Bowen Hills RNA

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	Dup04	Dup06	Dup08	Dup10
Date Sampled:	-	-	17 Apr 12	17 Apr 12	17 Apr 12	17 Apr 12
Analysis Description	Method	Units				
Naphthalene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Acenaphthene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Fluorene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Phenanthrene	04-022	mg/kg	<0.50	0.80	<0.50	<0.50
Anthracene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Fluoranthene	04-022	mg/kg	<0.50	3.4	0.60	<0.50
Pyrene	04-022	mg/kg	<0.50	3.5	0.60	<0.50
Benz(a)anthracene	04-022	mg/kg	<0.50	2.4	<0.50	<0.50
Chrysene	04-022	mg/kg	<0.50	2.4	<0.50	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	4.9	<1.0	<1.0
Benzo(a)pyrene	04-022	mg/kg	<0.50	2.8	<0.50	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	1.8	<0.50	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	0.50	<0.50	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	1.8	<0.50	<0.50
Coronene*	04-022	mg/kg	<0.50	0.60	<0.50	<0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50	2.0	<0.50	<0.50
Perylene*	04-022	mg/kg	<0.50	1.1	<0.50	<0.50
Surrogate 1 Recovery	04-022	%	94	86	88	86
Surrogate 2 Recovery	04-022	%	92	85	85	86
Surrogate 3 Recovery	04-022	%	96	91	88	91
Date Extracted	04-022	-	23/04/2012	23/04/2012	23/04/2012	23/04/2012
Date Analysed	04-022	-	25/04/2012	26/04/2012	25/04/2012	25/04/2012
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
gamma-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
delta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Aldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
trans-Chlordane*	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]

Issue Date: 3 May 2012

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www.advancedanalytical.com.au



Batch Number: A12/1983 [R00]
Project Reference: Bowen Hills RNA

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	Dup04	Dup06	Dup08	Dup10
Date Sampled:	-	-	17 Apr 12	17 Apr 12	17 Apr 12	17 Apr 12
Analysis Description	Method	Units				
cis-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDE	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Dieldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDD	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDT	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Methoxychlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin ketone	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Oxychlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Surrogate Recovery	04-024	%	[NA]	91	[NA]	[NA]
Date Extracted	04-024	-	[NA]	23/04/2012	[NA]	[NA]
Date Analysed	04-024	-	[NA]	25/04/2012	[NA]	[NA]

Issue Date: 3 May 2012

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Batch Number: A12/1983 [R00]
Project Reference: BowenHillsRNA

Laboratory Reference:	-	-	/5
Client Reference:	-	-	Dup16
Date Sampled:	-	-	18 Apr 12
Analysis Description	Method	Units	
Total Solids			
Total Solids	04-004	%	83.4
Trace Elements			
Arsenic	04-001	mg/kg	1.7
Cadmium	04-001	mg/kg	<1.0
Chromium	04-001	mg/kg	3.0
Copper	04-001	mg/kg	5.1
Lead	04-001	mg/kg	19
Mercury	04-002	mg/kg	0.57
Nickel	04-001	mg/kg	1.2
Zinc	04-001	mg/kg	21
BTEX			
Total Petroleum Hydrocarbons			
Polyaromatic Hydrocarbons			
Organochlorine Pesticides			

Method	Method Description
04-004	Total Solids by gravimetric, %
04-001	Metals by ICP-OES, mg/kg
04-002	Mercury by CVAAS, mg/kg
04-021	TRH C6-9 & BTEX by P&T GCMS, mg/kg
04-020	TRH by GC-FID, mg/kg
04-022	PAHs & Phenols by GCMS
04-024	OC & OP Pesticides by GCMS

Result Comments

[<] Less than
[INS] Insufficient sample for this test
[NA] Test not required
Sample#2 duplicate mismatch, not homogeneous.

Issue Date: 3 May 2012

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Batch Number: A12/1983 [R00]
Project Reference: Bowen Hills RNA

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	0	A12/1983-1	93.2 93.1 RPD: 0

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	<1.0	A12/1983-1	4.8 4.5 RPD: 6	A12/1983-1	102%
Cadmium	mg/kg	<1.0	A12/1983-1	<1.0 <1.0	A12/1983-1	105%
Chromium	mg/kg	<1.0	A12/1983-1	14 14 RPD: 0	A12/1983-1	100%
Copper	mg/kg	<1.0	A12/1983-1	21 20 RPD: 5	A12/1983-1	103%
Lead	mg/kg	<1.0	A12/1983-1	73 66 RPD: 10	A12/1983-1	80%
Mercury	mg/kg	<0.1	A12/1983-1	<0.1 <0.1	A12/1983-1	97%
Nickel	mg/kg	<1.0	A12/1983-1	8.2 7.9 RPD: 4	A12/1983-1	97%
Zinc	mg/kg	<1.0	A12/1983-1	160 140 RPD: 13	A12/1983-1	71%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	<0.20	A12/1983-3	<0.20 <0.20	A12/1983-3	126%
Toluene	mg/kg	<0.20	A12/1983-3	<0.20 <0.20	A12/1983-3	125%
Ethyl Benzene	mg/kg	<0.20	A12/1983-3	<0.20 <0.20	A12/1983-3	117%
m+p xylenes	mg/kg	<0.40	A12/1983-3	<0.40 <0.40	A12/1983-3	118%
o-xylene	mg/kg	<0.20	A12/1983-3	<0.20 <0.20	A12/1983-3	117%
Total BTEX	mg/kg	<1.2	A12/1983-3	<1.2 <1.2	A12/1983-3	[NA]
Surrogate 1 Recovery	%	115	A12/1983-3	104 96 RPD: 8	A12/1983-3	102%
Surrogate 2 Recovery	%	114	A12/1983-3	96 89 RPD: 8	A12/1983-3	99%
Surrogate 3 Recovery	%	109	A12/1983-3	97 90 RPD: 7	A12/1983-3	106%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	mg/kg	<25	A12/1983-3	<25 <25	A12/1983-3	123%
TPH C10-C14	mg/kg	<50	A12/1983-3	<50 <50	A12/1983-3	102%
TPH C15-C28	mg/kg	<100	A12/1983-3	<100 <100	A12/1983-3	99%
TPH C29-C36	mg/kg	<100	A12/1983-3	<100 <100	A12/1983-3	94%
Surrogate Recovery	%	103	A12/1983-3	98 103 RPD: 5	A12/1983-3	96%

Issue Date: 3 May 2012

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Batch Number: A12/1983 [R00]
Project Reference: BowenHillsRNA

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	<0.50	A12/1983-2	<0.50 <0.50	A12/1983-2	116%
Acenaphthylene	mg/kg	<0.50	A12/1983-2	<0.50 0.90	A12/1983-2	#
Acenaphthene	mg/kg	<0.50	A12/1983-2	<0.50 <0.50	A12/1983-2	99%
Fluorene	mg/kg	<0.50	A12/1983-2	<0.50 <0.50	A12/1983-2	106%
Phenanthrene	mg/kg	<0.50	A12/1983-2	0.80 2.8 RPD: 111	A12/1983-2	#
Anthracene	mg/kg	<0.50	A12/1983-2	<0.50 0.80	A12/1983-2	#
Fluoranthene	mg/kg	<0.50	A12/1983-2	3.4 10 RPD: 99	A12/1983-2	#
Pyrene	mg/kg	<0.50	A12/1983-2	3.5 9.5 RPD: 92	A12/1983-2	#
Benz(a)anthracene	mg/kg	<0.50	A12/1983-2	2.4 6.5 RPD: 92	A12/1983-2	#
Chrysene	mg/kg	<0.50	A12/1983-2	2.4 6.3 RPD: 90	A12/1983-2	#
Benzo(b)&(k)fluoranthene	mg/kg	<1.0	A12/1983-2	4.9 13 RPD: 91	A12/1983-2	#
Benzo(a)pyrene	mg/kg	<0.50	A12/1983-2	2.8 7.4 RPD: 90	A12/1983-2	#
Indeno(1,2,3-cd)pyrene	mg/kg	<0.50	A12/1983-2	1.8 4.1 RPD: 78	A12/1983-2	#
Dibenz(a,h)anthracene	mg/kg	<0.50	A12/1983-2	0.50 1.4 RPD: 95	A12/1983-2	#
Benzo(g,h,i)perylene	mg/kg	<0.50	A12/1983-2	1.8 4.1 RPD: 78	A12/1983-2	#
Coronene*	mg/kg	<0.50	A12/1983-2	0.60 1.6 RPD: 91	A12/1983-2	#
Benzo(e)pyrene*	mg/kg	<0.50	A12/1983-2	2.0 4.9 RPD: 84	A12/1983-2	#
Perylene*	mg/kg	<0.50	A12/1983-2	1.1 7.0 RPD: 146	A12/1983-2	#
Surrogate 1 Recovery	%	91	A12/1983-2	86 87 RPD: 1	A12/1983-2	89%
Surrogate 2 Recovery	%	78	A12/1983-2	85 87 RPD: 2	A12/1983-2	84%
Surrogate 3 Recovery	%	100	A12/1983-2	91 88 RPD: 3	A12/1983-2	88%

Issue Date: 3 May 2012

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Batch Number: A12/1983 [R00]
Project Reference: Bowen Hills RNA

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	93%
Hexachlorobenzene	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	93%
beta-BHC	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	#
gamma-BHC	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	#
delta-BHC	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	99%
Heptachlor	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	78%
Aldrin	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	89%
Heptachlor epoxide	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	81%
trans-Chlordane*	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	85%
cis-Chlordane	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	86%
Alpha-Endosulfan	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	83%
pp-DDE	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	88%
Dieldrin	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	91%
Endrin	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	84%
beta-Endosulfan	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	86%
pp-DDD	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	84%
Endrin aldehyde	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	72%
Endosulfan sulphate	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	86%
pp-DDT	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	71%
Methoxychlor	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	84%
Endrin ketone	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	84%
Oxychlordane	mg/kg	<0.05	A12/1983-2	<0.05 <0.05	A12/1983-2	#
Surrogate Recovery	%	87	A12/1983-2	91 93 RPD: 2	A12/1983-2	91%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	[NT]	[NT]	[NT]	External	112%
Toluene	mg/kg	[NT]	[NT]	[NT]	External	108%
Ethyl Benzene	mg/kg	[NT]	[NT]	[NT]	External	104%
m+p xylenes	mg/kg	[NT]	[NT]	[NT]	External	104%
o-xylene	mg/kg	[NT]	[NT]	[NT]	External	104%
Total BTEX	mg/kg	[NT]	[NT]	[NT]	External	[NA]
Surrogate 1 Recovery	%	[NT]	[NT]	[NT]	External	92%
Surrogate 2 Recovery	%	[NT]	[NT]	[NT]	External	87%
Surrogate 3 Recovery	%	[NT]	[NT]	[NT]	External	93%

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Released



Batch Number: A12/1983 [R00]
Project Reference: BowenHillsRNA

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	mg/kg	[NT]	[NT]	[NT]	External	108%
TPHC10-C14	mg/kg	[NT]	[NT]	[NT]	External	102%
TPHC15-C28	mg/kg	[NT]	[NT]	[NT]	External	102%
TPHC29-C36	mg/kg	[NT]	[NT]	[NT]	External	102%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	104%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	100%
Acenaphthylene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	81%
Acenaphthene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	99%
Fluorene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	91%
Phenanthrene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	90%
Anthracene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	86%
Fluoranthene	mg/kg	[NT]	A12/1983-3	0.60 0.60 RPD: 0	External	89%
Pyrene	mg/kg	[NT]	A12/1983-3	0.60 0.60 RPD: 0	External	97%
Benz(a)anthracene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	80%
Chrysene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	106%
Benzo(b)&(k)fluoranthene	mg/kg	[NT]	A12/1983-3	<1.0 <1.0	External	112%
Benzo(a)pyrene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	80%
Indeno(1,2,3-cd)pyrene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	70%
Dibenz(a,h)anthracene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	72%
Benzo(g,h,i)perylene	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	85%
Coronene*	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	#
Benzo(e)pyrene*	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	111%
Perylene*	mg/kg	[NT]	A12/1983-3	<0.50 <0.50	External	100%
Surrogate 1 Recovery	%	[NT]	A12/1983-3	88 90 RPD: 2	External	88%
Surrogate 2 Recovery	%	[NT]	A12/1983-3	85 88 RPD: 3	External	86%
Surrogate 3 Recovery	%	[NT]	A12/1983-3	88 92 RPD: 4	External	98%

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Batch Number: A12/1983 [R00]
Project Reference: Bowen Hills RNA

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	[NT]	[NT]	[NT]	External	92%
Hexachlorobenzene	mg/kg	[NT]	[NT]	[NT]	External	96%
beta-BHC	mg/kg	[NT]	[NT]	[NT]	External	89%
gamma-BHC	mg/kg	[NT]	[NT]	[NT]	External	96%
delta-BHC	mg/kg	[NT]	[NT]	[NT]	External	95%
Heptachlor	mg/kg	[NT]	[NT]	[NT]	External	70%
Aldrin	mg/kg	[NT]	[NT]	[NT]	External	82%
Heptachlor epoxide	mg/kg	[NT]	[NT]	[NT]	External	86%
trans-Chlordane*	mg/kg	[NT]	[NT]	[NT]	External	94%
cis-Chlordane	mg/kg	[NT]	[NT]	[NT]	External	107%
lpha-Endosulfan	mg/kg	[NT]	[NT]	[NT]	External	104%
pp-DDE	mg/kg	[NT]	[NT]	[NT]	External	93%
Dieldrin	mg/kg	[NT]	[NT]	[NT]	External	100%
Endrin	mg/kg	[NT]	[NT]	[NT]	External	88%
beta-Endosulfan	mg/kg	[NT]	[NT]	[NT]	External	86%
pp-DDD	mg/kg	[NT]	[NT]	[NT]	External	73%
Endrin aldehyde	mg/kg	[NT]	[NT]	[NT]	External	63%
Endosulfan sulphate	mg/kg	[NT]	[NT]	[NT]	External	72%
pp-DDT	mg/kg	[NT]	[NT]	[NT]	External	56%
Methoxychlor	mg/kg	[NT]	[NT]	[NT]	External	60%
Endrin ketone	mg/kg	[NT]	[NT]	[NT]	External	90%
Oxychlordane	mg/kg	[NT]	[NT]	[NT]	External	#
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	88%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

Issue Date: 3 May 2012

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Butler Partners Pty Ltd

PO Box 2257, Fortitude Valley BC Qld 4005
(79 Doggett Street, Newstead Qld 4006)
Ph: 07 3852 3850 Fax: 07 3852 3808

Job No: 011-165C Order No: 5480
Site: Bowen Hills RWA CDC No: 011-165C/2

Advanced Analytical

Advanced Analytical Australia
Unit 1, 483 Kingsford Smith Drive, Hamilton 4007

27/4
Ph: 3268 1218
Fax: 3268 1218

Quotation Number: Project Manager: sch4p4(6) Sampled By: Results To: [redacted]@butlerpartners.com.au Relinquished by: Due Date: 27-Apr-12 Special Instructions: Standard 5 day TAT						(B metals)	(TFH8TEX)	(TFH8TEX (Muss))	(TFH8TEXPs)	(TFH8TEXPAH)	(OCOP)	PAH	(TFH8TEXPAH)	(TFH8TEXPAH/OCOP/PCB (Muss))	(TFH8TEXPAH/OCOP/PCB (Muss))	(TFH8TEXPAH/OCOP/PCB (Muss))	OC pesticides	Cu, Zn	\$POCAS	TCLP (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn)	TCLP (PAH)	Vinyl Chloride (ug/L)	HOLD
Lab Sample No.	Sample Reference	Sample Depth	Sample Type	No. of Jars/Vials	Date Sampled																		
1	DUP02	-	soil	1	17-Apr-12																X		
2	DUP04	-	soil	1	17-Apr-12	X																	
3	DUP06	-	soil	1	17-Apr-12	X										X							
4	DUP08	-	soil	1	17-Apr-12	X																	
	DUP10	-	soil	1	17-Apr-12	X																	
	DUP12	-	soil	1	17-Apr-12																X		
	DUP14	-	soil	1	18-Apr-12																X		
5	DUP16	-	soil	1	18-Apr-12	X																	
TOTALS:						2			2		2				1						3		

Received By:
Date:
PP-03 - Chain of Custody - Advanced Analytical - Version 1 - 15/04/2012

Organization:
Name:

RECEIVED
BY: sch4p4([redacted])
DATE: 27/4/2012

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Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0918869	Page	: 1 of 7
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Person	Contact	: sch4p4(6)
Address	: P O BOX 1734 MILTON QLD, AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4@golder.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: 3721 5400	Telephone	: +61-7-3243 7222
Facsimile	: 3721 5401	Facsimile	: +61-7-3243 7218
Project	: 097632038	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ---	Date Samples Received	: 30-NOV-2009
C-O-C number	: ---	Issue Date	: 07-DEC-2009
Sampler	: A.S	No. of samples received	: 8
Site	: RNA	No. of samples analysed	: 8
Quote number	: EN/002/09		

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

This document is issued in accordance with NATA accreditation requirements.

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

sch4p4(6) P

Position

Senior Inorganic Chemist
Organic Chemist

Accreditation Category

Inorganics
Organics

Environmental Division Brisbane

Part of the **ALS Laboratory Group**

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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.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

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

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Analytical Results

Sub-Matrix: DI WATER LEACHATE

Client sample ID

				GA17 0.2-0.3 DI Water Leachate 02-DEC-2009 14:00	GA44 0.4-0.5 DI Water Leachate 02-DEC-2009 14:00	GA61 1.3-1.4 DI Water Leachate 02-DEC-2009 14:00	GA62 1.9-2.0 DI Water Leachate 02-DEC-2009 14:00	---
Client sampling date / time				EB0918869-004	EB0918869-005	EB0918869-006	EB0918869-008	---
Compound	CAS Number	LOR	Unit					
EG005W: Water Leachable Metals by ICPAES								
Lead	7439-92-1	0.01	mg/L	---	---	<0.01	---	---
EP07S(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	---	1.8	---
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	---	3.1	---
Fluorene	89-73-7	1.0	µg/L	2.4	<1.0	---	1.8	---
Phenanthrene	85-01-8	1.0	µg/L	7.7	2.5	---	16.7	---
Anthracene	120-12-7	1.0	µg/L	2.0	<1.0	---	4.0	---
Fluoranthene	206-44-0	1.0	µg/L	3.3	<1.0	---	6.7	---
Pyrene	129-00-0	1.0	µg/L	2.6	<1.0	---	5.5	---
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(a)pyrene	50-32-8	0.5	µg/L	0.7	<0.5	---	0.7	---
Indeno(1,2,3-cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	---	<1.0	---
EP07S(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	40.6	37.2	---	38.5	---
2-Chlorophenol-D4	93951-73-6	0.1	%	99.6	79.4	---	96.2	---
2,4,6-Tribromophenol	118-79-6	0.1	%	105	92.5	---	104	---
EP07S(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	110	91.2	---	107	---
Anthracene-d10	1719-06-8	0.1	%	114	106	---	114	---
4-Terphenyl-d14	1718-51-0	0.1	%	120	112	---	122	---

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA17 0.2-0.3 TCLP Leachate	GA44 0.4-0.5 TCLP Leachate	GA61 1.3-1.4 TCLP Leachate	GA17 0.2-0.3 DI Water Leachate	GA44 0.4-0.5 DI Water Leachate
				Client sampling date / time	16-OCT-2009 15:00	05-NOV-2009 15:00	06-NOV-2009 15:00	16-OCT-2009 15:00	05-NOV-2009 15:00
Compound	CAS Number	LOR	Unit		EB0918869-001	EB0918869-002	EB0918869-003	EB0918869-004	EB0918869-005
EN33: TCLP Leach									
Initial pH	---	0.1	pH Unit		7.6	8.8	8.8	---	---
After HCl pH	---	0.1	pH Unit		1.8	1.8	1.8	---	---
Extraction Fluid Number	---	1	-		1	1	1	---	---
Final pH	---	0.1	pH Unit		5.0	5.4	6.4	---	---
EN60: Bottle Leaching Procedure									
Final pH	---	0.1	pH Unit		---	---	---	6.3	7.5

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA61 1.3-1.4 DI Water Leachate	GA62 1.9-2.0 TCLP Leachate	GA62 1.9-2.0 DI Water Leachate	---	---
				Client sampling date / time	06-NOV-2009 15:00	18-NOV-2009 15:00	18-NOV-2009 15:00	---	---
Compound	CAS Number	LOR	Unit		EB0918869-006	EB0918869-007	EB0918869-008	---	---
EN33: TCLP Leach									
Initial pH	---	0.1	pH Unit		---	8.7	---	---	---
After HCl pH	---	0.1	pH Unit		---	1.8	---	---	---
Extraction Fluid Number	---	1	-		---	1	---	---	---
Final pH	---	0.1	pH Unit		---	5.0	---	---	---
EN60: Bottle Leaching Procedure									
Final pH	---	0.1	pH Unit		8.2	---	7.7	---	---

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Analytical Results

Sub-Matrix: TCLP LEACHATE

Client sample ID

				GA17 0.2-0.3 TCLP Leachate	GA44 0.4-0.5 TCLP Leachate	GA61 1.3-1.4 TCLP Leachate	GA62 1.9-2.0 TCLP Leachate	----
Client sampling date / time				02-DEC-2009 14:00	02-DEC-2009 14:00	02-DEC-2009 14:00	02-DEC-2009 14:00	----
Compound	CAS Number	LOR	Unit	EB0918869-001	EB0918869-002	EB0918869-003	EB0918869-007	----
EG005C: Leachable Metals by ICPAES								
Lead	7439-92-1	0.1	mg/L	---	---	2.6	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	2.5	---	2.8	---
Acenaphthylene	208-96-8	1.0	µg/L	1.2	2.6	---	<1.0	---
Acenaphthene	83-32-9	1.0	µg/L	2.0	3.1	---	3.8	---
Fluorene	86-73-7	1.0	µg/L	7.0	3.1	---	2.3	---
Phenanthrene	85-01-8	1.0	µg/L	14.8	93.6	---	23.8	---
Anthracene	120-12-7	1.0	µg/L	2.8	6.2	---	4.4	---
Fluoranthene	206-44-0	1.0	µg/L	4.1	13.8	---	8.2	---
Pyrene	129-00-0	1.0	µg/L	3.1	10.6	---	6.5	---
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(a)pyrene	50-32-6	0.5	µg/L	<0.5	<0.5	---	1.4	---
Indeno(1,2,3-cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	---	<1.0	---
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	---	1.1	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	40.6	42.3	---	41.0	---
2-Chlorophenol-D4	93951-73-5	0.1	%	105	103	---	99.0	---
2,4,6-Tribromophenol	118-79-6	0.1	%	95.0	101	---	96.9	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	109	109	---	116	---
Anthracene-d10	1719-06-8	0.1	%	112	116	---	118	---
4-Terphenyl-d14	1718-51-0	0.1	%	119	124	---	120	---

A Campbell Brothers Limited Company

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RTI Act 2009



Surrogate Control Limits

Sub-Matrix: DI WATER LEACHATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	94
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	10	123
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141
Sub-Matrix: TCLP LEACHATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	94
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	10	123
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141

A Campbell Brothers Limited Company

Published on DES Disclosure Log
 RTI Act 2009

DRAFT



**BUTLER
PARTNERS**



Butler Partners Pty Ltd
ABN 14 616 514 566
78 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au

LEGEND

- Proposed Sample Location
- ⬮ GA10 Previously Investigated Area (by Golder Associates)
- + Sampling Grid
- Area Investigated

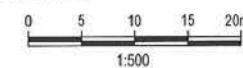
RNA REDEVELOPMENT - ZONE B

RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

INVESTIGATION SAMPLE LOCATIONS

CLIENT: **L & D CONTRACTING**

SCALE AT A3:



DATE: MAY 2012

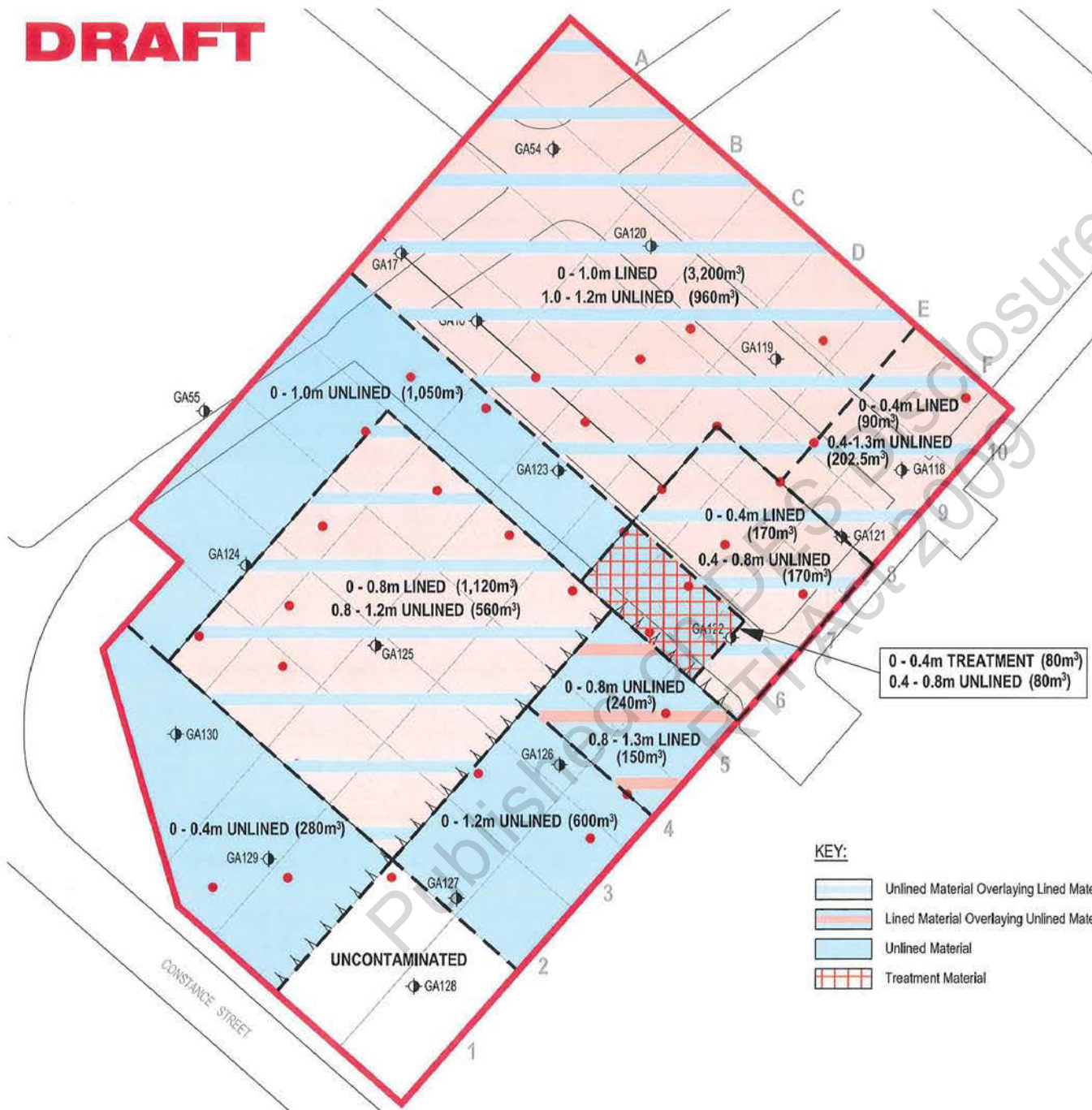
DRAWN: FD

APPROVED:

PROJECT No: 011-165C

DRAWING No: 2 REV: A

DRAFT



KEY:

- Unlined Material Overlaying Lined Material
- Lined Material Overlaying Unlined Material
- Unlined Material
- Treatment Material

**BUTLER
PARTNERS**



Butler Partners Pty Ltd
ABN 12 512 514 844
79 Daggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph 61 7 3852 3800
Fx 61 7 3852 3808
enquiries@butlerpartners.com.au

LEGEND

- Proposed Sample Location
- GA10 Previously Investigated Area (by Golder Associates)
- Sampling Grid
- Area Investigated

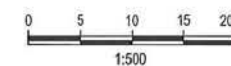
RNA REDEVELOPMENT - ZONE B

RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

**CONTAMINATED SOIL DISPOSAL
CATEGORIES AND IN-SITU VOLUMES**

CLIENT: **L & D CONTRACTING**

SCALE AT A3:



DATE: MAY 2012

DRAWN: FD

APPROVED:

PROJECT No: 011-165C

DRAWING No: 4 REV: A

Enquiries to: Paul Ritchie
Telephone: (07) 3330 5688
Our reference: Ecotrack: 379808 Permit No. CLEB02461811

Department of
**Environment and Resource
Management**

Permit to Remove and Dispose of Contaminated Soil

Pursuant to Section 424 of the *Environment Protection Act 1994* (EP Act) permission is given to the applicant,

Butler Partners Pty Ltd

PO Box 2267

FORTITUDE VALLEY BC QLD 4006

Attention [sch4p4(6) P

to remove soil contaminated with TPH, benzo(a)pyrene, DDT and heavy metals from Lot 701 on SP219236 and Lot 103 on SP219236 and described in the following correspondence:

Application for Contaminated Soil Disposal Permit dated 30 November 2011 and received 2 December 2011. The permit holder is responsible for ensuring that all personnel involved in

~~the excavation~~ removal and disposal comply with the specific and standard conditions in [sch4p4(6) Pe
2 of this permit.

Paul Ritchie
Contaminated Land Unit

13/12/2011

PDF copy sent via email on 13/12/11.
Ecotrack amended
Done and GMR [sch4p
13/12/2011

Notice to Applicant

The conditions on this permit have been decided after consideration of the standard criteria (EP Act) and for the purpose of preventing environmental harm. The applicant may apply for a review or appeal against the decision within 10 business days of receipt of this notice (s521 and s531).

Emr 12/12/11

[sch4p4(6) Person

Schedule 1 of 2 – Specific Conditions

The volume or mass of the contaminated soil shall not exceed 11,680 cubic metres.

6800 cubic metres of soil to be disposed to unlined landfill at the Veolia Environmental Services (Australia) Pty Ltd landfill at Wattle Glen Landfill, Halletts Road/ Patrick Street and Greenwood Village Road, Redbank Plains (Lot 288 on S31235 and Lot 1 on RP885033) in accordance with the disposal facility letter dated 1 December 2011.

4500 cubic metres of soil to be disposed to lined landfill and 380 cubic metres for treatment at Veolia Environmental Services (Australia) Pty Ltd landfill at Ti Tree bioEnergy, 55 Champions Way, Willowbank, Qld 4306 (Lot 4 on RP24574) in accordance with the disposal facility letter dated 1 December 2011.

This permit is valid from 13/12/2011 until 13/12/2012.

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Schedule 2 of 2 – Standard Conditions

1. Volume / mass of contaminated soil

This permit applies to the specified volume or mass only. Any increases to the specified quantity will require a new disposal permit.

2. Disposal time period

Disposal must occur within the dates specified or a new disposal permit must be sought.

3. Excavation and loading

The holder of this disposal permit must take all reasonable precautions necessary to prevent the spillage of contaminated soil during loading and prevent contaminated soil being transported from the site of origin on vehicle tyres and plant and equipment.

4. Transportation

(a) *Transporter to be advised of permit conditions*

Prior to the removal of contaminated soil, the permit holder must provide a copy of the permit and conditions to the transporter.

(b) *Load to be secured*

The contaminated soil must be covered in the transportation vehicle to ensure that the contaminated soil or offensive or noxious gases are not released during transport.

(c) *Cleaning of vehicles and plant equipment*

An effective system must be employed for cleaning of vehicles and plant and equipment which are used to transport or handle contaminated soil which prevents release of contaminants onto any roadway or to any waters or stormwater drainage system.

(d) *Spillage*

Any spillage of contaminants must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise releasing such contaminants or material to any stormwater drainage system, roadside gutter or waters.

5. Receipt and disposal

(a) *Licence conditions*

The acceptance and disposal of the contaminated soil must comply with the licence conditions and the specific requirements of the disposal facility.

(b) *Disposal receipts*

Copies of disposal acceptance receipts are to be submitted to the Administering Authority within 10 business days of the date of disposal. The holder of, or person acting under a disposal permit, must comply with the conditions of the permit (s425 of the *Environmental Protection Act 1994*).
Maximum penalty - 100 penalty units.

6. Interim storage

Contaminated soil which is temporarily stored at the site of origin or approved for storage at a separate property must be stockpiled and securely covered and/or managed to ensure that:

- (a) rainwater is drained away from the stockpiles;
- (b) contaminated soil is not transported from the stockpile by wind or rainwater;
- (c) offensive odours or noxious gases are not released; and
- (d) soil underlying the stockpiles is not affected by contamination.

A report is to be provided to the Administering Authority within 28 days of final disposal that verifies that the storage area is fully cleared of contamination.

7. Treatment of soil

(a) Licensed facility

When treatment is to be undertaken at a licensed general waste disposal facility or regulated waste treatment and disposal facility, acceptance receipts must be provided to the Administering Authority within 10 days of contaminated soil delivery. The contamination level in the soil must be reduced to a level agreed by the Administering Authority. When contaminated soil is stored at such facility pending treatment, storage is to be undertaken according to condition 6.

(b) Other treatment sites

(i) Soil remediation and validation report.

The permit holder must provide a report of the soil remediation including chemical test results that validate that the contamination has been lowered to levels agreed with the Administering Authority. The report must provide evidence that the land underlying the treatment activity is not affected by contamination.

(ii) Environmental harm.

Treatment activities must be carried out to ensure that environmental harm is not caused and that contaminants including treatment agents are not released from the site by wind, stormwater or as offensive or noxious gases. The requirements of condition 6 also apply.

(c) Final disposal

When soil contamination has been reduced to levels acceptable to the Administering Authority, the soil may be disposed of as general fill unless otherwise specified in Schedule 1. The location of the final disposal site of the soil is to be identified after treatment by written advice to the Administering Authority.

****End of Document****

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QNTIME Version 1.6

[QNTIME > Specific Parcel Search > Specific Parcel Report](#)**Specific Parcel Report**

Lot: 701 on Plan: SP219236

Parcel: on Segment:

DCDB:**Tenure:**

FH

Description:

FREEHOLD

CISP:**Previous Plan Details:****Plan Registered Description**

SP241983 08/06/2011 PLAN OF LEASE T IN LOT 701 ON SP219236

SP219236 11/11/2010 PLAN OF LOTS 101-107, 701 AND EASEMENTS B & C IN LOT 701 CANCELLING LOT 485 ON SP192466 AND LOT 486 ON SL4553 AND LOT 487 ON SP196776 AND LOT 641 ON SP196755

SP190743 18/05/2007 LOT 1 (VOLUMETRIC); PLAN OF LOT 487 ON SL4553 CANCELLING ROAD CLOSURE (PART OF USL BEING GREGORY ST & ALEXANDRIA ST, BOWEN HILLS, ADJACENT TO LOT 487 ON SL4553)

SP192466 05/04/2007 LOT 1 (VOLUMETRIC) & 485 CANCELLING LOT 485 ON SL4553

SP196776 05/04/2007 LOTS 1(VOLUMETRIC) & 487 CANCELLING LOT 487 ON SL4553

IS108764 (LEASE OVER PART OF) LOT 485 ON SL4553

IS24696 LOTS 484,487 ON SL4553

IS83553 (PART OF)LOTS 485-487 (STREET ALIGNMENTS) ON SL4553

SL4553 21/04/1965 POR.484-487

B31779 02/10/1959 ALIGN OF PART OF SUTTON ST ADJOINING POR.485

B3680 23/03/1927 ALIGN OF COSTIN ST ADJOINING SA.265 & 266 (BETWEEN WATER ST AND GREGORY TCE - FORTITUDE VALLEY)

B3575 07/08/1914 ALIGN OF ALEXANDRIA STREET AND PART OF GREGORY TERRACE ADJOININGSA.265 & POR.486 & 487

ATS:**Title Reference:**

50829666

Registered Owner:

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION

Tenure Reference:**Original Deed of Grant:**

1. 13833226 (POR 485)
2. 13833226 (POR 486)
3. 13833226 (POR 487)

Lease Purpose:**Reserve Purpose:****Area:****Lease Conditions:****Commencement Date:****Trustees:****Interests:**

EASEMENT 713512707 12/10/2010 14:48:34

EASEMENT 713512713 12/10/2010 14:48:56

MORTGAGE 713756862 14/03/2011 11:56:32

LEASE 713895150 08/06/2011 11:10:38

Previous Title References:

50658029

50658052

50658054

QVAS:**Registered Owner:**

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION OF QUEENSLAND

Address: 631 GREGORY TCE, BOWEN HILLS QLD 4006
Primary Land Use Code: SPORTSGROUND, RACECOURSE, AIRFIELD(56)
Secondary Land Use Code: NONE(0)

TAS:

No TAS data found.

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QNTIME Version 1.6

[QNTIME](#) > [Specific Parcel Search](#) > [Specific Parcel Report](#)**Specific Parcel Report**Lot: 103 on Plan: SP219236
Parcel: on Segment:**DCDB:****Tenure:** FH
Description: FREEHOLD**CISP:****Previous Plan Details:**

Plan	Registered Description
SP219236 11/11/2010	PLAN OF LOTS 101-107, 701 AND EASEMENTS B & C IN LOT 701 CANCELLING LOT 485 ON SP192466 AND LOT 486 ON SL4553 AND LOT 487 ON SP196776 AND LOT 641 ON SP196755
SP192466 05/04/2007	LOT 1 (VOLUMETRIC) & 485 CANCELLING LOT 485 ON SL4553
IS108764	(LEASE OVER PART OF) LOT 485 ON SL4553
IS83553	(PART OF) LOTS 485-487 (STREET ALIGNMENTS) ON SL4553
SL4553 21/04/1965	POR.484-487
B31779 02/10/1959	ALIGN OF PART OF SUTTON ST ADJOINING POR.485

ATS:**Title Reference:** 50829661
Registered Owner: THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION
Tenure Reference:
Original Deed of Grant: 1, 13833226 (POR 485)
Lease Purpose:
Reserve Purpose:
Area:
Lease Conditions:
Commencement Date:
Trustees:
Interests: LEASE 713732238 25/02/2011 11:23:15
MORTGAGE 713732241 25/02/2011 11:24:10
CAVEAT 713841631 09/05/2011 11:47:36
Previous Title References: 50658054**QVAS:****Registered Owner:** THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION OF QUEENSLAND
Address: 631 GREGORY TCE, BOWEN HILLS QLD 4006
Primary Land Use Code: SPORTSGROUND, RACECOURSE, AIRFIELD(56)
Secondary Land Use Code: NONE(0)**TAS:**

No TAS data found.

[View on Keymap](#)[Back to Search](#)

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QNTIME Version 1.6

[QNTIME](#) > [Specific Parcel Search](#) > [Specific Parcel Report](#)**Specific Parcel Report**Lot: 103 on Plan: SP219236
Parcel: on Segment:**DCDB:****Tenure:**

FH

Description:

FREEHOLD

CISP:**Previous Plan Details:****Plan Registered Description**

SP219236 11/11/2010 PLAN OF LOTS 101-107, 701 AND EASEMENTS B & C IN LOT 701 CANCELLING LOT 485 ON SP192466 AND LOT 486 ON SL4553 AND LOT 487 ON SP196776 AND LOT 641 ON SP196755
SP192466 05/04/2007 LOT 1 (VOLUMETRIC) & 485 CANCELLING LOT 485 ON SL4553
IS108764 (LEASE OVER PART OF) LOT 485 ON SL4553
IS83553 (PART OF) LOTS 485-487 (STREET ALIGNMENTS) ON SL4553
SL4553 21/04/1965 POR.484-487
B31779 02/10/1959 ALIGN OF PART OF SUTTON ST ADJOINING POR.485

ATS:**Title Reference:**

50829661

Registered Owner:

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION

Tenure Reference:**Original Deed of Grant:**

1. 13833226 (POR 485)

Lease Purpose:**Reserve Purpose:****Area:****Lease Conditions:****Commencement Date:****Trustees:**

LEASE 713732238 25/02/2011 11:23:15

Interests:

MORTGAGE 713732241 25/02/2011 11:24:10

CAVEAT 713841631 09/05/2011 11:47:36

Previous Title References:

50658054

QVAS:**Registered Owner:**

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL ASSOCIATION OF QUEENSLAND

Address:

631 GREGORY TCE, BOWEN HILLS QLD 4006

Primary Land Use Code:

SPORTSGROUND, RACECOURSE, AIRFIELD(56)

Secondary Land Use Code:

NONE(0)

TAS:

No TAS data found.

[View on Keymap](#)[Back to Search](#)

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DEPARTMENT OF ENVIRONMENT AND RESOURCE
MANAGEMENT

SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 44546990 EMR Site Id: 92051 05 December
2011
This response relates to a search request received for the site:
Lot: 103 Plan: SP219236

EMR RESULT

The above site IS included on the Environmental Management Register.
The site you have searched has been subdivided from the following site, which is included on the EMR. Subdivided new parcels will remain on the EMR unless it can be shown that they are not located near the contaminating activity.

Lot: 485 Plan: SP192466
Address: 631 GREGORY TERRACE
BOWEN HILLS 4006

The site has been subject to contamination from a hazardous contaminant as follows:
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant.
Refer to the summary given below.
Lead up to 9910 mg/kg, Benzo (a) Pyrene up to 47.1 mg/kg, PAH up to 556.3 mg/kg, TPH up to 3120 mg/kg.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

From the 1st August 2011, the price of an EMR/CLR search will increase to \$40.15 per lot for internet based searches and \$47.20 per lot for EMR/CLR searches done by means other than the internet.

If you have any queries in relation to this search please phone (07) 3330 5685.

FOR INTERNAL USE ONLY

**DEPARTMENT OF ENVIRONMENT AND RESOURCE
MANAGEMENT**

SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 44546990 EMR Site Id: 92051 05 December
2011
This response relates to a search request received for the site:
Lot: 103 Plan: SP219236

EMR RESULT

The above site IS included on the Environmental Management Register.
The site you have searched has been subdivided from the following site, which is included on the EMR. Subdivided new parcels will remain on the EMR unless it can be shown that they are not located near the contaminating activity.

Lot: 485 Plan: SP192466
Address: 631 GREGORY TERRACE
BOWEN HILLS 4006

The site has been subject to contamination from a hazardous contaminant as follows:
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant.
Refer to the summary given below.
Lead up to 9910 mg/kg, Benzo (a) Pyrene up to 47.1 mg/kg, PAH up to 556.3 mg/kg, TPH up to 3120 mg/kg.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

From the 1st August 2011, the price of an EMR/CLR search will increase to \$40.15 per lot for internet based searches and \$47.20 per lot for EMR/CLR searches done by means other than the internet.

If you have any queries in relation to this search please phone (07) 3330 5685.

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 12832681

Search Date: 01/12/2011 11:33

Title Reference: 50829666

Date Created: 11/11/2010

Previous Title: 50658029
50658052
50658054

REGISTERED OWNER

Dealing No: 713512624 12/10/2010

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL
ASSOCIATION OF QUEENSLAND

ESTATE AND LAND

Estate in Fee Simple

LOT 701 SURVEY PLAN 219236
County of STANLEY Parish of NORTH BRISBANE
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 13833226 (POR 485)
(POR 486)
(POR 487)
2. EASEMENT No 713512707 12/10/2010 at 14:48
burdening the land to
LOT 101 ON SP219236 OVER EASEMENT B ON SP219236
3. EASEMENT No 713512713 12/10/2010 at 14:48
burdening the land to
LOT 106 ON SP219236 OVER EASEMENT C ON SP219236
4. MORTGAGE No 713756862 14/03/2011 at 11:56
QUEENSLAND TREASURY CORPORATION A.B.N. 15 736 217 171
5. LEASE No 713895150 08/06/2011 at 11:10
TELSTRA CORPORATION LIMITED A.B.N. 33 051 775 556
OF LEASE T ON SP241983 AND PART OF THE BASEMENT
LEVEL (LEASE LB01)
TERM: 01/03/2010 TO 27/02/2020 OPTION NIL

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713630232	ADMIN NOTING	16/12/2010 11:29	CURRENT
	SEE DEALING FOR RELEVANT LEGISLATION		
713690945	HERITGE SITE	01/02/2011 09:05	CURRENT
	QUEENSLAND HERITAGE ACT 1992		

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DEPARTMENT OF ENVIRONMENT AND RESOURCE
MANAGEMENT

SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 44546988 EMR Site Id: 91845 05 December
2011
This response relates to a search request received for the site:
Lot: 701 Plan: SP219236

SEARCH RESULT

The site you have searched is a lot resulting from the amalgamation of the following sites, which are included on the Environmental Management Register (EMR) or the Contaminated Land Register (CLR), as indicated below. Further details for these sites are available by contacting this Agency.

Lot	Plan	
485	SP192466	EMR
487	SP196776	EMR

ADDITIONAL ADVICE

From the 1st August 2011, the price of an EMR/CLR search will increase to \$40.15 per lot for internet based searches and \$47.20 per lot for EMR/CLR searches done by means other than the internet.

If you have any queries in relation to this search please phone (07) 3330 5685.

Elizabeth Evans
Registrar, Contaminated Land Unit

To execute a new search, select the "Back" button on the browser twice

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 12832681

Search Date: 01/12/2011 11:33

Title Reference: 50829666

Date Created: 11/11/2010

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

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CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 12832682

Search Date: 01/12/2011 11:33

Title Reference: 50829661

Date Created: 11/11/2010

Previous Title: 50658054

REGISTERED OWNER

Dealing No: 713512624 12/10/2010

THE ROYAL NATIONAL AGRICULTURAL AND INDUSTRIAL
ASSOCIATION OF QUEENSLAND

ESTATE AND LAND

Estate in Fee Simple

LOT 103 SURVEY PLAN 219236
County of STANLEY Parish of NORTH BRISBANE
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 13833226 (POR 485)
2. LEASE No 713732238 25/02/2011 at 11:23
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351
OF THE WHOLE OF THE LAND
TERM: 21/12/2010 TO 20/12/2030 OPTION NIL
3. MORTGAGE No 713732241 25/02/2011 at 11:24
LEND LEASE (BOWEN HILLS) PTY LTD A.B.N. 68 127 727 351
4. CAVEAT No 713841631 09/05/2011 at 11:47
LEND LEASE (BOWEN HILLS) PTY LIMITED A.B.N. 68 127 727 351

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713690945	HERITGE SITE	01/02/2011 09:05	CURRENT

QUEENSLAND HERITAGE ACT 1992

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 1

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL6.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light grey silty sand	6.2		E	0.0	TP1-1	
	CLAYEY SAND - dark brown, minor brick fragments, glass, ceramics, concrete	6.0		E	0.1		
				E	0.3	TP1-2	
				E	0.5		
				E	0.8	TP1-3	
1				E	1.0		
	- dark brown sandy clay, rock fragments throughout (shale fragments up to 300mm squared)	5.0		E	1.2	TP1-4	
				E	1.4		
	GRAVELLY SAND - light brown			E	1.8	TP1-5	
2				E	2.0		
	GRAVELLY SANDY CLAY - brown grey mottled sandy gravelly clay	4.0		E	2.3	TP1-6	
				E	2.5		
				E	2.8	TP1-7	
3	End of Test Pit at 3 m	3.0			3.0		
4		2.0					

D Disturbed Sample E Environmental Sample pp Pocket Penetrometer Test (kPa)
 B Bulk Sample U Undisturbed Tube (50mm diameter) Is(50) Point Load Test Results (MPa)
 V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 300mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Dwg No. 161163-050CD-C-301-1006, Nov 2010.

DRAFT

TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 1 - GENERAL BONE LOG TEMPLATE.GDT 28/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 1

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL6.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light grey silty sand	6.2		E	0.0 0.1	TP1-1	
	CLAYEY SAND - dark brown, minor brick fragments, glass, ceramics, concrete	6.0		E	0.3 0.5	TP1-2	
				E	0.8	TP1-3	
1				E	1.0		
	- dark brown sandy clay, rock fragments throughout (shale fragments up to 300mm squared)	5.0		E	1.2 1.4	TP1-4	
	GRAVELLY SAND - light brown			E	1.8	TP1-5	
2				E	2.0		
	GRAVELLY SANDY CLAY - brown grey mottled sandy gravelly clay	4.0		E	2.3 2.5	TP1-6	
				E	2.8	TP1-7	
3	End of Test Pit at 3 m	3.0			3.0		
4		2.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 300mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

DRAFT

TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITTS + SAMPLE ID GPJ GENERAL BONE LOG_TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 2

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL6.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light grey silty sand - dark brown silty gravelly sand	6.2		E	0.0 0.1	TP2-1	
		6.0		E	0.3 0.5	TP2-2	
	- dark brown sandy clay, shale fragments			E	0.8 1.0	TP2-3	
1	SANDY CLAY - dark brown	5.0		E	1.2 1.4	TP2-4	
	GRAVELLY SAND - light brown			E	1.8 2.0	TP2-5	
2		4.0		E	2.4 2.6	TP2-6	
	GRAVELLY SANDY CLAY - brown grey mottled (weathered rock)			E	2.8 3.0	TP2-7	
3	End of Test Pit at 3 m	3.0					
4		2.0					

D Disturbed Sample

B Bulk Sample

V Vane Shear Strength (Uncorrected) kPa

E Environmental Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

Is(50) Point Load Test Results (MPa)

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 400mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's RNA Showground Redevelopment Enabling Works - Stage 1',
Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 2 - SAMPLE ID.GPJ GENERAL BORE LOG TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 3

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL5.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light grey silty sand - dark brown silty gravelly sand, clay piping, brick fragments, concrete	5.8		E	0.0 0.1	TP3-1	
				E	0.3 0.5	TP3-2 QC-01 QC-02	
	- dark brown and orange mottle silty sandy clay	5.0		E	0.8 1.0	TP3-3	
1				E	1.3	TP3-4	
	GRAVELLY SAND - brown, grey and orange	4.0		E	1.5 1.8 2.0	TP3-5	
2				E	2.3 2.5	TP3-6	
	SILTY CLAY - light grey and orange mottle	3.0		E	2.8 3.0	TP3-7	
3	End of Test Pit at 3 m						
4							
		2.0					
		1.0					

D Disturbed Sample E Environmental Sample pp Pocket Penetrometer Test (kPa)
 B Bulk Sample U Undisturbed Tube (50mm diameter) Is(50) Point Load Test Results (MPa)
 V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 400mm bucket

Groundwater: Groundwater was encountered at 2.40m to 2.50m during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrance, Fortitude Valley

Project No: 011-165B

TEST PIT 4

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL5.6m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light brown silty sand	5.6		E	0.0	TP4-1	
	- dark brown silty gravelly sand, brick fragments, minor shale			E	0.1		
	- dark brown and minor orange mottle silty sandy clay			E	0.2	TP4-2	
				E	0.4		
		5.0		E	0.8	TP4-3	
				E	1.0		
1	SILTY SANDY CLAY - brown orange mottle			E	1.3	TP4-4	
		4.0		E	1.5		
				E	1.8	TP4-5	
2	GRAVELLY SAND - brown, orange and grey			E	2.0		
				E	2.3	TP4-6	
	SILTY CLAY - grey orange mottle			E	2.5		
		3.0		E	2.8	TP4-7	
3	End of Test Pit at 3 m			E	3.0		
		2.0					
4		1.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 400mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 4 - GENERAL BORE LOG TEMPLATE.GDT 28/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 5

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL5.5m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light brown silty sand, gravel (<20mm)	5.5		E	0.0 0.1	TP5-1	
	- silty sand, rock fragments (shale ~ 200mm squared)			E	0.3 0.5	TP5-2	
	- dark brown orange mottled silty clay			E	0.8 1.0	TP5-3	
1	SILTY SANDY CLAY - brown orange mottled			E	1.3 1.5	TP5-4	
				E	1.8 2.0	TP5-5	
2	GRAVELLY SAND - brown, grey and orange			E	2.3 2.5	TP5-6	
	- brown, grey and orange (saturated)			E	2.8 3.0	TP5-7	
3	End of Test Pit at 3.2 m						
4							

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 400mm bucket

Groundwater: Groundwater was encountered at 2.80m during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

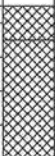
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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITS + SAMPLE ID.GPJ GENERAL 6 LOG_TEMPLATE.GDT 28/11/11 GINT

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Ground Surface Level: RL5.5m*

Ground Surface Level: RL5.5m*						
	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
	5.5		E	0.0	TP6-1	
				0.1		
			E	0.3	TP6-2	
	5.0		0.5			
			E	0.8	TP6-3	
				1.0		
	4.0		E	1.3	TP6-4	
				1.5		
			E	1.8	TP6-5	
				2.0		
	3.0		E	2.3	TP6-6	
				2.5		
			E	2.8	TP6-7	
				3.0		
	2.0					
	1.0					

pp Pocket Penetrometer Test (kPa)
ls(50) Point Load Test Results (MPa)

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TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 7

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL5.3m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light brown silty sand - brown silty gravelly sand, bricks/concrete fragments, rocks	5.3		E	0.0 0.1	TP7-1	
		5.0		E	0.3 0.5	TP7-2	
				E	0.8	TP7-3 QC-03 QC-04	
		4.0		E	1.3	TP7-4	
	SANDY CLAY - brown orange mottle			E	1.5		
				E	1.8	TP7-5	
2	GRAVELLY SAND - brown grey and orange	3.0		E	2.0		
				E	2.3	TP7-6	
	SILTY CLAY - grey orange mottle			E	2.5		
				E	2.8	TP7-7	
3	End of Test Pit at 3 m			E	3.0		
		2.0					
		1.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 400mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITTS - SAMPLE ID GPJ GENERAL L LCO TEMPLATE GOT 201111 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 8

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL5.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light brown grey silty sand	5.2		E	0.0	TP8-1	
	- light brown silty gravelly sand, bricks/concrete fragments	5.0		E	0.1		
				E	0.3	TP8-2	
				E	0.5		
	- dark brown gravelly sandy clay, concrete, glass, bricks			E	0.8	TP8-3	
1				E	1.0		
	SILTY SANDY CLAY - brown orange mottle	4.0		E	1.3	TP8-4	
				E	1.5		
				E	1.8	TP8-5	
2				E	2.0		
		3.0		E	2.3	TP8-6	
				E	2.5		
				E	2.8	TP8-7	
3	End of Test Pit at 3 m			E	3.0		
		2.0					
4							
		1.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: CAT 304 4 Tonne Excavator

Bucket Size: 400mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITTS - SAMPLE ID.GPJ GENERAL BORE LOG_TEMPLATE.GDT 26/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 9

Page No: 1 of 1

Date: 9 November 2011

Ground Surface Level: RL5.1m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - dark brown black silty gravelly sand, glass and concrete fragments	5.1			0.0	TP9-1	
		5.0		E	0.1		
				E	0.3	TP9-2	
	- dark brown gravelly sandy clay			E	0.5		
				E	0.8	TP9-3	
	- black gravelly sandy clay, ash and tars throughout			E	1.0		
1		4.0		E	1.3	TP9-4	
	- dark grey sandy gravel, some clay			E	1.5		
				E	1.8	TP9-5	
	SILTY CLAY - grey orange mottle			E	2.0		
2		3.0		E	2.3	TP9-6	
				E	2.5		
				E	2.8	TP9-7	
3	End of Test Pit at 3 m	2.0			3.0		
4		1.0					

D Disturbed Sample E Environmental Sample pp Pocket Penetrometer Test (kPa)
 B Bulk Sample U Undisturbed Tube (50mm diameter) Is(50) Point Load Test Results (MPa)
 V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's RNA Showground Redevelopment Enabling Works - Stage 1*,
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 9 - SAMPLE ID GPJ GENERAL & .LOG_TEMPLATE.GDT 2011/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 10

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - brown silty sand, bricks, concrete fragments, gravel, glass	7.2		E	0.0	TP10-1	
		7.0		E	0.1		
				E	0.3	TP10-2	
				E	0.5		
	- light grey gravelly sand (moist)			E	0.8	TP10-3	
1				E	1.0	QC-05 QC-06	
		6.0		E	1.3	TP10-4	
	SILTY CLAY - dark brown			E	1.5		
				E	1.8	TP10-5	
2	SILTY SANDY CLAY - grey orange mottled			E	2.0		
		5.0		E	2.3	TP10-6	
				E	2.5		
				E	2.8	TP10-7	
3	End of Test Pit at 3 m			E	3.0		
		4.0					
4							
		3.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITTS + SAMPLE ID GPJ GENERAL BORE LOG TEMPLATE.GDT 20/11/11 GNT

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TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 11

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - sand and gravel, bricks and concrete	7.2		E	0.0	TP11-1	
					0.1		
		7.0		E	0.3	TP11-2	
	- silty gravelly sand, ash throughout				0.4		
	- grey orange gravelly sandy clay						
				E	0.8	TP11-3	
1					1.0		
	- light grey gravelly sand	6.0		E	1.3	TP11-4	
				E	1.5		
	SILTY SANDY CLAY - grey orange mottle				1.8	TP11-5	
2				E	2.0		
		5.0		E	2.3	TP11-6	
				E	2.5		
				E	2.8	TP11-7	
3	End of Test Pit at 3 m			E	3.0		
		4.0					
4							
		3.0					

D Disturbed Sample

B Buk Sample

V Vane Shear Strength (Uncorrected) kPa

E Environmental Sample

U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)

Is(50) Point Load Test Results (MPa)

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITS - SAMPLE ID.GPJ GENERAL B. LOG_TEMPLATE.GDT 28/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 12

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.2m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - brown, coarse sand	7.2		E	0.0	TP12-1	
	- ash layer	7.0		E	0.1		
				E	0.2	TP12-2	
				E	0.4		
	- brown and grey gravelly sandy clay			E	0.5	TP12-3	
				E	0.6		
				E	0.8	TP12-4	
1				E	1.0		
		6.0					
	SILTY SANDY CLAY - grey orange mottle			E	1.4	TP12-5	
				E	1.6		
				E	1.8	TP12-6	
2				E	2.0		
		5.0					
				E	2.3	TP12-7	
				E	2.5		
				E	2.8	TP12-8	
3	End of Test Pit at 3 m			E	3.0		
		4.0					
4							
		3.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 12 - GENERAL BORE LOG TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 13

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - dark brown gravelly sand and clays, bricks, concrete, plastics	7.8		E	0.0 0.1	TP13-1	
				E	0.3 0.5	TP13-2	
		7.0		E	0.8 1.0	TP13-3	
				E	1.3 1.5	TP13-4 QC-07 QC-08	
	SANDY CLAY - brown orange mottie	6.0		E	1.8 2.0	TP13-5	
	SILTY SANDY CLAY - brown orange mottie			E	2.4 2.5	TP13-6	
	- layer of gravelly sand - brown orange mottie	5.0		E	2.8 3.0	TP13-7	
3	End of Test Pit at 3 m						
4		4.0					
		3.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID: 011-165B - TEST PITS - SAMPLE ID.GPJ GENERAL B... - LOG_TEMPLATE.GDT 28/11/11 GINT

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Ground Surface Level: RL7.8m*

Ground Surface Level: RL 7.8m*						
	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
	7.8		E	0.0	TP14-1	
			E	0.1		
			E	0.3	TP14-2	
				0.5		
	7.0		E	0.8	TP14-3	
				1.0		
			E	1.3	TP14-4	
				1.5		
	6.0		E	1.8	TP14-5	
				2.0		
			E	2.3	TP14-6	
				2.5		
	5.0		E	2.8	TP14-7	
				3.0		
	4.0					
	3.0					

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

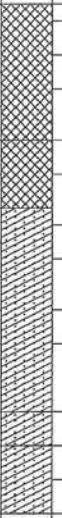
Project No: 011-165B

TEST PIT 15

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - brown gravelly sand and clay, concrete fragments and bricks	7.8		E	0.0 0.1	TP15-1	
				E	0.3 0.5	TP15-2	
				E	0.8 1.0	TP15-3	
1	- sandy gravel and rock (shale)	7.0		E	1.3 1.5	TP15-4	
	SANDY CLAY - grey orange mottle			E	1.8 2.0	TP15-5	
2		6.0		E	2.4 2.6	TP15-6	
	- gravelly			E	2.8 3.0	TP15-7	
	- grey orange mottle	5.0					
3	End of Test Pit at 3 m						
4		4.0					
		3.0					

D Disturbed Sample
B Bulk Sample
V Vane Shear Strength (Uncorrected) kPa

E Environmental Sample
U Undisturbed Tube (50mm diameter)

pp Pocket Penetrometer Test (kPa)
Is(50) Point Load Test Results (MPa)

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITS - SAMPLE ID.GPJ GENERAL B... LOG_TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 16

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light brown gravelly sand, concrete and brick fragments	7.8		E	0.0	TP16-1	
				E	0.1	QC-09	
				E	0.3	QC-10	
				E	0.5	TP16-2	
				E	0.8	TP16-3	
1	- grey brown sandy clay, shale fragments	7.0		E	1.0		
	SANDY CLAY - grey orange mottle			E	1.3	TP16-4	
				E	1.5		
		6.0		E	1.8	TP16-5	
2				E	2.0		
				E	2.3	TP16-6	
				E	2.5		
	- grey orange mottle, gravel	5.0		E	2.8	TP16-7	
3	End of Test Pit at 3 m				3.0		
4		4.0					
		3.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 16 - GENERAL BORE LOG TEMPLATE.GDT 28/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 17

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - light brown gravelly sand	7.8		E	0.0 0.1	TP17-1	
				E	0.3 0.5	TP17-2	
	- sandy clay, shale fragments	7.0		E	0.8	TP17-3	
1	SANDY CLAY - dark brown orange mottle			E	1.0 1.3 1.5	TP17-4	
	- brown orange mottle	6.0		E	1.8 2.0	TP17-5	
2				E	2.4 2.6	TP17-6	
	- gravelly			E	2.8	TP17-7	
	- brown orange mottle	5.0		E	3.0		
3	End of Test Pit at 3 m						
4		4.0					
		3.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITS + SAMPLE ID.GPJ GENERAL BUILDING LOG_TEMPLATE.GDT 29/11/11 GINT

Release

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TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrance, Fortitude Valley

Project No: 011-165B

TEST PIT 18

Page No: 1 of 1

Date: 10 November 2011

Ground Surface Level: RL7.8m*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL -brown gravelly sand, bricks and concrete	7.8		E	0.0 0.1	TP18-1	
				E	0.3 0.5	TP18-2	
	- shale	7.0		E	0.8	TP18-3	
1	SANDY CLAY - dark brown			E	1.0 1.3	QC-11 QC-12 TP18-4	
	GRAVELLY SANDY CLAY - brown orange mottle			E	1.4		
2		6.0		E	1.8 2.0	TP18-5	
				E	2.3 2.5	TP18-6	
	- brown orange mottle, sandy clay	5.0		E	2.8 3.0	TP18-7	
3	End of Test Pit at 3 m						
4		4.0					
		3.0					

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 30 Tonne Tracked Excavator

Bucket Size: 1200mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 18 - GENERAL BORE LOG TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 19

Page No: 1 of 1

Date: 17 November 2011

Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - brown, gravelly sand and clay, bricks, concrete	TBA		E	0.0 0.1	TP19-1	
	- brown, sandy clay, minor gravel/rocks			E	0.3 0.5	TP19-2 QC-13 QC-14	
1				E	0.8 1.0	TP19-3	
	GRAVELLY SANDY CLAY - brown			E	1.4 1.5	TP19-4	
2	- brown orange mottle, minor sand layers with gravel			E	1.8 2.0	TP19-5	
				E	2.3 2.5	TP19-6	
3	SANDY CLAY - grey brown, orange mottle			E	2.8 3.0	TP19-7	
	End of Test Pit at 3 m						
4							

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 35 Tonne Tracked Excavator

Bucket Size: 1800mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITS - SAMPLE ID.GPJ GENERAL BO-LOG_TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 20

Page No: 1 of 1

Date: 17 November 2011

Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - brown, gravelly sand and clay, bricks fragments and concrete	TBA		E	0.0 0.1	TP20-1	
				E	0.3 0.5	TP20-2	
	- brown, sandy clay, and coarse grained sand			E	0.8 1.0	TP20-3	
				E	1.3 1.5	TP20-4	
	SANDY CLAY - brown grey mottle, with sand/gravel layers throughout			E	1.8 2.0	TP20-5	
				E	2.3 2.5	TP20-6	
	- grey orange mottle			E	2.8 3.0	TP20-7	
3	End of Test Pit at 3 m						
4							

D Distrubed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Buk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 35 Tonne Tracked Excavator

Bucket Size: 1800mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 20 - GENERAL BORE LOG TEMPLATE.GDT 29/11/11 GMT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 21

Page No: 1 of 1

Date: 17 November 2011

Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - dark brown, gravelly sand, ash layers throughout	TBA		E	0.0 0.1	TP21-1	
				E	0.3 0.5	TP21-2	
	- sandy clay and gravel, rock fragments (~20cm squared), shale			E	0.8 1.0	TP21-3 QC-15 QC-16	
1	- light grey and blue green tinge sandy clay			E	1.3 1.5	TP21-4	
	SANDY CLAY - light brown, with sand/gravel layers throughout			E	1.8 2.0	TP21-5	
2				E	2.3 2.5	TP21-6	
	SILTY SANDY CLAY - grey brown mottles			E	2.8 3.0	TP21-7	
3	End of Test Pit at 3 m						
4							

D Disturbed Sample E Environmental Sample pp Pocket Penetrometer Test (kPa)
 B Bulk Sample U Undisturbed Tube (50mm diameter) ls(50) Point Load Test Results (MPa)
 V Vane Shear Strength (Uncorrected) kPa

Rig: 35 Tonne Tracked Excavator

Bucket Size: 1800mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITS - SAMPLE ID.GPJ GENERAL BU-4 LOG_TEMPLATE.GDT 29/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 22

Page No: 1 of 1

Date: 17 November 2011

Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - gravelly sand, bricks, ash layers throughout	TBA		E	0.0	TP22-1	
				E	0.1		
				E	0.3	TP22-2	
				E	0.5		
	- brown, silty sandy clay, minor amounts of shale fragments becoming moist with depth			E	0.8	TP22-3	
1				E	1.0		
	SANDY CLAY - light brown			E	1.3	TP22-4	
				E	1.5		
				E	1.8	TP22-5	
2	- grey red mottle			E	2.0		
				E	2.3	TP22-6	
				E	2.5		
				E	2.8	TP22-7	
3	End of Test Pit at 3 m			E	3.0		
4							

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 35 Tonne Tracked Excavator

Bucket Size: 2000mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PITTS + SAMPLE ID.GPJ GENERAL BORE LOG TEMPLATE.GDT 2011/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-165B

TEST PIT 23

Page No: 1 of 1

Date: 17 November 2011

Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - brown gravelly sand and clay, layers of ash with brick fragments	TBA		E	0.0 0.1	TP23-1	
				E	0.3 0.5	TP23-2	
	- brown sandy clay and gravel, bricks			E	0.8 1.0	TP23-3	
1				E	1.3 1.5	TP23-4	
	SANDY CLAY - dark grey, with gravel			E	1.8 2.0	TP23-5	
2				E	2.3 2.5	TP23-6	
	- grey brown mottle			E	2.8 3.0	TP23-7	
3	End of Test Pit at 3 m						
4							

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 35 Tonne Tracked Excavator

Bucket Size: 2000mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1',
 Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-165B - TEST PIT 23 - GENERAL LOG TEMPLATE.GDT 28/11/11 GINT

TEST PIT REPORT

**BUTLER
PARTNERS**

Client: L&D Contracting

Project: RNA Showgrounds Redevelopment - Enabling Works - Stage 1

Location: St Pauls Terrace, Fortitude Valley

Project No: 011-1658

TEST PIT 24

Page No: 1 of 1

Date: 17 November 2011

Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Lithology	Sample Type	Sample Depth (m)	Sample ID	Test Results
0	FILL - sandy gravel and clay, bricks, pipes	TBA		E	0.0	TP24-1	
	- sandy gravel and clay, minor brick fragments			E	0.1		
				E	0.3	TP24-2	
				E	0.5		
				E	0.8	TP24-3	
				E	1.0		
1	SANDY CLAY - light brown			E	1.3	TP24-4	
	- dark grey			E	1.5	QC-17 QC-18	
				E	1.8	TP24-5	
2				E	2.0		
	- grey brown mottle			E	2.3	TP24-6	
				E	2.5		
				E	2.8	TP24-7	
3	End of Test Pit at 3 m			E	3.0		
4							

D Disturbed Sample **E** Environmental Sample **pp** Pocket Penetrometer Test (kPa)
B Bulk Sample **U** Undisturbed Tube (50mm diameter) **Is(50)** Point Load Test Results (MPa)
V Vane Shear Strength (Uncorrected) kPa

Rig: 35 Tonne Tracked Excavator

Bucket Size: 2000mm bucket

Groundwater: No free groundwater was encountered during excavation

Remarks: *Approx. ground level interpolated from Cardno (QLD) Pty Ltd's 'RNA Showground Redevelopment Enabling Works - Stage 1', Drwg No. 161163-050CD-C-301-1006, Nov 2010.

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TEST PIT REPORT WITH SAMPLE ID 011-1658 - TEST PITTS + SAMPLE ID.GPJ GENERAL BORE LOG_TEMPLATE.GDT 28/11/11 GINT

Notes on Description and Classification of Soil

The methods of description and classification of soils used in this report are generally based on Australian Standard AS1726-1993 *Geotechnical Site Investigations*.

Soil description is based on an assessment of disturbed samples, as recovered from bores and excavations, or from undisturbed materials as seen in excavations and exposures or in undisturbed samples. Descriptions given on report sheets are an interpretation of the conditions encountered at the time of investigation.

In the case of cone or piezocone penetrometer tests, actual soil samples are not recovered and soil description is inferred based on published correlations, past experience and comparison with bore and/or test pit data (if available).

Soil classification is based on the particle size distribution of the soil and the plasticity of the portion of the material finer than 0.425mm. The description of particle size distribution and plasticity is based on the results of visual field estimation, laboratory testing or both. When assessed in the field, the properties of the soil are estimated; precise description will always require laboratory testing to define soil properties.

Where soil can be clearly identified as FILL this will be noted as the main soil type followed by a description of the composition of the fill (e.g. FILL – yellow-brown, fine to coarse grained gravelly clay fill with concrete rubble). If the soil is assessed as possibly being fill this will be noted as an additional observation.

Soils are generally described using the following sequence of terms. In certain instances, not all of the terms will be included in the soil description.

MAIN SOIL TYPE (CLASSIFICATION GROUP SYMBOL)

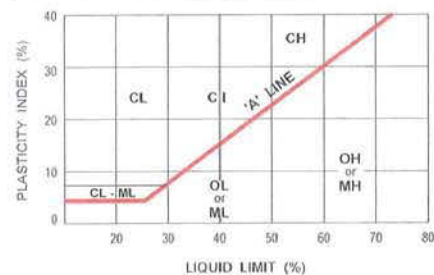
- strength/density, colour, structure/grain size, secondary and minor components, additional observations

Information on the definition of descriptive and classification terms follows.

SOIL TYPE and CLASSIFICATION GROUP SYMBOLS

	Major Divisions	Particle Size	Classification Group Symbol	Typical Names
COARSE GRAINED SOILS (more than half of material is larger than 0.075 mm)	BOULDERS	> 200mm		
	COBBLES	63 – 200mm		
	GRAVELS (more than half of coarse fraction is larger than 2.36mm)	Coarse: 20 – 63mm Medium: 6 – 20mm Fine: 2.36 – 6mm	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels.
			GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (more than half of coarse fraction is smaller than 2.36mm)	Coarse: 0.6 – 2.36mm Medium: 0.2 – 0.6mm Fine: 0.075 – 0.2mm	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands and gravelly sands; little or no fines, uniform sands.
			SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
			ML	Inorganic silts and very fine sands, silty/clayey fine sands or clayey silts with low plasticity.
			CL and CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays.
FINE GRAINED SOILS (more than half of material is smaller than 0.075 mm)	SILTS & CLAYS (liquid limit <50%)		OL	Organic silts and organic silty clays of low plasticity.
			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils.
			CH	Inorganic clays of high plasticity.
	SILTS & CLAYS (liquid limit >50%)		OH	Organic clays of medium to high plasticity, organic silts.
	HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils.

PLASTICITY CHART FOR CLASSIFICATION OF FINE GRAINED SOILS



(Reference: Australian Standard AS1726-1993 *Geotechnical site investigations*)

DESCRIPTIVE TERMS FOR MATERIAL PROPORTIONS

Coarse Grained Soils		Fine Grained Soils	
% Fines	Modifier	% Coarse	Modifier
< 5	Omit, or use 'trace'	< 15	Omit, or use trace.
5 – 12	Describe as 'with clay/silt' as applicable.	15 – 30	Describe as 'with sand/gravel' as applicable.
> 12	Prefix soil as 'silty/clayey' as applicable	> 30	Prefix soil as 'sandy/gravelly' as applicable.

STRENGTH TERMS – COHESIVE SOILS

Strength Term	Undrained Shear Strength	Field Guide to Strength
Very soft	< 12kPa	Exudes between the fingers when squeezed in hand.
Soft	12 – 25kPa	Can be moulded by light finger pressure.
Firm	25 – 50kPa	Can be moulded by strong finger pressure.
Stiff	50 – 100kPa	Cannot be moulded by fingers, can be indented by thumb.
Very stiff	100 – 200kPa	Can be indented by thumb nail.
Hard	> 200kPa	Can be indented with difficulty by thumb nail.

DENSITY TERMS – NON COHESIVE SOILS

Density Term	Density Index	SPT "N"	CPT Cone Resistance
Very loose	< 15%	0 – 5	0 – 2MPa
Loose	15 – 35%	5 – 10	2 – 5MPa
Medium dense	35 – 65%	10 – 30	5 – 15MPa
Dense	65 – 85%	30 – 50	15 – 25MPa
Very dense	> 85%	> 50	> 25MPa

COLOUR

The colour of a soil will generally be described in a 'moist' condition using simple colour terms (eg. black, grey, red, brown etc.) modified as necessary by "pale", "dark", "light" or "mottled". Borderline colours will be described as a combination of colours (eg. grey-brown).

EXAMPLE

e.g. CLAYEY SAND (SC) – medium dense, grey-brown, fine to medium grained with silt.

Indicates a medium dense, grey-brown, fine to medium grained clayey sand with silt.

RNA Showgrounds
St Pauls Terrace, Fortitude Valley
Project No. 011-1658, November 2011

Table 2: Analytical Results for Soils (Total Concentrations)

						Organics (mg/kg)										Inorganics (mg/kg)														
Sample Date	Sample Location	Sample Duplicate	Sample Number	Sample Depth	Material Type	PAH					TPH					BTEX					Pesticides					Metals				
						Total	Benzo (a) pyrene	C ₁₂ -C ₁₄	C ₁₅ -C ₁₈	C ₁₉ -C ₂₈	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX	Aldrin & Dieldrin	Chlordane	DDT	Heptachlor	As	Cd	Total Cr	Cu	Pb	Hg	Ni	Zn			
Background Levels						0.05-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2-30	0.04-2	0.5-110	1-190	<200	0.001-0.1	2-400	2-180	
TPR Approved Clean Fill Criteria (mg/kg)						20	1	100 ¹	100 ¹	1,000 ¹	1,000 ¹	-	-	-	7	0.2	-	0.2	-	-	100	3	100 ¹	200	300	1	60	400		
RP Area E Site Acceptance Criteria (SAC) (mg/kg)						100	5	-	-	1,000	1,000	-	-	-	-	-	-	-	-	-	5,000	1,500	-	5,000	1,500	-	-	-		
RP SAC - HIL-F (mg/kg)						100	5	100	100	1,000	1,000	1	-	-	7	-	-	-	-	-	500	100	500 ¹	5,000	1,500	75	3,000	35,000		
Laboratory Level of Reporting (mg/kg)						8	0.5	10	50	100	100	0.2	0.5	0.5	1.0	2.2	0.1	0.1	0.3	0.1	5	1	2	5	0.1	2	5			
09-Nov-11	Area E	-	TP1-1	0-0.1	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	<1.0	130	120	16	0.1	42	74			
09-Nov-11	Area E	-	TP1-2	0.3-0.5	Fill	31	2.9	<25	<50	<100	<100	<0.2	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0	8.1	2	12	96	1100	0.55	12	720			
09-Nov-11	Area E	-	TP1-3	0.8-1.0	Fill	24.3	2.1	-	-	-	-	-	-	-	-	-	-	-	-	22	<1.0	82	42	320	0.47	21	250			
09-Nov-11	Area E	-	TP1-4	1.2-1.4	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	9.4	<1.0	6.6	13	27	<0.1	4.6	49			
09-Nov-11	Area E	-	TP1-5	1.8-2.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	<1.0	6.9	10	24	<0.1	3.3	41			
09-Nov-11	Area E	-	TP1-6	2.3-2.5	Gravelly Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	<1.0	7.3	2.6	7.5	<0.1	1.8	9.6			
09-Nov-11	Area E	-	TP1-7	0.1	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	19	<1.0	13	9.9	38	<0.1	3.9	93			
09-Nov-11	Area E	-	TP1-8	0.3-0.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<1.0	10	45	800	0.33	11	469			
09-Nov-11	Area E	-	TP1-9	0.8-1.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	<1.0	7.5	22	93	0.36	9.6	120			
09-Nov-11	Area E	-	TP1-10	1.2-1.4	Fill	<1.0	<0.5	<25	<50	<100	<100	<0.2	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0	8.9	<1.0	6.3	8.1	20	<0.1	2.7	17			
09-Nov-11	Area E	-	TP1-11	1.8-2.0	Gravelly Sandy Clay	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	16	<1.0	7.7	5.7	16	<0.1	2.8	33			
09-Nov-11	Area E	-	TP1-12	2.3-2.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<1.0	5.4	5.8	22	<0.1	2.3	36			
09-Nov-11	Area E	-	TP1-13	2.8-3.0	Gravelly Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	<1.0	13	13	72	<0.1	4.2	120			
09-Nov-11	Area E	-	TP1-14	0.1	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<1.0	11	54	1300	4.4	13	999			
09-Nov-11	Area E	-	TP1-15	0.3-0.5	Fill	39	3.3	<25	<50	<100	<100	<0.2	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0	9.5	<1.0	10	49	1100	4.2	10	550			
09-Nov-11	Area E	Blind Split	OC01	0.3-0.5	Duplicate of TP1-2	36.8	3	<25	<50	<100	<100	<0.2	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0	6	<1	8	30	687	2.1	9	485			
09-Nov-11	Area E	Blind Split	OC02	0.3-0.5	Duplicate of TP1-3	181.2	15.9	<10	<50	360	160	<0.2	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-			
09-Nov-11	Area E	-	TP1-16	0.8-1.0	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	6.3	<1.0	8.4	9.2	18	<0.1	4	130			
09-Nov-11	Area E	-	TP1-17	1.3-1.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	<1.0	4.1	3.5	8.5	<0.1	1.3	12			
09-Nov-11	Area E	-	TP1-18	1.8-2.0	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	10	<1.0	5.8	4.3	11	<0.1	1.8	33			
09-Nov-11	Area E	-	TP1-19	2.3-2.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<1.0	6.5	4.5	12	<0.1	2.5	34			
09-Nov-11	Area E	-	TP1-20	2.8-3.0	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	<1.0	6.4	6	9.7	<0.1	1.6	8.1			
09-Nov-11	Area E	-	TP1-21	0.1	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	<1.0	12	9.1	53	<0.1	4.4	85			
09-Nov-11	Area E	-	TP1-22	0.3-0.5	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	7.1	<1.0	6.9	9.5	30	0.14	3.4	86			
09-Nov-11	Area E	-	TP1-23	0.8-1.0	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	9.2	<1.0	13	13	44	<0.1	5.5	130			
09-Nov-11	Area E	-	TP1-24	1.2-1.4	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<1.0	9.1	7	13	<0.1	2.8	49			
09-Nov-11	Area E	-	TP1-25	1.8-2.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1	<1.0	5.9	8.6	31	<0.1	2.2	69			
09-Nov-11	Area E	-	TP1-26	2.3-2.5	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	<1.0	5.8	4.3	6.6	<0.1	6.1	6.9			
09-Nov-11	Area E	-	TP1-27	2.8-3.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	<1.0	11	13	79	<0.1	6.1	110			
09-Nov-11	Area E	-	TP1-28	0.1	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	7.1	<1.0	9	29	75	<0.1	1.6	81			
09-Nov-11	Area E	-	TP1-29	0.3-0.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.8	<1.0	13	9.7	16	<0.1	4.6	20			
09-Nov-11	Area E	-	TP1-30	0.8-1.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	<1.0	8.6	6.3	10	<0.1	2.3	10			
09-Nov-11	Area E	-	TP1-31	1.3-1.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<1.0	8.1	6.8	9.2	<0.1	1.2	63			
09-Nov-11	Area E	-	TP1-32	1.8-2.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<1.0	3.8	4.3	9.7	<0.1	1.3	25			
09-Nov-11	Area E	-	TP1-33	2.3-2.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<1.0	9.1	5.8	13	<0.1	3.2	32			
09-Nov-11	Area E	-	TP1-34	2.8-3.0	Fill	<1.0	<0.5	<25	<50	<100	<100	<0.2	<0.2	<0.2	<1.0	<1.0	-	-	-	2.5	<1.0	6.4	76	30	<0.1	3.1	87			
09-Nov-11	Area E	-	TP1-35	0.1	Fill	25.2	2.5	<25	<50	<100	130	<0.2	<0.2	<0.2	<1.0	<1.0	-	-	-	13	<1.0	28	66	1200	0.73	19	2300			
09-Nov-11	Area E	-	TP1-36	0.3-0.5	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	5.3	<1.0	9.9	11	18	<0.1	4.2	23			
09-Nov-11	Area E	-	TP1-37	0.8-1.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	<1.0	14	11	19	<0.1	3.6	16			
09-Nov-11	Area E	-	TP1-38	1.3-1.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	<1.0	5.2	3.2	8.7	<0.1	1.4	7.6			
09-Nov-11	Area E	-	TP1-39	1.8-2.0	Fill	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	2.4	<1.0	10	8.7	19	<0.1	2.7	15			
09-Nov-11	Area E	-	TP1-40	2.3-2.5	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	<1.0	8.4	25	270	0.27	6.1	210			
09-Nov-11	Area E	-	TP1-41	2.8-3.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	2	24	130	2800	0.85	16	4000			
09-Nov-11	Area E	Blind Split	TP1-42	0.3-0.5	Duplicate of TP1-3	<1.0	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	13	<1.0	13	46	470	4.6	9.9	490			
09-Nov-11	Area E	Blind Split	OC03	0.8-1.0	Duplicate of TP1-3	28.4	2.3	-	-	-	-	-																		

Table 2: Analytical Results for Soils (Total Concentrations)

Table 2: Analytical Results for Soils (Total Concentrations)

NOTES:	1	Analyte exceeds the TPR approved Clean Fill Criteria
	1	Analyte exceeds the RP Site Acceptance Criteria (SAC)
	<LOR	Below the limit of reporting
	100 %	GLD EPA Draft Investigation Thresholds for Underground
	100%	Assumes Cr(VI)
	-	Not analyzed

RNA Showgrounds
St Pauls Terrace, Fortitude Valley
Project No. 011-165B, November 2011

Table 3: TCLP Results for Soils

Sample Date	Sample Location	Sample Duplicate	Sample Number	Sample Depth	Material Type	Organics (mg/L)						Inorganics (mg/L)					
						PAH		Pesticides				Metals					
						Total	Benzo (a) pyrene	Aldrin & Dieldrin	Chlordane	DDT	Heptachlor	As	Cd	Total Cr	Cu	Pb	Hg
Landfill Criteria - Unlined (mg/kg)						0.1	0.002	0.001	0.006	0.003	0.003	0.5	0.1	0.5	10	0.5	0.01
Landfill Criteria - Maximum (mg/kg)						1.0	0.02	0.03	0.1	2.0	0.03	5.0	0.5	5.0	200	5.0	0.1
Laboratory Level of Reporting (mg/L)						0.0155	0.001	0.0001	0.0001	0.001	0.0001	0.01	0.005	0.01	0.01	0.01	0.0001
09-Nov-11	Area E	-	TP6-3	0.8-1.0	Fill	-	-	-	-	-	-	-	-	-	-	-	-
09-Nov-11	Area E	-	TP7-2	0.3-0.5	Fill	<LOR	<0.001	-	-	-	-	-	-	-	-	0.39	-
09-Nov-11	Area E	-	TP8-4	1.3-1.5	Silty Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-
09-Nov-11	Area E	-	TP9-3	0.8-1.0	Fill	-	-	-	-	-	-	-	-	-	-	0.15	-
10-Nov-11	Area E	-	TP14-4	1.3-1.5	Fill	-	-	<LOR	<LOR	<LOR	<LOR	-	-	-	-	-	<0.0001
10-Nov-11	Area E	-	TP14-5	1.8-2.0	Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-
10-Nov-11	Area E	-	TP16-2	0.3-0.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-
10-Nov-11	Area E	-	TP17-1	0-0.1	Fill	-	-	-	-	-	-	-	-	-	-	12	-
10-Nov-11	Area E	-	TP17-3	0.8-1.0	Fill	<LOR	<0.001	-	-	-	-	-	-	-	-	-	<0.014
10-Nov-11	Area E	-	TP17-4	1.3-1.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-
10-Nov-11	Area E	-	TP18-2	0.3-0.5	Fill	-	-	-	-	-	-	-	-	-	-	-	-
10-Nov-11	Site Office	-	XS-1	-	Stockpile (Skip Bin)	0.03	0.003	-	-	-	-	-	0.69	-	-	2.4	0.065
09-Nov-11	Area E	Blind	QC01	0.3-0.5	Duplicate of TP3-2	<LOR	<0.001	-	-	-	-	-	-	-	-	0.091	<0.0001

NOTES:

- 1 Analyte exceeds the Unlined Landfill Criteria
- 1 Analyte exceeds the Lined Landfill Criteria
- <LOR Below the limit of reporting
- Not analysed



REPORT OF ANALYSIS

Laboratory Reference: A11/5375-A [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 4236
Project: Bowen Hills
Sample Type: Soil
No. of Samples: 36
Date Received: 9/11/2011
Date Completed: 16/11/2011

Contact: sch4p4(6)

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Perso
Technical Enquiries:
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Email: brisbane@advancedanalytical.com.au
sch4p4(6) Perso@advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal inform

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 16 November 2011

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP1 - 1	TP1 - 2	TP1 - 3	TP1 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	99.0	88.4	89.1	80.4
Trace Elements						
Arsenic	04-001	mg/kg	16	8.1	22	9.4
Cadmium	04-001	mg/kg	<1.0	1.5	<1.0	<1.0
Chromium	04-001	mg/kg	130	12	8.2	6.6
Copper	04-001	mg/kg	120	96	42	13
Mercury	04-002	mg/kg	0.10	0.55	0.47	<0.1
Nickel	04-001	mg/kg	42	12	21	4.6
Lead	04-001	mg/kg	16	1,100	320	27
Zinc	04-001	mg/kg	74	720	250	49
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	99	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	100	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	87	[NA]	[NA]
Date Extracted	04-021	-	[NA]	10/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	11/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPH C10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPH C15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
TPH C29-C36	04-020	mg/kg	[NA]	<100	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	99	[NA]	[NA]
Date Extracted	04-020	-	[NA]	14/11/11	[NA]	[NA]
Date Analysed	04-020	-	[NA]	14/11/11	[NA]	[NA]
Polyaromatic Hydrocarbons						

Issue Date: 16 November 2011

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Release



Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP1 - 1	TP1 - 2	TP1 - 3	TP1 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	[NA]	0.90	[NA]	<0.50
Anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	[NA]	3.5	[NA]	<0.50
Pyrene	04-022	mg/kg	[NA]	3.4	[NA]	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	2.3	[NA]	<0.50
Chrysene	04-022	mg/kg	[NA]	2.0	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	5.3	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	2.9	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	2.0	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	2.1	[NA]	<0.50
Coronene*	04-022	mg/kg	[NA]	0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	2.2	[NA]	<0.50
Perylene*	04-022	mg/kg	[NA]	0.90	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	96	[NA]	87
Surrogate 2 Recovery	04-022	%	[NA]	104	[NA]	82
Surrogate 3 Recovery	04-022	%	[NA]	97	[NA]	109
Residue Extracted	04-022	-	[NA]	14/11/2011	[NA]	14/11/2011
Date Analysed	04-022	-	[NA]	15/11/2011	[NA]	15/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
gamma-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
delta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Aldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]

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Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP1 - 1	TP1 - 2	TP1 - 3	TP1 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
cis-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDE	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Dieldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDD	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDT	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Methoxychlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin ketone	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Oxychlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Surrogate Recovery	04-024	%	[NA]	114	[NA]	[NA]
Date Extracted	04-024	-	[NA]	14/11/2011	[NA]	[NA]
Date Analysed	04-024	-	[NA]	15/11/2011	[NA]	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/5	/6	/8	/9
Client Reference:	-	-	TP1 - 5	TP1 - 6	TP2 - 1	TP2 - 2
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	93.9	89.9	98.2	91.1
Trace Elements						
Arsenic	04-001	mg/kg	18	5.4	19	12
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	6.9	7.3	13	10
Copper	04-001	mg/kg	10	2.6	9.9	45
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	0.33
Nickel	04-001	mg/kg	3.3	1.8	3.9	11
Lead	04-001	mg/kg	24	7.5	38	800
Zinc	04-001	mg/kg	41	9.6	93	460
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	98	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/5	/6	/8	/9
Client Reference:	-	-	TP1 - 5	TP1 - 6	TP2 - 1	TP2 - 2
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	97	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	120	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	[NA]	15/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/10	/11	/12	/13
Client Reference:	-	-	TP2 - 3	TP2 - 4	TP2 - 5	TP2 - 6
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	80.6	86.7	92.9	85.2
Trace Elements						
Arsenic	04-001	mg/kg	8.0	8.9	16	12
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	7.5	6.3	7.7	5.4
Copper	04-001	mg/kg	22	8.1	5.7	5.8
Mercury	04-002	mg/kg	0.36	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	9.6	2.7	3.3	2.3
Lead	04-001	mg/kg	93	20	18	22
Zinc	04-001	mg/kg	120	17	28	36
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	86	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	88	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	87	[NA]	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/10	/11	/12	/13
Client Reference:	-	-	TP2 - 3	TP2 - 4	TP2 - 5	TP2 - 6
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Date Extracted	04-021	-	[NA]	10/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	11/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
HC29-C36	04-020	mg/kg	[NA]	<100	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	110	[NA]	[NA]
Date Extracted	04-020	-	[NA]	14/11/11	[NA]	[NA]
Date Analysed	04-020	-	[NA]	14/11/11	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
b(a)pyrene	04-022	mg/kg	[NA]	<1.0	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	95	92	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	89	93	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	110	130	[NA]
Date Extracted	04-022	-	[NA]	14/11/2011	14/11/2011	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/10	/11	/12	/13
Client Reference:	-	-	TP2 - 3	TP2 - 4	TP2 - 5	TP2 - 6
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Date Analysed	04-022	-	[NA]	15/11/2011	15/11/2011	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
beta-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
gamma-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
delta-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Heptachlor	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Aldrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
cis-Chlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDE	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Dieldrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDD	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDT	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Methoxychlor	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin ketone	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Oxychlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Surrogate Recovery	04-024	%	[NA]	[NA]	131	[NA]
Date Extracted	04-024	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-024	-	[NA]	[NA]	15/11/2011	[NA]

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Released



Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/15	/16	/17	/18
Client Reference:	-	-	TP3 - 1	TP3 - 2	TP3 - 3	TP3 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	97.8	89.6	78.8	93.2
Trace Elements						
Arsenic	04-001	mg/kg	26	11	6.3	6.7
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	13	11	8.4	4.1
Copper	04-001	mg/kg	13	54	9.2	3.5
Mercury	04-002	mg/kg	<0.1	4.4	<0.1	<0.1
Nickel	04-001	mg/kg	4.2	13	4.0	1.3
Lead	04-001	mg/kg	72	1,300	18	8.5
Zinc	04-001	mg/kg	120	990	130	12
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	88	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	89	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	84	[NA]	[NA]
Extraction Efficiency	04-021	-	[NA]	10/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	11/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	[NA]	<100	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	111	[NA]	[NA]
Date Extracted	04-020	-	[NA]	14/11/11	[NA]	[NA]
Date Analysed	04-020	-	[NA]	14/11/11	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]

Issue Date: 16 November 2011

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Release



Batch Number: A11/5375-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/15	/16	/17	/18
Client Reference:	-	-	TP3 - 1	TP3 - 2	TP3 - 3	TP3 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	92	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	96	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	107	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
gamma-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
delta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Aldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
cis-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/15	/16	/17	/18
Client Reference:	-	-	TP3 - 1	TP3 - 2	TP3 - 3	TP3 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
alpha-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDE	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Dieldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDD	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
drin aldehyde	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDT	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Methoxychlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin ketone	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Oxychlorane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Surrogate Recovery	04-024	%	[NA]	105	[NA]	[NA]
Date Extracted	04-024	-	[NA]	14/11/2011	[NA]	[NA]
Date Analysed	04-024	-	[NA]	15/11/2011	[NA]	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/19	/20	/21	/22
Client Reference:	-	-	TP3 - 5	TP3 - 6	TP3 - 7	TP4 - 1
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	93.4	89.2	81.4	97.9
Trace Elements						
Arsenic	04-001	mg/kg	10	12	8.4	22
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.8	6.5	6.4	12
Copper	04-001	mg/kg	4.3	4.5	6.0	9.1
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	1.8	2.5	1.6	4.4
Lead	04-001	mg/kg	11	12	9.7	53
Zinc	04-001	mg/kg	33	34	8.1	85
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Acenaphthene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Fluorene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Phenanthrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Fluoranthene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Chrysene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Coronene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Perylene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	94	[NA]	[NA]	[NA]

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Release



Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/19	/20	/21	/22
Client Reference:	-	-	TP3 - 5	TP3 - 6	TP3 - 7	TP4 - 1
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	92	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	127	[NA]	[NA]	[NA]
Date Extracted	04-022	-	14/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-022	-	16/11/2011	[NA]	[NA]	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/23	/24	/25	/26
Client Reference:	-	-	TP4 - 2	TP4 - 3	TP4 - 4	TP4 - 5
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	82.4	74.2	78.8	93.5
Trace Elements						
Arsenic	04-001	mg/kg	7.1	9.2	12	8.1
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	6.9	13	9.1	5.9
Copper	04-001	mg/kg	9.5	13	7.0	8.6
Mercury	04-002	mg/kg	0.14	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	3.4	5.5	2.8	2.2
Lead	04-001	mg/kg	39	44	13	31
Manganese	04-001	mg/kg	86	130	49	99
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]

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Release



Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/23	/24	/25	/26
Client Reference:	-	-	TP4 - 2	TP4 - 3	TP4 - 4	TP4 - 5
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Pyrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	93	[NA]	89	[NA]
Surrogate 2 Recovery	04-022	%	92	[NA]	92	[NA]
Surrogate 3 Recovery	04-022	%	127	[NA]	122	[NA]
Date Extracted	04-022	-	14/11/2011	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	16/11/2011	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/27	/29	/30	/31
Client Reference:	-	-	TP4 - 6	TP5 - 1	TP5 - 2	TP5 - 3
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	86.6	98.6	97.2	75.2
Trace Elements						
Arsenic	04-001	mg/kg	4.7	7.1	7.1	7.8
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.8	11	9.0	13
Copper	04-001	mg/kg	4.3	13	29	9.7
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	1.0	6.1	16	4.6

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/27	/29	/30	/31
Client Reference:	-	-	TP4 - 6	TP5 - 1	TP5 - 2	TP5 - 3
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Lead	04-001	mg/kg	5.6	79	75	16
Zinc	04-001	mg/kg	6.9	110	81	20
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	95	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	98	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	107	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
gamma-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/27	/29	/30	/31
Client Reference:	-	-	TP4 - 6	TP5 - 1	TP5 - 2	TP5 - 3
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
delta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Aldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
cis-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDE	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Dieldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDD	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDT	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Methoxychlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin ketone	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Oxychlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Surrogate Recovery	04-024	%	[NA]	117	[NA]	[NA]
Date Extracted	04-024	-	[NA]	14/11/2011	[NA]	[NA]
Date Analysed	04-024	-	[NA]	16/11/2011	[NA]	[NA]

Laboratory Reference:	-	-	/32	/33	/34	/35
Client Reference:	-	-	TP5 - 4	TP5 - 5	TP5 - 6	TP5 - 7
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	80.0	84.7	94.2	89.4
Trace Elements						
Arsenic	04-001	mg/kg	9.6	11	12	14
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/32	/33	/34	/35
Client Reference:	-	-	TP5 - 4	TP5 - 5	TP5 - 6	TP5 - 7
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Chromium	04-001	mg/kg	8.6	8.1	3.8	9.1
Copper	04-001	mg/kg	6.3	6.6	4.3	5.8
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	2.3	1.2	1.3	3.2
Lead	04-001	mg/kg	10	9.2	9.7	13
Zinc	04-001	mg/kg	10	6.3	25	32
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Toluene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
m+p xylenes	04-021	mg/kg	[NA]	[NA]	[NA]	<0.40
o-xylene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Total BTEX	04-021	mg/kg	[NA]	[NA]	[NA]	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	[NA]	85
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	[NA]	84
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	[NA]	84
Date Extracted	04-021	-	[NA]	[NA]	[NA]	10/11/2011
Date Analysed	04-021	-	[NA]	[NA]	[NA]	11/11/2011
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	[NA]	<25
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	[NA]	<50
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	[NA]	<100
TPHC29-C36	04-020	mg/kg	[NA]	[NA]	[NA]	<100
Surrogate Recovery	04-020	%	[NA]	[NA]	[NA]	108
Date Extracted	04-020	-	[NA]	[NA]	[NA]	14/11/11
Date Analysed	04-020	-	[NA]	[NA]	[NA]	14/11/11
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Acenaphthene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Fluorene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Phenanthrene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Anthracene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50

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Batch Number: A11/5375-A [R00]

Project Reference: BowenHills

Laboratory Reference:	-	-	/32	/33	/34	/35
Client Reference:	-	-	TP5 - 4	TP5 - 5	TP5 - 6	TP5 - 7
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Fluoranthene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Pyrene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Chrysene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Coronene*	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Perylene*	04-022	mg/kg	[NA]	[NA]	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	[NA]	91
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	[NA]	96
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	[NA]	116
Date Extracted	04-022	-	[NA]	[NA]	[NA]	14/11/2011
Date Analysed	04-022	-	[NA]	[NA]	[NA]	16/11/2011
Organochlorine Pesticides						

Laboratory Reference:	-	-	/36
Client Reference:	-	-	QA - 01
Date Sampled:	-	-	9/11/2011
Analysis Description	Method	Units	
Total Solids			
Total Solids	04-004	%	90.0
Trace Elements			
Arsenic	04-001	mg/kg	9.5
Cadmium	04-001	mg/kg	<1.0
Chromium	04-001	mg/kg	10
Copper	04-001	mg/kg	49
Mercury	04-002	mg/kg	4.2

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Release



Batch Number: A11/5375-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/36
Client Reference:	-	-	QA - 01
Date Sampled:	-	-	9/11/2011
Analysis Description	Method	Units	
Nickel	04-001	mg/kg	10
Lead	04-001	mg/kg	1,100
Zinc	04-001	mg/kg	560
BTEX			
Benzene	04-021	mg/kg	<0.20
Toluene	04-021	mg/kg	<0.20
o-xyl Benzene	04-021	mg/kg	<0.20
m+p xylenes	04-021	mg/kg	<0.40
o-xylene	04-021	mg/kg	<0.20
Total BTEX	04-021	mg/kg	<1.2
Surrogate 1 Recovery	04-021	%	98
Surrogate 2 Recovery	04-021	%	97
Surrogate 3 Recovery	04-021	%	95
Date Extracted	04-021	-	10/11/2011
Date Analysed	04-021	-	11/11/2011
Total Petroleum Hydrocarbons			
TPH C6-C9	04-021	mg/kg	<25
TPH C10-C14	04-020	mg/kg	<50
TPH C15-C28	04-020	mg/kg	<100
TPH C29-C36	04-020	mg/kg	<100
Surrogate Recovery	04-020	%	112
Date Extracted	04-020	-	14/11/11
Date Analysed	04-020	-	14/11/11
Polyaromatic Hydrocarbons			
Naphthalene	04-022	mg/kg	<0.50
Acenaphthylene	04-022	mg/kg	<0.50
Acenaphthene	04-022	mg/kg	<0.50
Fluorene	04-022	mg/kg	<0.50
Phenanthrene	04-022	mg/kg	1.4
Anthracene	04-022	mg/kg	<0.50
Fluoranthene	04-022	mg/kg	5.9
Pyrene	04-022	mg/kg	5.6
Benz(a)anthracene	04-022	mg/kg	2.5

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/36
Client Reference:	-	-	QA - 01
Date Sampled:	-	-	9/11/2011
Analysis Description	Method	Units	
Chrysene	04-022	mg/kg	2.8
Benzo(b)&(k)fluoranthene	04-022	mg/kg	5.5
Benzo(a)pyrene	04-022	mg/kg	3.0
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	1.9
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	1.7
Coronene*	04-022	mg/kg	0.50
Benzo(e)pyrene*	04-022	mg/kg	2.1
Perylene*	04-022	mg/kg	0.90
Surrogate 1 Recovery	04-022	%	91
Surrogate 2 Recovery	04-022	%	93
Surrogate 3 Recovery	04-022	%	107
Date Extracted	04-022	-	14/11/2011
Date Analysed	04-022	-	16/11/2011
Organochlorine Pesticides			
alpha-BHC	04-024	mg/kg	<0.05
Hexachlorobenzene	04-024	mg/kg	<0.05
beta-BHC	04-024	mg/kg	<0.05
gamma-BHC	04-024	mg/kg	<0.05
delta-BHC	04-024	mg/kg	<0.05
Heptachlor	04-024	mg/kg	<0.05
Aldrin	04-024	mg/kg	<0.05
Heptachlor epoxide	04-024	mg/kg	<0.05
trans-Chlordane	04-024	mg/kg	<0.05
cis-Chlordane	04-024	mg/kg	<0.05
alpha-Endosulfan	04-024	mg/kg	<0.05
pp-DDE	04-024	mg/kg	<0.05
Dieldrin	04-024	mg/kg	<0.05
Endrin	04-024	mg/kg	<0.05
beta-Endosulfan	04-024	mg/kg	<0.05
pp-DDD	04-024	mg/kg	<0.05
Endrin aldehyde	04-024	mg/kg	<0.05
Endosulfan sulphate	04-024	mg/kg	<0.05

Issue Date: 16 November 2011

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/36
Client Reference:	-	-	QA - 01
Date Sampled:	-	-	9/11/2011
Analysis Description	Method	Units	
pp-DDT	04-024	mg/kg	<0.05
Methoxychlor	04-024	mg/kg	<0.05
Endrin ketone	04-024	mg/kg	<0.05
Oxychlordane	04-024	mg/kg	<0.05
Surrogate Recovery	04-024	%	105
Date Extracted	04-024	-	14/11/2011
Date Analysed	04-024	-	16/11/2011

Method	Method Description
04-004	Total Solids by gravimetric, %
04-001	Metals by ICP-OES, mg/kg
04-002	Mercury by CVAAS, mg/kg
04-021	TPH C6-9 & BTEX by P&T GCMS, mg/kg
04-020	TPH by GC-FID, mg/kg
04-022	PAHs & Phenols by GCMS, mg/kg
04-024	OC & OP Pesticides by GCMS, mg/kg

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

- Spike recovery for Cu could not be accurately determined due to a significant background analyte concentration.

- Spike recovery for PAH's could not be accurately determined due to background analyte concentration.

Issue Date: 16 November 2011

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5375-A-1	99.0 99.5 RPD:1

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	<1.0	A11/5375-A-1	16 16 RPD:0	A11/5375-A-1	122%
Cadmium	mg/kg	<1.0	A11/5375-A-1	<1.0 <1.0	A11/5375-A-1	107%
Chromium	mg/kg	<1.0	A11/5375-A-1	130 140 RPD:7	A11/5375-A-1	87%
Copper	mg/kg	<1.0	A11/5375-A-1	120 120 RPD:0	A11/5375-A-1	#
Mercury	mg/kg	<0.1	A11/5375-A-1	0.10 0.12 RPD:18	A11/5375-A-1	97%
Nickel	mg/kg	<1.0	A11/5375-A-1	42 44 RPD:5	A11/5375-A-1	87%
Lead	mg/kg	<1.0	A11/5375-A-1	16 15 RPD:6	A11/5375-A-1	88%
Zinc	mg/kg	<1.0	A11/5375-A-1	74 76 RPD:3	A11/5375-A-1	86%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	<0.20	A11/5375-A-2	<0.20 <0.20	A11/5375-A-2	83%
Toluene	mg/kg	<0.20	A11/5375-A-2	<0.20 <0.20	A11/5375-A-2	87%
Ethyl Benzene	mg/kg	<0.20	A11/5375-A-2	<0.20 <0.20	A11/5375-A-2	86%
m+p xylenes	mg/kg	<0.40	A11/5375-A-2	<0.40 <0.40	A11/5375-A-2	81%
o-xylene	mg/kg	<0.20	A11/5375-A-2	<0.20 <0.20	A11/5375-A-2	88%
Total BTEX	mg/kg	<1.2	A11/5375-A-2	<1.2 <1.2	A11/5375-A-2	85%
Surrogate 1 Recovery	%	110	A11/5375-A-2	99 93 RPD:6	A11/5375-A-2	92%
Surrogate 2 Recovery	%	113	A11/5375-A-2	100 93 RPD:7	A11/5375-A-2	94%
Surrogate 3 Recovery	%	106	A11/5375-A-2	87 86 RPD:1	A11/5375-A-2	92%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	mg/kg	<25	A11/5375-A-2	<25 <25	A11/5375-A-2	76%
TPHC10-C14	mg/kg	<50	A11/5375-A-2	<50 <50	A11/5375-A-2	81%
TPHC15-C28	mg/kg	<100	A11/5375-A-2	<100 <100	A11/5375-A-2	85%
TPHC29-C36	mg/kg	<100	A11/5375-A-2	<100 120	A11/5375-A-2	85%
Surrogate Recovery	%	106	A11/5375-A-2	99 114 RPD:14	A11/5375-A-2	100%

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	<0.50	A11/5375-A-2	<0.50 <0.50	A11/5375-A-2	130%
Acenaphthylene	mg/kg	<0.50	A11/5375-A-2	<0.50 <0.50	A11/5375-A-2	#
Acenaphthene	mg/kg	<0.50	A11/5375-A-2	<0.50 <0.50	A11/5375-A-2	#
Fluorene	mg/kg	<0.50	A11/5375-A-2	<0.50 <0.50	A11/5375-A-2	#
Phenanthrene	mg/kg	<0.50	A11/5375-A-2	0.90 1.8 RPD: 67	A11/5375-A-2	#
Anthracene	mg/kg	<0.50	A11/5375-A-2	<0.50 0.50	A11/5375-A-2	#
Fluoranthene	mg/kg	<0.50	A11/5375-A-2	3.5 5.7 RPD: 48	A11/5375-A-2	#
Pyrene	mg/kg	<0.50	A11/5375-A-2	3.4 5.6 RPD: 49	A11/5375-A-2	#
Benz(a)anthracene	mg/kg	<0.50	A11/5375-A-2	2.3 3.0 RPD: 26	A11/5375-A-2	#
Chrysene	mg/kg	<0.50	A11/5375-A-2	2.0 2.8 RPD: 33	A11/5375-A-2	#
Benzo(b)&(k)fluoranthene	mg/kg	<1.0	A11/5375-A-2	5.3 6.2 RPD: 16	A11/5375-A-2	#
Benzo(a)pyrene	mg/kg	<0.50	A11/5375-A-2	2.9 3.4 RPD: 16	A11/5375-A-2	#
Indeno(1,2,3-cd)pyrene	mg/kg	<0.50	A11/5375-A-2	2.0 1.8 RPD: 11	A11/5375-A-2	#
Dibenz(a,h)anthracene	mg/kg	<0.50	A11/5375-A-2	<0.50 0.50	A11/5375-A-2	107%
Benzo(g,h,i)perylene	mg/kg	<0.50	A11/5375-A-2	2.1 1.8 RPD: 15	A11/5375-A-2	#
Coronene*	mg/kg	<0.50	A11/5375-A-2	0.50 0.60 RPD: 18	A11/5375-A-2	128%
Benzo(e)pyrene*	mg/kg	<0.50	A11/5375-A-2	2.2 2.5 RPD: 13	A11/5375-A-2	#
Perylene*	mg/kg	<0.50	A11/5375-A-2	0.90 1.1 RPD: 20	A11/5375-A-2	111%
Surrogate 1 Recovery	%	81	A11/5375-A-2	96 90 RPD: 6	A11/5375-A-2	95%
Surrogate 2 Recovery	%	103	A11/5375-A-2	104 94 RPD: 10	A11/5375-A-2	84%
Surrogate 3 Recovery	%	126	A11/5375-A-2	97 116 RPD: 18	A11/5375-A-2	94%

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Release



Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	106%
Hexachlorobenzene	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	83%
beta-BHC	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	127%
gamma-BHC	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	130%
delta-BHC	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	75%
Heptachlor	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	77%
Aldrin	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	88%
Heptachlor epoxide	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	95%
trans-Chlordane	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	104%
cis-Chlordane	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	101%
alpha-Endosulfan	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	93%
pp-DDE	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	102%
Dieldrin	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	106%
Endrin	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	102%
beta-Endosulfan	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	108%
pp-DDD	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	92%
Endrin aldehyde	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	86%
Endosulfan sulphate	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	94%
pp-DDT	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	92%
Methoxychlor	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	75%
Endrin ketone	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	84%
Oxychlordane	mg/kg	<0.05	A11/5375-A-2	<0.05 <0.05	A11/5375-A-2	NT
Surrogate Recovery	%	108	A11/5375-A-2	114 97 RPD: 16	A11/5375-A-2	103%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5375-A-11	86.7 87.8 RPD: 1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	[NT]	A11/5375-A-11	8.9 8.9 RPD: 0	A11/5375-A-21	115%
Cadmium	mg/kg	[NT]	A11/5375-A-11	<1.0 <1.0	A11/5375-A-21	105%
Chromium	mg/kg	[NT]	A11/5375-A-11	6.3 5.9 RPD: 7	A11/5375-A-21	99%
Copper	mg/kg	[NT]	A11/5375-A-11	8.1 7.9 RPD: 2	A11/5375-A-21	105%
Mercury	mg/kg	[NT]	A11/5375-A-11	<0.1 <0.1	A11/5375-A-21	95%
Nickel	mg/kg	[NT]	A11/5375-A-11	2.7 2.5 RPD: 8	A11/5375-A-21	95%
Lead	mg/kg	[NT]	A11/5375-A-11	20 20 RPD: 0	A11/5375-A-21	93%
Zinc	mg/kg	[NT]	A11/5375-A-11	17 16 RPD: 6	A11/5375-A-21	96%

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Batch Number: A11/5375-A [R00]

Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	mg/kg	[NT]	[NT]	[NT]	External	[NT]
TPH C10-C14	mg/kg	[NT]	[NT]	[NT]	External	82%
TPH C15-C28	mg/kg	[NT]	[NT]	[NT]	External	84%
TPH C29-C36	mg/kg	[NT]	[NT]	[NT]	External	85%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	98%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	101%
Acenaphthylene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	95%
Acenaphthene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	100%
Fluorene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	102%
Phenanthrene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	72%
Anthracene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	76%
Fluoranthene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	94%
Pyrene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	99%
Benz(a)anthracene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	84%
Chrysene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	98%
Benzo(b)&(k)fluoranthene	mg/kg	[NT]	A11/5375-A-11	<1.0 <1.0	External	82%
Benzo(a)pyrene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	84%
Indeno(1,2,3-cd)pyrene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	85%
Dibenz(a,h)anthracene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	92%
Benzo(g,h,i)perylene	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	93%
Coronene*	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	NT
Benzo(e)pyrene*	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	95%
Perylene*	mg/kg	[NT]	A11/5375-A-11	<0.50 <0.50	External	113%
Surrogate 1 Recovery	%	[NT]	A11/5375-A-11	95 88 RPD: 8	External	99%
Surrogate 2 Recovery	%	[NT]	A11/5375-A-11	89 95 RPD: 7	External	103%
Surrogate 3 Recovery	%	[NT]	A11/5375-A-11	110 123 RPD: 11	External	120%

Issue Date: 16 November 2011

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Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	[NT]	[NT]	[NT]	External	90%
Hexachlorobenzene	mg/kg	[NT]	[NT]	[NT]	External	89%
beta-BHC	mg/kg	[NT]	[NT]	[NT]	External	91%
gamma-BHC	mg/kg	[NT]	[NT]	[NT]	External	91%
delta-BHC	mg/kg	[NT]	[NT]	[NT]	External	91%
Heptachlor	mg/kg	[NT]	[NT]	[NT]	External	80%
Aldrin	mg/kg	[NT]	[NT]	[NT]	External	89%
Heptachlor epoxide	mg/kg	[NT]	[NT]	[NT]	External	101%
trans-Chlordane	mg/kg	[NT]	[NT]	[NT]	External	120%
cis-Chlordane	mg/kg	[NT]	[NT]	[NT]	External	114%
alpha-Endosulfan	mg/kg	[NT]	[NT]	[NT]	External	95%
pp-DDE	mg/kg	[NT]	[NT]	[NT]	External	110%
Dieldrin	mg/kg	[NT]	[NT]	[NT]	External	112%
Endrin	mg/kg	[NT]	[NT]	[NT]	External	118%
beta-Endosulfan	mg/kg	[NT]	[NT]	[NT]	External	129%
pp-DDD	mg/kg	[NT]	[NT]	[NT]	External	110%
Endrin aldehyde	mg/kg	[NT]	[NT]	[NT]	External	102%
Endosulfan sulphate	mg/kg	[NT]	[NT]	[NT]	External	112%
pp-DDT	mg/kg	[NT]	[NT]	[NT]	External	93%
Methoxychlor	mg/kg	[NT]	[NT]	[NT]	External	93%
Endrin ketone	mg/kg	[NT]	[NT]	[NT]	External	96%
Oxychlordane	mg/kg	[NT]	[NT]	[NT]	External	NT
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	125%

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Release



Batch Number: A11/5375-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5375-A-21	81.4 81.6 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5375-A-21	8.4 8.3 RPD:1
Cadmium	mg/kg	[NT]	A11/5375-A-21	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5375-A-21	6.4 6.4 RPD:0
Copper	mg/kg	[NT]	A11/5375-A-21	6.0 6.1 RPD:2
Mercury	mg/kg	[NT]	A11/5375-A-21	<0.1 <0.1
Nickel	mg/kg	[NT]	A11/5375-A-21	1.6 1.6 RPD:0
Lead	mg/kg	[NT]	A11/5375-A-21	9.7 9.9 RPD:2
Zinc	mg/kg	[NT]	A11/5375-A-21	8.1 8.1 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5375-A-31	75.2 73.8 RPD:2

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5375-A-31	7.8 7.8 RPD:0
Cadmium	mg/kg	[NT]	A11/5375-A-31	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5375-A-31	13 13 RPD:0
Copper	mg/kg	[NT]	A11/5375-A-31	9.7 9.7 RPD:0
Mercury	mg/kg	[NT]	A11/5375-A-31	<0.1 <0.1
Nickel	mg/kg	[NT]	A11/5375-A-31	4.6 4.6 RPD:0
Lead	mg/kg	[NT]	A11/5375-A-31	16 15 RPD:6
Zinc	mg/kg	[NT]	A11/5375-A-31	20 20 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPH C6-C9	mg/kg	[NT]	A11/5375-A-11	<25 [NT]
TPH C10-C14	mg/kg	[NT]	A11/5375-A-11	<50 <50
TPH C15-C28	mg/kg	[NT]	A11/5375-A-11	<100 <100
HC29-C36	mg/kg	[NT]	A11/5375-A-11	<100 <100
Surrogate Recovery	%	[NT]	A11/5375-A-11	110 106 RPD:4

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits: Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

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Released

REPORT OF ANALYSIS



Laboratory Reference: A11/5375-B [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 4236
Project: Bowen Hills
Sample Type: Water
No. of Samples: 1
Date Received: 9/11/2011
Date Completed: 11/11/2011

Contact: sch4p4(6)

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Perso
Technical Enquiries:
Telephone: +61 73268 1228
Fax: +61 73268 1238
Email: brisbane@advancedanalytical.com.au
sch4p4(6) Pe@advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal info

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Accreditation No 15109

Issue Date: 16 November 2011

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Batch Number: A11/5375-B [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/1
Client Reference:	-	-	TB - 091111
Date Sampled:	-	-	9/11/2011
Analysis Description	Method	Units	
BTEX			
Benzene	04-021	µg/L	<1.0
Toluene	04-021	µg/L	<2.0
Ethyl Benzene	04-021	µg/L	<2.0
m+p xylenes	04-021	µg/L	<4.0
o-xylene	04-021	µg/L	<2.0
Total BTEX	04-021	µg/L	<11
Surrogate 1 Recovery	04-021	%	95
Surrogate 2 Recovery	04-021	%	90
Surrogate 3 Recovery	04-021	%	89
Date Extracted	04-021	-	10/11/2011
Date Analysed	04-021	-	11/11/2011
Total Petroleum Hydrocarbons			
TPH C6-C9	04-021	µg/L	<25
Surrogate Recovery	04-030	%	89
Date Extracted	04-030	-	10/11/2011
Date Analysed	04-030	-	11/11/2011

Method	Method Description
04-021	TPH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TPH by GC-FID, µg/L

Result Comments

[<] Less than
[INS] Insufficient sample for this test
[NA] Test not required

Issue Date: 16 November 2011

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Release



Batch Number: A11/5375-B [R00]
Project Reference: Bowen Hills

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	µg/L	<1.0	A11/5375-B-1	<1.0 <1.0	A11/5375-B-1	102%
Toluene	µg/L	<2.0	A11/5375-B-1	<2.0 <2.0	A11/5375-B-1	106%
Ethyl Benzene	µg/L	<2.0	A11/5375-B-1	<2.0 <2.0	A11/5375-B-1	104%
m+p xylenes	µg/L	<4.0	A11/5375-B-1	<4.0 <4.0	A11/5375-B-1	101%
o-xylene	µg/L	<2.0	A11/5375-B-1	<2.0 <2.0	A11/5375-B-1	108%
total BTEX	µg/L	<11	A11/5375-B-1	<11 <11	A11/5375-B-1	104%
Surrogate 1 Recovery	%	93	A11/5375-B-1	95 99 RPD: 4	A11/5375-B-1	99%
Surrogate 2 Recovery	%	81	A11/5375-B-1	90 92 RPD: 2	A11/5375-B-1	98%
Surrogate 3 Recovery	%	82	A11/5375-B-1	89 92 RPD: 3	A11/5375-B-1	99%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	<25	A11/5375-B-1	<25 <25	A11/5375-B-1	97%
TPH C10-14	µg/L	NT	[NT]	[NT]	A11/5375-B-1	NT
TPH C15-28	µg/L	NT	[NT]	[NT]	A11/5375-B-1	NT
TPH C29-36	µg/L	NT	[NT]	[NT]	A11/5375-B-1	NT
Surrogate Recovery	%	82	A11/5375-B-1	89 92 RPD: 3	A11/5375-B-1	99%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD:

Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

Issue Date: 16 November 2011

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Released

SAMPLE RECEIPT NOTIFICATION



Attention : sch4p4(6) F

Client : Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Telephone : 07 3852 3800

Facsimile : 07 3852 3808

Project : Bowen Hills

Order Number : 4236

Laboratory Reference : A11/5375-A

Completed Chain of Custody accompanied samples.

YES

Samples were received in good condition and correctly preserved for all tests.

YES

Samples were received in sufficient time to allow laboratory to meet holding times.

YES

Samples were received chilled/chilling (if required).

YES

Date samples received : 9/11/2011

Matrix : Soil

No. of samples : 36

Scheduled reporting date : 16/11/11

Customer Services Officer : sch4p4(6) Perso

Telephone : 07 3268 1228

Email : brisbane@advancedanalytical.com.au

Contact your Customer Services Officer for all queries and issues regarding this sample batch.

Note: Turnaround time begins at time of receipt at laboratory, surcharges may apply for fast turnaround.

Water samples will be appropriately stored for 1 month from date of receipt of samples.

Soil / Sediment samples will be appropriately stored for 2 months from date of receipt of samples.

COMMENTS:

Advanced Analytical Australia Pty Ltd

ABN 20 105 644 979

Unit 1, 482 Kingsford Smith Drive

Hamilton QLD 4007 Australia

Ph: + 61 7 3268 1228

Fax: + 61 7 3268 1238

brisbane@advancedanalytical.com.au

www.advancedanalytical.com.au

SAMPLE RECEIPT NOTIFICATION



Attention : sch4p4(6) Pers

Client : Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Telephone : 07 3852 3800

Facsimile : 07 3852 3808

Project : Bowen Hills

Order Number : 4236

Laboratory Reference : A11/5375-B

Completed Chain of Custody accompanied samples.

Samples were received in good condition and correctly preserved for all tests.

Samples were received in sufficient time to allow laboratory to meet holding times.

Samples were received chilled/chilling (if required).

YES

YES

YES

YES

Date samples received : 9/11/2011

Matrix : Water

No. of samples : 1

Scheduled reporting date : 16/11/11

Customer Services Officer : sch4p4(6) Pers

Telephone : 07 3268 1228

Email : brisbane@advancedanalytical.com.au

Contact your Customer Services Officer for all queries and issues regarding this sample batch.

Note: Turnaround time begins at time of receipt at laboratory, surcharges may apply for fast turnaround.

Water samples will be appropriately stored for 1 month from date of receipt of samples.

Soil / Sediment samples will be appropriately stored for 2 months from date of receipt of samples.

COMMENTS:

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ABN 20 105 644 979

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AN/5375a+G

16/11

Butler Partners Pty Ltd

PO Box 1287, Fortitude Valley BC QW 4006
79 Dagupan Street, Newstead QLD 4006
Ph: 07 3552 3800 Fax: 07 3552 3809

Job No: 011-105B
Site: Bowen Hills

Order No: 4236
COC No: 011-1668/T

Advanced Analytical

Advanced Analytical Australia
Unit 1, 402 Kingsford Smith Drive, Hamilton 4007

PS: 3268 1238
Fax: 3268 1216

Quotation Number: _____

Project Manager: **sch4p4(6) F**

Sampled By: _____

Results To: **sch4p4(6) F**

Relinquished by: _____

Due Date: **5 Day TAT**

Special Instructions: _____

Lab Sample No	Sample Reference	Sample Depth	Sample Type	No. of Tests/Visits	Date Sampled	8 mbs	TPH/TEX	TPH/TEX/3 mbs	TPH/TEX/5 mbs	TPH/TEX/10 mbs	OC Penalties	SAH	TPH/TEX/15 mbs	TPH/TEX/20 mbs	TPH/TEX/25 mbs	TPH/TEX/30 mbs	TPH/TEX/35 mbs	TPH/TEX/40 mbs	TPH/TEX/45 mbs	TPH/TEX/50 mbs	TPH/TEX/55 mbs	TPH/TEX/60 mbs	TPH/TEX/65 mbs	TPH/TEX/70 mbs	TPH/TEX/75 mbs	TPH/TEX/80 mbs	TPH/TEX/85 mbs	TPH/TEX/90 mbs	TPH/TEX/95 mbs	TPH/TEX/100 mbs
26	TPH/5		Soil	1	2-Nov-11	X																								
27	TPH/4		Soil	1	2-Nov-11	X																								
28	TPH/3		Soil	1	2-Nov-11																									
29	TPH/2		Soil	1	2-Nov-11	X					X																			
30	TPH/1		Soil	1	2-Nov-11	X						X																		
31	TPH/5		Soil	1	2-Nov-11	X																								
32	TPH/4		Soil	1	2-Nov-11	X																								
33	TPH/3		Soil	1	2-Nov-11	X																								
34	TPH/2		Soil	1	2-Nov-11	X																								
35	TPH/1		Soil	1	2-Nov-11	X																								
36	TPH/5		Soil	1	2-Nov-11	X					X																			
37	TPH/4		Soil	1	2-Nov-11	X						X																		
38	TPH/3		Soil	1	2-Nov-11	X																								
39	TPH/2		Soil	1	2-Nov-11	X																								
40	TPH/1		Soil	1	2-Nov-11	X																								
41	TPH/5		Soil	1	2-Nov-11	X																								
42	TPH/4		Soil	1	2-Nov-11	X																								
43	TPH/3		Soil	1	2-Nov-11	X																								
44	TPH/2		Soil	1	2-Nov-11	X																								
45	TPH/1		Soil	1	2-Nov-11	X																								
46	TPH/5		Soil	1	2-Nov-11	X																								
47	TPH/4		Soil	1	2-Nov-11	X																								
48	TPH/3		Soil	1	2-Nov-11	X																								
49	TPH/2		Soil	1	2-Nov-11	X																								
50	TPH/1		Soil	1	2-Nov-11	X																								
51	TPH/5		Soil	1	2-Nov-11	X																								
52	TPH/4		Soil	1	2-Nov-11	X																								
53	TPH/3		Soil	1	2-Nov-11	X																								
54	TPH/2		Soil	1	2-Nov-11	X																								
55	TPH/1		Soil	1	2-Nov-11	X																								
56	TPH/5		Soil	1	2-Nov-11	X																								
57	TPH/4		Soil	1	2-Nov-11	X																								
58	TPH/3		Soil	1	2-Nov-11	X																								
59	TPH/2		Soil	1	2-Nov-11	X																								
60	TPH/1		Soil	1	2-Nov-11	X																								
61	TPH/5		Soil	1	2-Nov-11	X																								
62	TPH/4		Soil	1	2-Nov-11	X																								
63	TPH/3		Soil	1	2-Nov-11	X																								
64	TPH/2		Soil	1	2-Nov-11	X																								
65	TPH/1		Soil	1	2-Nov-11	X																								
66	TPH/5		Soil	1	2-Nov-11	X																								
67	TPH/4		Soil	1	2-Nov-11	X																								
68	TPH/3		Soil	1	2-Nov-11	X																								
69	TPH/2		Soil	1	2-Nov-11	X																								
70	TPH/1		Soil	1	2-Nov-11	X																								
71	TPH/5		Soil	1	2-Nov-11	X																								
72	TPH/4		Soil	1	2-Nov-11	X																								
73	TPH/3		Soil	1	2-Nov-11	X																								
74	TPH/2		Soil	1	2-Nov-11	X																								
75	TPH/1		Soil	1	2-Nov-11	X																								
76	TPH/5		Soil	1	2-Nov-11	X																								
77	TPH/4		Soil	1	2-Nov-11	X																								
78	TPH/3		Soil	1	2-Nov-11	X																								
79	TPH/2		Soil	1	2-Nov-11	X																								
80	TPH/1		Soil	1	2-Nov-11	X																								
81	TPH/5		Soil	1	2-Nov-11	X																								
82	TPH/4		Soil	1	2-Nov-11	X																								
83	TPH/3		Soil	1	2-Nov-11	X																								
84	TPH/2		Soil	1	2-Nov-11	X																								
85	TPH/1		Soil	1	2-Nov-11	X																								
86	TPH/5		Soil	1	2-Nov-11	X																								
87	TPH/4		Soil	1	2-Nov-11	X																								
88	TPH/3		Soil	1	2-Nov-11	X																								



REPORT OF ANALYSIS

Laboratory Reference: A11/5406-A [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 4236
Project: Bowen Hills
Sample Type: Soil
No. of Samples: 99
Date Received: 10/11/2011
Date Completed: 17/11/2011

Contact: sch4p4(6) Pe

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Personal in
Technical Enquiries:
Telephone: +61 7 3268 1228
Fax: +61 7 3268 1238
Email: brisbane@advancedanalytical.com.au
sch4p4(6) Person@advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal information

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 17 November 2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP6 - 1	TP6 - 2	TP6 - 3	TP6 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	98.9	96.7	79.6	74.9
Trace Elements						
Arsenic	04-001	mg/kg	2.5	13	5.3	9.1
Cadmium	04-001	mg/kg	<1.0	1.1	<1.0	<1.0
Chromium	04-001	mg/kg	6.4	28	9.9	14
Copper	04-001	mg/kg	9.8	66	11	11
Mercury	04-002	mg/kg	<0.1	0.73	<0.1	<0.1
Nickel	04-001	mg/kg	3.1	19	4.2	3.6
Lead	04-001	mg/kg	76	1,200	18	19
Zinc	04-001	mg/kg	97	2,300	23	16
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	109	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	108	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	95	[NA]	[NA]
Date Extracted	04-021	-	[NA]	11/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	16/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	[NA]	130	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	108	[NA]	[NA]
Date Extracted	04-020	-	[NA]	15/11/11	[NA]	[NA]
Date Analysed	04-020	-	[NA]	15/11/11	[NA]	[NA]
Polyaromatic Hydrocarbons						

Issue Date: 17 November 2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP6 - 1	TP6 - 2	TP6 - 3	TP6 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Phenanthrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluoranthene	04-022	mg/kg	[NA]	3.0	[NA]	[NA]
Pyrene	04-022	mg/kg	[NA]	3.1	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	2.2	[NA]	[NA]
Chrysene	04-022	mg/kg	[NA]	1.3	[NA]	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	4.2	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	2.5	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	1.1	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	1.4	[NA]	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	1.7	[NA]	[NA]
Perylene*	04-022	mg/kg	[NA]	0.70	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	87	[NA]	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	72	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	98	[NA]	[NA]
ate Extracted	04-022	-	[NA]	14/11/2011	[NA]	[NA]
Date Analysed	04-022	-	[NA]	16/11/2011	[NA]	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
beta-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
gamma-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
delta-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Heptachlor	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Aldrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP6 - 1	TP6 - 2	TP6 - 3	TP6 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
cis-Chlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDE	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Dieldrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDD	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDT	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Methoxychlor	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin ketone	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Oxychlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Surrogate Recovery	04-024	%	[NA]	[NA]	128	[NA]
Date Extracted	04-024	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-024	-	[NA]	[NA]	16/11/2011	[NA]

Issue Date: 17 November 2011

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[Release]



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/5	/6	/8	/9
Client Reference:	-	-	TP6 - 5	TP6 - 6	TP7 - 1	TP7 - 2
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	94.0	72.6	97.6	90.3
Trace Elements						
Arsenic	04-001	mg/kg	3.2	2.4	6.7	16
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	2.3
Chromium	04-001	mg/kg	5.2	10	8.4	24
Copper	04-001	mg/kg	3.2	8.7	25	130
Mercury	04-002	mg/kg	<0.1	<0.1	0.27	0.85
Nickel	04-001	mg/kg	1.4	2.7	6.1	16
Lead	04-001	mg/kg	8.7	19	270	2,800
Zinc	04-001	mg/kg	7.6	15	210	4,000
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Acenaphthene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Fluorene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Phenanthrene	04-022	mg/kg	<0.50	[NA]	[NA]	1.2
Anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Fluoranthene	04-022	mg/kg	<0.50	[NA]	[NA]	6.0
Pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	4.2
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	2.8
Chrysene	04-022	mg/kg	<0.50	[NA]	[NA]	3.0
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	[NA]	7.0
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	3.6
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	2.5
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	[NA]	2.3
Coronene*	04-022	mg/kg	<0.50	[NA]	[NA]	0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	[NA]	2.5
Perylene*	04-022	mg/kg	<0.50	[NA]	[NA]	1.1
Surrogate 1 Recovery	04-022	%	87	[NA]	[NA]	82

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/5	/6	/8	/9
Client Reference:	-	-	TP6 - 5	TP6 - 6	TP7 - 1	TP7 - 2
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	72	[NA]	[NA]	74
Surrogate 3 Recovery	04-022	%	110	[NA]	[NA]	97
Date Extracted	04-022	-	14/11/2011	[NA]	[NA]	14/11/2011
Date Analysed	04-022	-	16/11/2011	[NA]	[NA]	16/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Hexachlorobenzene	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
beta-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
gamma-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
delta-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Heptachlor	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Aldrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Heptachlor epoxide	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
trans-Chlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
cis-Chlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
alpha-Endosulfan	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDE	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Dieldrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
beta-Endosulfan	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDD	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin aldehyde	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endosulfan sulphate	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDT	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Methoxychlor	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin ketone	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Oxychlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Surrogate Recovery	04-024	%	[NA]	[NA]	[NA]	96
Date Extracted	04-024	-	[NA]	[NA]	[NA]	14/11/2011
Date Analysed	04-024	-	[NA]	[NA]	[NA]	16/11/2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/10	/11	/12	/13
Client Reference:	-	-	TP7 - 3	TP7 - 4	TP7 - 5	TP7 - 6
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	87.7	84.1	93.2	85.6
Trace Elements						
Arsenic	04-001	mg/kg	13	10	5.9	2.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	13	8.6	3.8	7.0
Copper	04-001	mg/kg	40	6.1	3.3	3.3
Mercury	04-002	mg/kg	4.6	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	9.9	2.3	<1.0	1.9
Lead	04-001	mg/kg	470	18	17	14
Zinc	04-001	mg/kg	480	27	20	13
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Pyrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	77	[NA]	81	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/10	/11	/12	/13
Client Reference:	-	-	TP7 - 3	TP7 - 4	TP7 - 5	TP7 - 6
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	73	[NA]	77	[NA]
Surrogate 3 Recovery	04-022	%	115	[NA]	101	[NA]
Date Extracted	04-022	-	14/11/2011	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	16/11/2011	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/15	/16	/17	/18
Client Reference:	-	-	TP8 - 1	TP8 - 2	TP8 - 3	TP8 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	97.5	97.0	84.5	87.4
Trace Elements						
Arsenic	04-001	mg/kg	6.0	4.3	8.1	5.7
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	9.6	6.8	12	7.2
Copper	04-001	mg/kg	27	23	40	5.0
Mercury	04-002	mg/kg	0.13	0.19	4.8	<0.1
Nickel	04-001	mg/kg	9.0	4.8	8.4	2.4
Lead	04-001	mg/kg	160	310	480	15
Zinc	04-001	mg/kg	200	310	560	46
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Toluene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
m+p xylenes	04-021	mg/kg	[NA]	[NA]	<0.40	[NA]
o-xylene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Total BTEX	04-021	mg/kg	[NA]	[NA]	<1.2	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	97	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	98	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	89	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/15	/16	/17	/18
Client Reference:	-	-	TP8 - 1	TP8 - 2	TP8 - 3	TP8 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Date Extracted	04-021	-	[NA]	[NA]	11/11/2011	[NA]
Date Analysed	04-021	-	[NA]	[NA]	16/11/2011	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	<25	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	<50	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	<100	[NA]
HC29-C36	04-020	mg/kg	[NA]	[NA]	<100	[NA]
Surrogate Recovery	04-020	%	[NA]	[NA]	106	[NA]
Date Extracted	04-020	-	[NA]	[NA]	14/11/11	[NA]
Date Analysed	04-020	-	[NA]	[NA]	14/11/11	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	0.60	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	2.6	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	1.3	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	1.2	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	1.3	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	2.6	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	1.4	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	0.70	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	0.70	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	1.1	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	83	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	72	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	104	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/15	/16	/17	/18
Client Reference:	-	-	TP8 - 1	TP8 - 2	TP8 - 3	TP8 - 4
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/20	/22	/23	/24
Client Reference:	-	-	TP8 - 6	TP9 - 1	TP9 - 2	TP9 - 3
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	90.3	88.1	87.2	71.6
Trace Elements						
Arsenic	04-001	mg/kg	3.4	14	8.2	45
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	1.5
Chromium	04-001	mg/kg	4.6	6.6	6.5	9.8
Copper	04-001	mg/kg	3.0	35	14	47
Mercury	04-002	mg/kg	<0.1	0.22	0.11	<0.1
Nickel	04-001	mg/kg	<1.0	5.8	3.8	7.0
Lead	04-001	mg/kg	41	180	58	3,000
Zinc	04-001	mg/kg	37	230	100	2,600
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Toluene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
m+p xylenes	04-021	mg/kg	[NA]	[NA]	[NA]	<0.40
o-xylene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Total BTEX	04-021	mg/kg	[NA]	[NA]	[NA]	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	[NA]	89
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	[NA]	76
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	[NA]	55
Date Extracted	04-021	-	[NA]	[NA]	[NA]	11/11/2011
Date Analysed	04-021	-	[NA]	[NA]	[NA]	16/11/2011
Total Petroleum Hydrocarbons						

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/20	/22	/23	/24
Client Reference:	-	-	TP8 - 6	TP9 - 1	TP9 - 2	TP9 - 3
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	[NA]	<25
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	[NA]	<50
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	[NA]	<100
TPHC29-C36	04-020	mg/kg	[NA]	[NA]	[NA]	<100
Surrogate Recovery	04-020	%	[NA]	[NA]	[NA]	104
Date Extracted	04-020	-	[NA]	[NA]	[NA]	14/11/11
Date Analysed	04-020	-	[NA]	[NA]	[NA]	14/11/11
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Phenanthrene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Fluoranthene	04-022	mg/kg	[NA]	1.5	1.1	<0.50
Pyrene	04-022	mg/kg	[NA]	1.1	1.1	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	0.90	0.50	<0.50
Chrysene	04-022	mg/kg	[NA]	0.80	0.60	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	2.0	1.4	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	1.2	0.80	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	0.80	<0.50	<0.50
Benzo(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	0.90	0.50	<0.50
Coronene*	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	0.90	0.60	<0.50
Perylene*	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	83	83	83
Surrogate 2 Recovery	04-022	%	[NA]	75	73	75
Surrogate 3 Recovery	04-022	%	[NA]	100	98	100
Date Extracted	04-022	-	[NA]	14/11/2011	14/11/2011	14/11/2011
Date Analysed	04-022	-	[NA]	16/11/2011	16/11/2011	16/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/20	/22	/23	/24
Client Reference:	-	-	TP8 - 6	TP9 - 1	TP9 - 2	TP9 - 3
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	9/11/2011
Analysis Description	Method	Units				
Hexachlorobenzene	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
beta-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
gamma-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
delta-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Heptachlor	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Aldrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Heptachlor epoxide	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
trans-Chlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
cis-Chlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
alpha-Endosulfan	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDE	04-024	mg/kg	[NA]	[NA]	[NA]	0.080
Dieldrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
beta-Endosulfan	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDD	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin aldehyde	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endosulfan sulphate	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDT	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Methoxychlor	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin ketone	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Oxychlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Surrogate Recovery	04-024	%	[NA]	[NA]	[NA]	105
Date Extracted	04-024	-	[NA]	[NA]	[NA]	14/11/2011
Date Analysed	04-024	-	[NA]	[NA]	[NA]	16/11/2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/25	/26	/27	/29
Client Reference:	-	-	TP9 - 4	TP9 - 5	TP9 - 6	TP10 - 1
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	72.4	80.7	82.0	93.9
Trace Elements						
Arsenic	04-001	mg/kg	7.8	9.2	4.4	12
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	6.8	7.1	11	12
Copper	04-001	mg/kg	160	5.6	6.2	29
Mercury	04-002	mg/kg	0.86	<0.1	<0.1	0.27
Nickel	04-001	mg/kg	9.6	1.4	1.7	7.5
Lead	04-001	mg/kg	110	11	9.0	150
Zinc	04-001	mg/kg	170	6.5	10	230
BTEX						
Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Toluene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
m+p xylenes	04-021	mg/kg	<0.40	[NA]	[NA]	[NA]
o-xylene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Total BTEX	04-021	mg/kg	<1.2	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	85	[NA]	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	87	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	74	[NA]	[NA]	[NA]
Sample Extracted	04-021	-	11/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-021	-	16/11/2011	[NA]	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	<25	[NA]	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	<50	[NA]	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	<100	[NA]	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	<100	[NA]	[NA]	[NA]
Surrogate Recovery	04-020	%	102	[NA]	[NA]	[NA]
Date Extracted	04-020	-	14/11/11	[NA]	[NA]	[NA]
Date Analysed	04-020	-	14/11/11	[NA]	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/25	/26	/27	/29
Client Reference:	-	-	TP9 - 4	TP9 - 5	TP9 - 6	TP10 - 1
Date Sampled:	-	-	9/11/2011	9/11/2011	9/11/2011	10/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	<0.50	<0.50	[NA]	0.50
Pyrene	04-022	mg/kg	<0.50	<0.50	[NA]	0.50
Benz(a)anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Chrysene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	<1.0	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Coronene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Perylene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	83	79	[NA]	86
Surrogate 2 Recovery	04-022	%	71	78	[NA]	76
Surrogate 3 Recovery	04-022	%	97	103	[NA]	100
Date Extracted	04-022	-	14/11/2011	14/11/2011	[NA]	14/11/2011
Date Analysed	04-022	-	16/11/2011	16/11/2011	[NA]	16/11/2011
Organochlorine Pesticides						

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/30	/31	/32	/33
Client Reference:	-	-	TP10 - 2	TP10 - 3	TP10 - 4	TP10 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	84.4	81.9	87.0	77.3
Trace Elements						
Arsenic	04-001	mg/kg	8.1	4.2	12	6.2
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	13	4.1	10	8.6
Copper	04-001	mg/kg	48	15	32	6.3
Mercury	04-002	mg/kg	0.39	0.16	0.31	<0.1
Nickel	04-001	mg/kg	7.1	2.0	4.8	3.3
Lead	04-001	mg/kg	440	170	170	13
Zinc	04-001	mg/kg	420	110	300	14
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Acenaphthene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Fluorene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Phenanthrene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Anthracene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Fluoranthene	04-022	mg/kg	0.70	<0.50	<0.50	[NA]
Benzo(a)anthracene	04-022	mg/kg	0.50	<0.50	<0.50	[NA]
Chrysene	04-022	mg/kg	0.50	<0.50	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	1.1	<1.0	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	0.60	<0.50	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Coronene*	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Perylene*	04-022	mg/kg	<0.50	<0.50	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	86	85	84	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/30	/31	/32	/33
Client Reference:	-	-	TP10 - 2	TP10 - 3	TP10 - 4	TP10 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	70	76	76	[NA]
Surrogate 3 Recovery	04-022	%	105	102	100	[NA]
Date Extracted	04-022	-	14/11/2011	14/11/2011	14/11/2011	[NA]
Date Analysed	04-022	-	16/11/2011	16/11/2011	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/34	/36	/37	/38
Client Reference:	-	-	TP10 - 6	TP11 - 1	TP11 - 2	TP11 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	79.6	95.6	88.7	82.8
Trace Elements						
Arsenic	04-001	mg/kg	1.9	11	10	2.6
Cadmium	04-001	mg/kg	<1.0	<1.0	1.2	<1.0
Chromium	04-001	mg/kg	14	12	16	2.5
Copper	04-001	mg/kg	7.3	21	78	4.0
Mercury	04-002	mg/kg	<0.1	0.17	3.9	<0.1
Nickel	04-001	mg/kg	2.1	8.6	13	1.2
Lead	04-001	mg/kg	12	100	270	25
Zinc	04-001	mg/kg	9.6	170	430	50
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Toluene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
m+p xylenes	04-021	mg/kg	[NA]	[NA]	[NA]	<0.40
o-xylene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Total BTEX	04-021	mg/kg	[NA]	[NA]	[NA]	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	[NA]	92
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	[NA]	92
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	[NA]	89

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/34	/36	/37	/38
Client Reference:	-	-	TP10 - 6	TP11 - 1	TP11 - 2	TP11 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Date Extracted	04-021	-	[NA]	[NA]	[NA]	11/11/2011
Date Analysed	04-021	-	[NA]	[NA]	[NA]	16/11/2011
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	[NA]	<25
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	[NA]	<50
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	[NA]	<100
HC29-C36	04-020	mg/kg	[NA]	[NA]	[NA]	<100
Surrogate Recovery	04-020	%	[NA]	[NA]	[NA]	103
Date Extracted	04-020	-	[NA]	[NA]	[NA]	14/11/11
Date Analysed	04-020	-	[NA]	[NA]	[NA]	14/11/11
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Fluoranthene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	86	84
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	73	80
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	96	106
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	14/11/2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/34	/36	/37	/38
Client Reference:	-	-	TP10 - 6	TP11 - 1	TP11 - 2	TP11 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	16/11/2011
Organochlorine Pesticides						

Laboratory Reference:	-	-	/39	/40	/42	/43
Client Reference:	-	-	TP11 - 4	TP11 - 5	TP11 - 7	TP12 - 1
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	89.2	80.9	80.2	92.3
Trace Elements						
Arsenic	04-001	mg/kg	9.4	3.4	4.6	4.2
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.2	12	14	12
Copper	04-001	mg/kg	2.8	3.8	5.1	4.7
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	1.9	1.5	2.0	1.5
Lead	04-001	mg/kg	7.1	9.6	11	10
Zinc	04-001	mg/kg	7.6	7.1	10	7.1
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Acenaphthene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Fluorene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Phenanthrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Fluoranthene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Chrysene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]

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Released



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/39	/40	/42	/43
Client Reference:	-	-	TP11 - 4	TP11 - 5	TP11 - 7	TP12 - 1
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Coronene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Perylene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	87	[NA]	[NA]	[NA]
Surrogate 2 Recovery	04-022	%	77	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	112	[NA]	[NA]	[NA]
Date Extracted	04-022	-	14/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-022	-	16/11/2011	[NA]	[NA]	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/44	/45	/46	/47
Client Reference:	-	-	TP12 - 2	TP12 - 3	TP12 - 4	TP12 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	83.4	85.6	78.4	85.9
Trace Elements						
Arsenic	04-001	mg/kg	8.0	8.9	6.0	2.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	7.5	14	7.4	3.7
Copper	04-001	mg/kg	17	27	10	2.0
Mercury	04-002	mg/kg	0.29	<0.1	0.47	<0.1
Nickel	04-001	mg/kg	4.2	5.9	3.3	1.0
Lead	04-001	mg/kg	89	130	52	5.8
Zinc	04-001	mg/kg	130	190	47	3.6
BTEX						

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Released



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/44	/45	/46	/47
Client Reference:	-	-	TP12 - 2	TP12 - 3	TP12 - 4	TP12 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Toluene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
m+p xylenes	04-021	mg/kg	<0.40	[NA]	[NA]	[NA]
o-xylene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Total BTEX	04-021	mg/kg	<1.2	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	95	[NA]	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	89	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	73	[NA]	[NA]	[NA]
Date Extracted	04-021	-	11/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-021	-	16/11/2011	[NA]	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	<25	[NA]	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	<50	[NA]	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	<100	[NA]	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	<100	[NA]	[NA]	[NA]
Surrogate Recovery	04-020	%	104	[NA]	[NA]	[NA]
Date Extracted	04-020	-	14/11/11	[NA]	[NA]	[NA]
Date Analysed	04-020	-	14/11/11	[NA]	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	<0.50	1.2	[NA]	<0.50
Pyrene	04-022	mg/kg	<0.50	1.1	[NA]	<0.50
Benz(a)anthracene	04-022	mg/kg	<0.50	0.70	[NA]	<0.50
Chrysene	04-022	mg/kg	<0.50	0.70	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	1.5	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	<0.50	0.80	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/44	/45	/46	/47
Client Reference:	-	-	TP12 - 2	TP12 - 3	TP12 - 4	TP12 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	0.50	[NA]	<0.50
Coronene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50	0.60	[NA]	<0.50
Perylene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	78	87	[NA]	86
Surrogate 2 Recovery	04-022	%	71	74	[NA]	75
Surrogate 3 Recovery	04-022	%	92	100	[NA]	113
Date Extracted	04-022	-	14/11/2011	14/11/2011	[NA]	14/11/2011
Date Analysed	04-022	-	16/11/2011	16/11/2011	[NA]	16/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
beta-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
gamma-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
delta-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Heptachlor	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Aldrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
cis-Chlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
gamma-Ha-Endosulfan	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDE	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Dieldrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDD	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDT	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Methoxychlor	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin ketone	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Oxychlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/44	/45	/46	/47
Client Reference:	-	-	TP12 - 2	TP12 - 3	TP12 - 4	TP12 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Surrogate Recovery	04-024	%	104	[NA]	[NA]	[NA]
Date Extracted	04-024	-	14/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-024	-	16/11/2011	[NA]	[NA]	[NA]

Laboratory Reference:	-	-	/49	/51	/52	/53
Client Reference:	-	-	TP12 - 7	TP13 - 1	TP13 - 2	TP13 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	82.9	87.9	90.3	91.9
Trace Elements						
Arsenic	04-001	mg/kg	2.5	6.3	5.8	4.0
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	8.9	8.2	10	8.2
Copper	04-001	mg/kg	2.5	17	16	12
Mercury	04-002	mg/kg	<0.1	0.11	0.21	0.17
Nickel	04-001	mg/kg	1.2	4.1	5.5	4.0
Lead	04-001	mg/kg	8.7	70	59	52
Zinc	04-001	mg/kg	5.5	130	150	120
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/49	/51	/52	/53
Client Reference:	-	-	TP12 - 7	TP13 - 1	TP13 - 2	TP13 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Chrysene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	<1.0	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluoranthene*	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Perylene*	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	84	[NA]	85
Surrogate 2 Recovery	04-022	%	[NA]	74	[NA]	72
Surrogate 3 Recovery	04-022	%	[NA]	99	[NA]	95
Date Extracted	04-022	-	[NA]	14/11/2011	[NA]	14/11/2011
Date Analysed	04-022	-	[NA]	16/11/2011	[NA]	16/11/2011
Organochlorine Pesticides						

Laboratory Reference:	-	-	/54	/55	/56	/57
Client Reference:	-	-	TP13 - 4	TP13 - 5	TP13 - 6	TP13 - 7
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	87.7	79.7	90.9	82.9
Trace Elements						
Arsenic	04-001	mg/kg	4.5	6.1	8.9	7.2
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	4.4	8.6	5.2	7.2
Copper	04-001	mg/kg	26	7.0	3.2	4.3
Mercury	04-002	mg/kg	0.15	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	3.9	3.4	1.5	1.8
Lead	04-001	mg/kg	80	13	8.4	8.5
Zinc	04-001	mg/kg	120	25	11	8.6

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/54	/55	/56	/57
Client Reference:	-	-	TP13 - 4	TP13 - 5	TP13 - 6	TP13 - 7
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Organochlorine Pesticides						

Laboratory Reference:	-	-	/58	/59	/60	/61
Client Reference:	-	-	TP14 - 1	TP14 - 2	TP14 - 3	TP14 - 4
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	89.8	88.8	92.1	88.9
Trace Elements						
Arsenic	04-001	mg/kg	6.6	5.0	5.8	8.1
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.8	6.1	10	5.3
Copper	04-001	mg/kg	12	12	17	18
Mercury	04-002	mg/kg	0.13	0.94	0.24	5.0
Nickel	04-001	mg/kg	4.3	3.7	3.9	4.2
Lead	04-001	mg/kg	86	99	50	290
Zinc	04-001	mg/kg	96	97	83	140
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Hexachlorobenzene	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
beta-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
gamma-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
delta-BHC	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Heptachlor	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Aldrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/58	/59	/60	/61
Client Reference:	-	-	TP14 - 1	TP14 - 2	TP14 - 3	TP14 - 4
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Heptachlor epoxide	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
trans-Chlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
cis-Chlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
alpha-Endosulfan	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDE	04-024	mg/kg	[NA]	[NA]	[NA]	0.11
Dieldrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
beta-Endosulfan	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDD	04-024	mg/kg	[NA]	[NA]	[NA]	0.080
Endrin aldehyde	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endosulfan sulphate	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
pp-DDT	04-024	mg/kg	[NA]	[NA]	[NA]	0.29
Methoxychlor	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Endrin ketone	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Oxychlordane	04-024	mg/kg	[NA]	[NA]	[NA]	<0.05
Surrogate Recovery	04-024	%	[NA]	[NA]	[NA]	98
Date Extracted	04-024	-	[NA]	[NA]	[NA]	14/11/2011
Date Analysed	04-024	-	[NA]	[NA]	[NA]	16/11/2011

Laboratory Reference:	-	-	/62	/63	/65	/66
Client Reference:	-	-	TP14 - 5	TP14 - 6	TP15 - 1	TP15 - 2
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	81.0	91.0	90.1	95.2
Trace Elements						
Arsenic	04-001	mg/kg	4.9	5.9	5.8	9.1
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.2	5.3	8.8	9.9
Copper	04-001	mg/kg	7.2	3.9	14	20
Mercury	04-002	mg/kg	0.19	<0.1	<0.1	<0.1

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/62	/63	/65	/66
Client Reference:	-	-	TP14 - 5	TP14 - 6	TP15 - 1	TP15 - 2
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Nickel	04-001	mg/kg	2.4	1.8	4.7	6.8
Lead	04-001	mg/kg	32	7.7	46	57
Zinc	04-001	mg/kg	25	7.5	100	250
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Acenaphthene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Fluorene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Phenanthrene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Fluoranthene	04-022	mg/kg	<0.50	[NA]	[NA]	0.60
Pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	0.60
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Chrysene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Coronene*	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Perylene*	04-022	mg/kg	<0.50	[NA]	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	87	[NA]	[NA]	83
Surrogate 2 Recovery	04-022	%	81	[NA]	[NA]	75
Surrogate 3 Recovery	04-022	%	98	[NA]	[NA]	87
Date Extracted	04-022	-	14/11/2011	[NA]	[NA]	14/11/2011
Date Analysed	04-022	-	16/11/2011	[NA]	[NA]	16/11/2011
Organochlorine Pesticides						

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/67	/68	/69	/70
Client Reference:	-	-	TP15 - 3	TP15 - 4	TP15 - 5	TP15 - 6
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	92.2	80.1	84.6	95.5
Trace Elements						
Arsenic	04-001	mg/kg	12	4.7	6.3	8.7
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	7.5	5.4	7.0	5.1
Copper	04-001	mg/kg	18	47	6.2	4.4
Mercury	04-002	mg/kg	<0.1	0.20	<0.1	<0.1
Nickel	04-001	mg/kg	6.2	2.3	2.3	2.3
Lead	04-001	mg/kg	28	94	12	10
Zinc	04-001	mg/kg	77	51	22	18
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	86	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/67	/68	/69	/70
Client Reference:	-	-	TP15 - 3	TP15 - 4	TP15 - 5	TP15 - 6
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	72	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	119	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/71	/72	/73	/74
Client Reference:	-	-	TP15 - 7	TP16 - 1	TP16 - 2	TP16 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	90.5	91.5	94.7	92.6
Trace Elements						
Arsenic	04-001	mg/kg	9.4	9.0	4.8	18
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	7.1	30	9.5	4.3
Copper	04-001	mg/kg	4.6	39	12	13
Mercury	04-002	mg/kg	<0.1	0.44	0.10	<0.1
Nickel	04-001	mg/kg	1.6	23	5.9	4.7
Lead	04-001	mg/kg	7.6	140	94	20
Zinc	04-001	mg/kg	17	300	130	36
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	96	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	95	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	86	[NA]	[NA]

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/71	/72	/73	/74
Client Reference:	-	-	TP15 - 7	TP16 - 1	TP16 - 2	TP16 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Date Extracted	04-021	-	[NA]	11/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	16/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	130	[NA]	[NA]
HC29-C36	04-020	mg/kg	[NA]	140	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	106	[NA]	[NA]
Date Extracted	04-020	-	[NA]	14/11/11	[NA]	[NA]
Date Analysed	04-020	-	[NA]	14/11/11	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Phenanthrene	04-022	mg/kg	[NA]	5.2	[NA]	[NA]
Anthracene	04-022	mg/kg	[NA]	1.2	[NA]	[NA]
Fluoranthene	04-022	mg/kg	[NA]	12	[NA]	[NA]
Pyrene	04-022	mg/kg	[NA]	11	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	3.9	[NA]	[NA]
Chrysene	04-022	mg/kg	[NA]	3.7	[NA]	[NA]
benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	7.0	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	4.3	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	2.3	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	3.0	[NA]	[NA]
Coronene*	04-022	mg/kg	[NA]	0.60	[NA]	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	3.0	[NA]	[NA]
Perylene*	04-022	mg/kg	[NA]	1.2	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	84	[NA]	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	73	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	102	[NA]	[NA]
Date Extracted	04-022	-	[NA]	14/11/2011	[NA]	[NA]

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Rela



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/71	/72	/73	/74
Client Reference:	-	-	TP15 - 7	TP16 - 1	TP16 - 2	TP16 - 3
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Date Analysed	04-022	-	[NA]	16/11/2011	[NA]	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
gamma-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
delta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Aldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
cis-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDE	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Dieldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDD	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDT	04-024	mg/kg	[NA]	0.10	[NA]	[NA]
Methoxychlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin ketone	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Oxychlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Surrogate Recovery	04-024	%	[NA]	93	[NA]	[NA]
Date Extracted	04-024	-	[NA]	14/11/2011	[NA]	[NA]
Date Analysed	04-024	-	[NA]	16/11/2011	[NA]	[NA]

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/75	/76	/77	/78
Client Reference:	-	-	TP16 - 4	TP16 - 5	TP16 - 6	TP16 - 7
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	83.6	92.5	86.0	92.5
Trace Elements						
Arsenic	04-001	mg/kg	11	7.4	11	6.2
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	8.2	6.0	8.7	4.1
Copper	04-001	mg/kg	7.1	5.0	6.7	2.7
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	1.9	1.3	1.4	1.4
Lead	04-001	mg/kg	10	8.9	9.7	6.0
Zinc	04-001	mg/kg	10	7.2	7.7	10
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	84	[NA]

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Released



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/75	/76	/77	/78
Client Reference:	-	-	TP16 - 4	TP16 - 5	TP16 - 6	TP16 - 7
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	77	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	113	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/79	/80	/81	/82
Client Reference:	-	-	TP17 - 1	TP17 - 2	TP17 - 3	TP17 - 4
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	90.9	93.7	90.9	82.6
Trace Elements						
Arsenic	04-001	mg/kg	13	6.2	5.0	4.6
Cadmium	04-001	mg/kg	1.9	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	17	24	160	4.5
Copper	04-001	mg/kg	85	17	74	7.2
Mercury	04-002	mg/kg	0.44	<0.1	0.15	<0.1
Nickel	04-001	mg/kg	35	15	110	3.4
Lead	04-001	mg/kg	380	38	15	15
Zinc	04-001	mg/kg	1,500	140	77	20
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Toluene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
m+p xylenes	04-021	mg/kg	[NA]	[NA]	<0.40	[NA]
o-xylene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Total BTEX	04-021	mg/kg	[NA]	[NA]	<1.2	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	102	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	103	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	93	[NA]

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Release



Batch Number: A11/5406-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/79	/80	/81	/82
Client Reference:	-	-	TP17 - 1	TP17 - 2	TP17 - 3	TP17 - 4
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Date Extracted	04-021	-	[NA]	[NA]	11/11/2011	[NA]
Date Analysed	04-021	-	[NA]	[NA]	16/11/2011	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	<25	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	<50	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	200	[NA]
HC29-C36	04-020	mg/kg	[NA]	[NA]	220	[NA]
Surrogate Recovery	04-020	%	[NA]	[NA]	95	[NA]
Date Extracted	04-020	-	[NA]	[NA]	14/11/11	[NA]
Date Analysed	04-020	-	[NA]	[NA]	14/11/11	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	0.60	[NA]
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	[NA]	1.7	[NA]
Anthracene	04-022	mg/kg	[NA]	[NA]	0.70	[NA]
Fluoranthene	04-022	mg/kg	[NA]	[NA]	11	[NA]
Pyrene	04-022	mg/kg	[NA]	[NA]	11	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	5.8	[NA]
Chrysene	04-022	mg/kg	[NA]	[NA]	6.1	[NA]
benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	14	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	8.8	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	4.8	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	0.90	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	6.8	[NA]
Coronene*	04-022	mg/kg	[NA]	[NA]	1.2	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	6.5	[NA]
Perylene*	04-022	mg/kg	[NA]	[NA]	3.0	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	76	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	71	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	100	[NA]
Date Extracted	04-022	-	[NA]	[NA]	14/11/2011	[NA]

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/79	/80	/81	/82
Client Reference:	-	-	TP17 - 1	TP17 - 2	TP17 - 3	TP17 - 4
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Date Analysed	04-022	-	[NA]	[NA]	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/83	/84	/85	/86
Client Reference:	-	-	TP17 - 5	TP17 - 6	TP17 - 7	TP18 - 1
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	84.0	87.9	87.8	92.8
Trace Elements						
Arsenic	04-001	mg/kg	4.5	4.9	6.2	5.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	4.5	4.6	4.4	16
Copper	04-001	mg/kg	6.7	4.6	2.7	19
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	1.8
Nickel	04-001	mg/kg	3.2	1.8	<1.0	9.6
Lead	04-001	mg/kg	19	5.6	6.3	110
Zinc	04-001	mg/kg	18	7.8	13	280
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Toluene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
m+p xylenes	04-021	mg/kg	[NA]	[NA]	[NA]	<0.40
o-xylene	04-021	mg/kg	[NA]	[NA]	[NA]	<0.20
Total BTEX	04-021	mg/kg	[NA]	[NA]	[NA]	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	[NA]	104
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	[NA]	101
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	[NA]	93
Date Extracted	04-021	-	[NA]	[NA]	[NA]	11/11/2011
Date Analysed	04-021	-	[NA]	[NA]	[NA]	16/11/2011
Total Petroleum Hydrocarbons						

Issue Date: 17 November 2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/83	/84	/85	/86
Client Reference:	-	-	TP17 - 5	TP17 - 6	TP17 - 7	TP18 - 1
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	[NA]	<25
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	[NA]	<50
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	[NA]	<100
TPHC29-C36	04-020	mg/kg	[NA]	[NA]	[NA]	<100
Surrogate Recovery	04-020	%	[NA]	[NA]	[NA]	99
Date Extracted	04-020	-	[NA]	[NA]	[NA]	14/11/11
Date Analysed	04-020	-	[NA]	[NA]	[NA]	14/11/11
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	[NA]	<0.50	[NA]	1.8
Pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	1.5
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	1.3
Chrysene	04-022	mg/kg	[NA]	<0.50	[NA]	1.2
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	<1.0	[NA]	2.9
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	1.7
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	0.90
Benzo(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	[NA]	1.0
Coronene*	04-022	mg/kg	[NA]	<0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	[NA]	1.1
Perylene*	04-022	mg/kg	[NA]	<0.50	[NA]	0.50
Surrogate 1 Recovery	04-022	%	[NA]	84	[NA]	85
Surrogate 2 Recovery	04-022	%	[NA]	77	[NA]	72
Surrogate 3 Recovery	04-022	%	[NA]	109	[NA]	102
Date Extracted	04-022	-	[NA]	14/11/2011	[NA]	14/11/2011
Date Analysed	04-022	-	[NA]	16/11/2011	[NA]	16/11/2011
Organochlorine Pesticides						

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/87	/88	/89	/90
Client Reference:	-	-	TP18 - 2	TP18 - 3	TP18 - 4	TP18 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	93.1	90.5	93.3	86.1
Trace Elements						
Arsenic	04-001	mg/kg	8.4	5.3	6.0	3.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	16	33	6.1	3.5
Copper	04-001	mg/kg	17	26	4.6	3.9
Mercury	04-002	mg/kg	0.15	0.34	<0.1	<0.1
Nickel	04-001	mg/kg	13	27	3.7	1.4
Lead	04-001	mg/kg	49	210	18	15
Zinc	04-001	mg/kg	280	150	21	14
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	0.60	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	3.7	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	3.8	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	2.2	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	2.8	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	5.0	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	3.0	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	1.8	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	1.9	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	2.2	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	0.90	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	86	84	[NA]

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Released



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/87	/88	/89	/90
Client Reference:	-	-	TP18 - 2	TP18 - 3	TP18 - 4	TP18 - 5
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	[NA]	72	77	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	106	113	[NA]
Date Extracted	04-022	-	[NA]	14/11/2011	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	16/11/2011	16/11/2011	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/92	/93	/94	/95
Client Reference:	-	-	TP18 - 7	QC - 03	QC - 05	QC - 07
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	93.9	82.1	81.5	87.8
Trace Elements						
Arsenic	04-001	mg/kg	8.6	14	4.9	4.0
Cadmium	04-001	mg/kg	<1.0	2.4	<1.0	<1.0
Chromium	04-001	mg/kg	13	15	4.9	5.5
Copper	04-001	mg/kg	6.4	59	21	24
Mercury	04-002	mg/kg	<0.1	2.8	0.33	0.49
Nickel	04-001	mg/kg	10	14	2.4	3.9
Lead	04-001	mg/kg	20	1,100	150	59
Zinc	04-001	mg/kg	29	1,600	150	110
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	1.1	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	4.0	0.50	[NA]

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Released



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/92	/93	/94	/95
Client Reference:	-	-	TP18 - 7	QC - 03	QC - 05	QC - 07
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Pyrene	04-022	mg/kg	[NA]	3.3	0.60	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	2.1	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	2.6	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	4.5	1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	2.2	0.60	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	1.3	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	1.2	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	1.9	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	0.70	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	84	81	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	69	75	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	92	93	[NA]
Date Extracted	04-022	-	[NA]	14/11/2011	14/11/2011	[NA]
Date Analysed	04-022	-	[NA]	16/11/2011	16/11/2011	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
gamma-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
delta-BHC	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Aldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
cis-Chlordane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
alpha-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDE	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Dieldrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDD	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]

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[Release]



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/92	/93	/94	/95
Client Reference:	-	-	TP18 - 7	QC - 03	QC - 05	QC - 07
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Endrin aldehyde	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
pp-DDT	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Methoxychlor	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Endrin ketone	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Oxychlorane	04-024	mg/kg	[NA]	<0.05	[NA]	[NA]
Surrogate Recovery	04-024	%	[NA]	93	[NA]	[NA]
Date Extracted	04-024	-	[NA]	14/11/2011	[NA]	[NA]
Date Analysed	04-024	-	[NA]	16/11/2011	[NA]	[NA]

Laboratory Reference:	-	-	/96	/97	/98	/99
Client Reference:	-	-	QC - 09	QC - 11	XS - 1	XS - 2
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	90.5	90.4	87.9	97.0
Trace Elements						
Arsenic	04-001	mg/kg	9.8	7.2	19	9.0
Cadmium	04-001	mg/kg	<1.0	<1.0	32	<1.0
Chromium	04-001	mg/kg	31	29	17	8.9
Copper	04-001	mg/kg	43	30	200	110
Mercury	04-002	mg/kg	0.37	0.62	0.32	0.20
Nickel	04-001	mg/kg	23	24	21	14
Lead	04-001	mg/kg	180	430	1,300	160
Zinc	04-001	mg/kg	400	200	5,600	150
BTEX						
Benzene	04-021	mg/kg	<0.20	[NA]	<0.20	<0.20
Toluene	04-021	mg/kg	<0.20	[NA]	<0.20	<0.20
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	<0.20	<0.20
m+p xylenes	04-021	mg/kg	<0.40	[NA]	<0.40	<0.40
o-xylene	04-021	mg/kg	<0.20	[NA]	<0.20	<0.20

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/96	/97	/98	/99
Client Reference:	-	-	QC - 09	QC - 11	XS - 1	XS - 2
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Total BTEX	04-021	mg/kg	<1.2	[NA]	<1.2	<1.2
Surrogate 1 Recovery	04-021	%	99	[NA]	96	100
Surrogate 2 Recovery	04-021	%	99	[NA]	88	100
Surrogate 3 Recovery	04-021	%	88	[NA]	77	93
Date Extracted	04-021	-	11/11/2011	[NA]	11/11/2011	11/11/2011
Date Analysed	04-021	-	16/11/2011	[NA]	16/11/2011	16/11/2011
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	mg/kg	<25	[NA]	<25	<25
TPH C10-C14	04-020	mg/kg	<50	[NA]	<50	<50
TPH C15-C28	04-020	mg/kg	100	[NA]	190	<100
TPH C29-C36	04-020	mg/kg	110	[NA]	200	<100
Surrogate Recovery	04-020	%	100	[NA]	115	105
Date Extracted	04-020	-	14/11/11	[NA]	14/11/11	14/11/11
Date Analysed	04-020	-	14/11/11	[NA]	14/11/11	14/11/11
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Acenaphthene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Fluorene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Phenanthrene	04-022	mg/kg	0.70	<0.50	1.7	1.0
Anthracene	04-022	mg/kg	<0.50	<0.50	<0.50	<0.50
Fluoranthene	04-022	mg/kg	3.0	2.3	6.1	3.5
Pyrene	04-022	mg/kg	1.7	1.3	6.5	3.1
Benz(a)anthracene	04-022	mg/kg	1.6	1.0	2.9	1.6
Chrysene	04-022	mg/kg	1.6	1.0	3.8	1.8
Benzo(b)&(k)fluoranthene	04-022	mg/kg	3.8	2.3	8.7	4.0
Benzo(a)pyrene	04-022	mg/kg	2.1	1.4	4.7	2.0
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	1.5	0.80	3.1	1.3
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	<0.50	0.60	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	1.7	0.90	3.6	1.3
Coronene*	04-022	mg/kg	<0.50	<0.50	0.50	<0.50
Benzo(e)pyrene*	04-022	mg/kg	1.6	1.0	3.2	1.6
Perylene*	04-022	mg/kg	0.70	<0.50	1.5	0.60

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/96	/97	/98	/99
Client Reference:	-	-	QC - 09	QC - 11	XS - 1	XS - 2
Date Sampled:	-	-	10/11/2011	10/11/2011	10/11/2011	10/11/2011
Analysis Description	Method	Units				
Surrogate 1 Recovery	04-022	%	84	82	86	84
Surrogate 2 Recovery	04-022	%	71	75	74	76
Surrogate 3 Recovery	04-022	%	97	101	104	98
Date Extracted	04-022	-	14/11/2011	14/11/2011	14/11/2011	14/11/2011
Date Analysed	04-022	-	16/11/2011	16/11/2011	16/11/2011	16/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Hexachlorobenzene	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
beta-BHC	04-024	mg/kg	<0.05	[NA]	<0.05	0.070
gamma-BHC	04-024	mg/kg	<0.05	[NA]	<0.05	0.05
delta-BHC	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Heptachlor	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Aldrin	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Heptachlor epoxide	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
trans-Chlordane	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
cis-Chlordane	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
alpha-Endosulfan	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
pp-DDE	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Dieldrin	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Endrin	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
beta-Endosulfan	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
gamma-DDD	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Endrin aldehyde	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Endosulfan sulphate	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
pp-DDT	04-024	mg/kg	<0.05	[NA]	<0.05	0.060
Methoxychlor	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Endrin ketone	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Oxychlordane	04-024	mg/kg	<0.05	[NA]	<0.05	<0.05
Surrogate Recovery	04-024	%	93	[NA]	96	92
Date Extracted	04-024	-	14/11/2011	[NA]	14/11/2011	14/11/2011
Date Analysed	04-024	-	16/11/2011	[NA]	16/11/2011	16/11/2011

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

Method	Method Description
04-004	Total Solids by gravimetric, %
04-001	Metals by ICP-OES, mg/kg
04-002	Mercury by CVAAS, mg/kg
04-021	TPH C6-9 & BTEX by P&T GCMS, mg/kg
04-020	TPH by GC-FID, mg/kg
04-022	PAHs & Phenols by GCMS, mg/kg
04-024	OC & OP Pesticides by GCMS, mg/kg

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

BTEX surrogate 3 recovery for sample 24 is biased low due to matrix effects

- Spike recovery for Hg could not be accurately determined due to a significant background analyte concentration.

- Spike recovery for PAH and OC could not be accurately determined due to matrix interferences.

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	NT	A11/5406-A-1	98.9 99.2 RPD: 0

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	<1.0	A11/5406-A-1	2.5 2.5 RPD: 0	A11/5406-A-1	101%
Cadmium	mg/kg	<1.0	A11/5406-A-1	<1.0 <1.0	A11/5406-A-1	105%
Chromium	mg/kg	<1.0	A11/5406-A-1	6.4 6.4 RPD: 0	A11/5406-A-1	99%
Copper	mg/kg	<1.0	A11/5406-A-1	9.8 9.8 RPD: 0	A11/5406-A-1	101%
Mercury	mg/kg	<0.1	A11/5406-A-1	<0.1 <0.1	A11/5406-A-1	97%
Nickel	mg/kg	<1.0	A11/5406-A-1	3.1 3.1 RPD: 0	A11/5406-A-1	97%
Lead	mg/kg	<1.0	A11/5406-A-1	76 76 RPD: 0	A11/5406-A-1	94%
Zinc	mg/kg	<1.0	A11/5406-A-1	97 97 RPD: 0	A11/5406-A-1	89%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	<0.20	A11/5406-A-2	<0.20 <0.20	A11/5406-A-2	88%
Toluene	mg/kg	<0.20	A11/5406-A-2	<0.20 <0.20	A11/5406-A-2	91%
Ethyl Benzene	mg/kg	<0.20	A11/5406-A-2	<0.20 <0.20	A11/5406-A-2	87%
m+p xylenes	mg/kg	<0.40	A11/5406-A-2	<0.40 <0.40	A11/5406-A-2	86%
o-xylene	mg/kg	<0.20	A11/5406-A-2	<0.20 <0.20	A11/5406-A-2	89%
Total BTEX	mg/kg	<1.2	A11/5406-A-2	<1.2 <1.2	A11/5406-A-2	88%
Surrogate 1 Recovery	%	113	A11/5406-A-2	109 107 RPD: 2	A11/5406-A-2	93%
Surrogate 2 Recovery	%	113	A11/5406-A-2	108 102 RPD: 6	A11/5406-A-2	107%
Surrogate 3 Recovery	%	106	A11/5406-A-2	95 93 RPD: 2	A11/5406-A-2	94%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	mg/kg	<25	A11/5406-A-2	<25 <25	A11/5406-A-2	91%
TPHC10-C14	mg/kg	<50	A11/5406-A-2	<50 <50	A11/5406-A-2	80%
TPHC15-C28	mg/kg	<100	A11/5406-A-2	<100 <100	A11/5406-A-2	80%
TPHC29-C36	mg/kg	<100	A11/5406-A-2	130 210 RPD: 47	A11/5406-A-2	73%
Surrogate Recovery	%	106	A11/5406-A-2	108 105 RPD: 3	A11/5406-A-2	92%

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	105%
Acenaphthylene	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	92%
Acenaphthene	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	90%
Fluorene	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	91%
Phenanthrene	mg/kg	<0.50	A11/5406-A-2	<0.50 0.60	A11/5406-A-24	64%
Anthracene	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	78%
Fluoranthene	mg/kg	<0.50	A11/5406-A-2	3.0 2.2 RPD: 31	A11/5406-A-24	123%
Pyrene	mg/kg	<0.50	A11/5406-A-2	3.1 1.1 RPD: 95	A11/5406-A-24	128%
Benz(a)anthracene	mg/kg	<0.50	A11/5406-A-2	2.2 1.2 RPD: 59	A11/5406-A-24	88%
Chrysene	mg/kg	<0.50	A11/5406-A-2	1.3 1.1 RPD: 17	A11/5406-A-24	#
Benzo(b)&(k)fluoranthene	mg/kg	<1.0	A11/5406-A-2	4.2 2.6 RPD: 47	A11/5406-A-24	121%
Benzo(a)pyrene	mg/kg	<0.50	A11/5406-A-2	2.5 1.3 RPD: 63	A11/5406-A-24	91%
Indeno(1,2,3-cd)pyrene	mg/kg	<0.50	A11/5406-A-2	1.1 1.2 RPD: 9	A11/5406-A-24	89%
Dibenz(a,h)anthracene	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	80%
Benzo(g,h,i)perylene	mg/kg	<0.50	A11/5406-A-2	1.4 1.2 RPD: 15	A11/5406-A-24	85%
Coronene*	mg/kg	<0.50	A11/5406-A-2	<0.50 <0.50	A11/5406-A-24	NT
Benzo(e)pyrene*	mg/kg	<0.50	A11/5406-A-2	1.7 1.8 RPD: 6	A11/5406-A-24	124%
Perylene*	mg/kg	<0.50	A11/5406-A-2	0.70 0.60 RPD: 15	A11/5406-A-24	99%
Surrogate 1 Recovery	%	86	A11/5406-A-2	87 86 RPD: 1	A11/5406-A-24	81%
Surrogate 2 Recovery	%	86	A11/5406-A-2	72 72 RPD: 0	A11/5406-A-24	73%
Surrogate 3 Recovery	%	114	A11/5406-A-2	98 91 RPD: 7	A11/5406-A-24	107%

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TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	94%
Hexachlorobenzene	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	90%
beta-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	93%
gamma-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	91%
delta-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	87%
Heptachlor	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	83%
Aldrin	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	87%
Heptachlor epoxide	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	114%
trans-Chlordane	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	#
cis-Chlordane	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	#
alpha-Endosulfan	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	108%
DDE	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	91%
Dieldrin	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	131%
Endrin	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	124%
beta-Endosulfan	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	127%
pp-DDD	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	106%
Endrin aldehyde	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	103%
Endosulfan sulphate	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	109%
pp-DDT	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	99%
Methoxychlor	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	91%
Endrin ketone	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	103%
Oxychlordane	mg/kg	<0.05	[NT]	[NT]	A11/5406-A-24	NT
Surrogate Recovery	%	124	[NT]	[NT]	A11/5406-A-24	121%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-11	84.1 80.6 RPD: 4

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5406-A-11	10 10 RPD: 0
cadmium	mg/kg	[NT]	A11/5406-A-11	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5406-A-11	8.6 8.6 RPD: 0
Copper	mg/kg	[NT]	A11/5406-A-11	6.1 6.1 RPD: 0
Mercury	mg/kg	[NT]	A11/5406-A-11	<0.1 <0.1
Nickel	mg/kg	[NT]	A11/5406-A-11	2.3 2.4 RPD: 4
Lead	mg/kg	[NT]	A11/5406-A-11	18 18 RPD: 0
Zinc	mg/kg	[NT]	A11/5406-A-11	27 27 RPD: 0

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Batch Number: A11/5406-A [R00]
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TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Benzene	mg/kg	[NT]	A11/5406-A-96	<0.20 <0.20
Toluene	mg/kg	[NT]	A11/5406-A-96	<0.20 <0.20
Ethyl Benzene	mg/kg	[NT]	A11/5406-A-96	<0.20 <0.20
m+p xylenes	mg/kg	[NT]	A11/5406-A-96	<0.40 <0.40
o-xylene	mg/kg	[NT]	A11/5406-A-96	<0.20 <0.20
Total BTEX	mg/kg	[NT]	A11/5406-A-96	<1.2 <1.2
Surrogate 1 Recovery	%	[NT]	A11/5406-A-96	99 109 RPD: 10
Surrogate 2 Recovery	%	[NT]	A11/5406-A-96	99 108 RPD: 9
Surrogate 3 Recovery	%	[NT]	A11/5406-A-96	88 101 RPD: 14

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	mg/kg	[NT]	A11/5406-A-96	<25 <25	External	[NT]
TPHC10-C14	mg/kg	[NT]	A11/5406-A-96	<50 <50	External	81%
TPHC15-C28	mg/kg	[NT]	A11/5406-A-96	100 120 RPD: 18	External	82%
TPHC29-C36	mg/kg	[NT]	A11/5406-A-96	110 140 RPD: 24	External	84%
Surrogate Recovery	%	[NT]	A11/5406-A-96	100 100 RPD: 0	External	99%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	103%
Acenaphthylene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	89%
Acenaphthene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	89%
Fluorene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	85%
Phenanthrene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	95%
Anthracene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	75%
Fluoranthene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Pyrene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Benz(a)anthracene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Chrysene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Benzo(b)&(k)fluoranthene	mg/kg	<1.0	A11/5406-A-24	<1.0 <1.0	A11/5406-A-44	#
Benzo(a)pyrene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Indeno(1,2,3-cd)pyrene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Dibenz(a,h)anthracene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	82%
Benzo(g,h,i)perylene	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Coronene*	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	NT
Benzo(e)pyrene*	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	#
Perylene*	mg/kg	<0.50	A11/5406-A-24	<0.50 <0.50	A11/5406-A-44	133%
Surrogate 1 Recovery	%	98	A11/5406-A-24	83 81 RPD: 2	A11/5406-A-44	78%
Surrogate 2 Recovery	%	76	A11/5406-A-24	75 72 RPD: 4	A11/5406-A-44	65%
Surrogate 3 Recovery	%	92	A11/5406-A-24	100 88 RPD: 13	A11/5406-A-44	106%

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Release



Batch Number: A11/5406-A [R00]
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TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	86%
Hexachlorobenzene	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	78%
beta-BHC	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	88%
gamma-BHC	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	88%
delta-BHC	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	78%
Heptachlor	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	77%
Aldrin	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	80%
Heptachlor epoxide	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	108%
trans-Chlordane	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	121%
cis-Chlordane	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	119%
alpha-Endosulfan	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	92%
DDE	mg/kg	<0.05	A11/5406-A-24	0.080 0.070 RPD: 13	A11/5406-A-44	101%
Dieldrin	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	120%
Endrin	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	118%
beta-Endosulfan	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	126%
pp-DDD	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	101%
Endrin aldehyde	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	104%
Endosulfan sulphate	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	102%
pp-DDT	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	103%
Methoxychlor	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	86%
Endrin ketone	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	97%
Oxychlordane	mg/kg	<0.05	A11/5406-A-24	<0.05 <0.05	A11/5406-A-44	NT
Surrogate Recovery	%	124	A11/5406-A-24	105 102 RPD: 3	A11/5406-A-44	117%

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-22	88.1 87.8 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	[NT]	A11/5406-A-22	14 14 RPD:0	A11/5406-A-22	103%
Cadmium	mg/kg	[NT]	A11/5406-A-22	<1.0 <1.0	A11/5406-A-22	105%
Chromium	mg/kg	[NT]	A11/5406-A-22	6.6 6.6 RPD:0	A11/5406-A-22	96%
Copper	mg/kg	[NT]	A11/5406-A-22	35 35 RPD:0	A11/5406-A-22	103%
Mercury	mg/kg	[NT]	A11/5406-A-22	0.22 0.22 RPD:0	A11/5406-A-22	93%
Nickel	mg/kg	[NT]	A11/5406-A-22	5.8 5.8 RPD:0	A11/5406-A-22	92%
Lead	mg/kg	[NT]	A11/5406-A-22	180 180 RPD:0	A11/5406-A-22	103%
Zinc	mg/kg	[NT]	A11/5406-A-22	230 230 RPD:0	A11/5406-A-22	86%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	100%
Acenaphthylene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	95%
Acenaphthene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	96%
Fluorene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	93%
Phenanthrene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	76%
Anthracene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	87%
Fluoranthene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	85%
Pyrene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	86%
Benz(a)anthracene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	84%
Chrysene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	97%
Benzo(b)&(k)fluoranthene	mg/kg	[NT]	A11/5406-A-44	<1.0 <1.0	External	98%
Benzo(a)pyrene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	89%
Indeno(1,2,3-cd)pyrene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	89%
Dibenz(a,h)anthracene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	88%
Benzo(g,h,i)perylene	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	85%
Coronene*	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	NT
Benzo(e)pyrene*	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	106%
Perylene*	mg/kg	[NT]	A11/5406-A-44	<0.50 <0.50	External	113%
Surrogate 1 Recovery	%	[NT]	A11/5406-A-44	78 86 RPD: 10	External	78%
Surrogate 2 Recovery	%	[NT]	A11/5406-A-44	71 72 RPD: 1	External	87%
Surrogate 3 Recovery	%	[NT]	A11/5406-A-44	92 95 RPD: 3	External	101%

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	86%
Hexachlorobenzene	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	86%
beta-BHC	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	94%
gamma-BHC	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	90%
delta-BHC	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	102%
Heptachlor	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	86%
Aldrin	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	90%
Heptachlor epoxide	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	92%
trans-Chlordane	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	103%
cis-Chlordane	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	100%
alpha-Endosulfan	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	79%
gamma-DDE	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	103%
Dieldrin	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	105%
Endrin	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	109%
beta-Endosulfan	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	121%
pp-DDD	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	90%
Endrin aldehyde	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	90%
Endosulfan sulphate	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	100%
pp-DDT	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	91%
Methoxychlor	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	90%
Endrin ketone	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	100%
Oxychlordane	mg/kg	[NT]	A11/5406-A-44	<0.05 <0.05	External	NT
Surrogate Recovery	%	[NT]	A11/5406-A-44	104 107 RPD: 3	External	113%

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-31	81.9 79.8 RPD:3

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	[NT]	A11/5406-A-31	4.2 4.2 RPD:0	A11/5406-A-43	97%
Cadmium	mg/kg	[NT]	A11/5406-A-31	<1.0 <1.0	A11/5406-A-43	106%
Chromium	mg/kg	[NT]	A11/5406-A-31	4.1 4.1 RPD:0	A11/5406-A-43	101%
Copper	mg/kg	[NT]	A11/5406-A-31	15 15 RPD:0	A11/5406-A-43	100%
Mercury	mg/kg	[NT]	A11/5406-A-31	0.16 0.16 RPD:0	A11/5406-A-43	104%
Nickel	mg/kg	[NT]	A11/5406-A-31	2.0 2.0 RPD:0	A11/5406-A-43	94%
Lead	mg/kg	[NT]	A11/5406-A-31	170 170 RPD:0	A11/5406-A-43	92%
Zinc	mg/kg	[NT]	A11/5406-A-31	110 110 RPD:0	A11/5406-A-43	99%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Naphthalene	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Acenaphthylene	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Acenaphthene	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Fluorene	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Phenanthrene	mg/kg	[NT]	A11/5406-A-96	0.70 0.90 RPD:25
Anthracene	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Fluoranthene	mg/kg	[NT]	A11/5406-A-96	3.0 3.3 RPD:10
Pyrene	mg/kg	[NT]	A11/5406-A-96	1.7 1.0 RPD:52
Benz(a)anthracene	mg/kg	[NT]	A11/5406-A-96	1.6 1.8 RPD:12
Chrysene	mg/kg	[NT]	A11/5406-A-96	1.6 1.8 RPD:12
Benzo(b)&(k)fluoranthene	mg/kg	[NT]	A11/5406-A-96	3.8 4.1 RPD:8
Benzo(a)pyrene	mg/kg	[NT]	A11/5406-A-96	2.1 2.2 RPD:5
Indeno(1,2,3-cd)pyrene	mg/kg	[NT]	A11/5406-A-96	1.5 1.8 RPD:18
Dibenz(a,h)anthracene	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Benzo(g,h,i)perylene	mg/kg	[NT]	A11/5406-A-96	1.7 2.0 RPD:16
Coronene*	mg/kg	[NT]	A11/5406-A-96	<0.50 <0.50
Benzo(e)pyrene*	mg/kg	[NT]	A11/5406-A-96	1.6 1.8 RPD:12
Perylene*	mg/kg	[NT]	A11/5406-A-96	0.70 0.80 RPD:13
Surrogate 1 Recovery	%	[NT]	A11/5406-A-96	84 86 RPD:2
Surrogate 2 Recovery	%	[NT]	A11/5406-A-96	71 71 RPD:0
Surrogate 3 Recovery	%	[NT]	A11/5406-A-96	97 105 RPD:8

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
alpha-BHC	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Hexachlorobenzene	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
beta-BHC	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
gamma-BHC	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
delta-BHC	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Heptachlor	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Aldrin	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Heptachlor epoxide	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
trans-Chlordane	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
cis-Chlordane	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
alpha-Endosulfan	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
gamma-DDE	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
delta-DDE	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Endrin	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
beta-Endosulfan	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
pp-DDD	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Endrin aldehyde	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Endosulfan sulphate	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
pp-DDT	mg/kg	[NT]	A11/5406-A-96	<0.05 0.060
Methoxychlor	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Endrin ketone	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Oxychlordane	mg/kg	[NT]	A11/5406-A-96	<0.05 <0.05
Surrogate Recovery	%	[NT]	A11/5406-A-96	93 100 RPD: 7

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Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-42	80.2 79.3 RPD:1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	[NT]	A11/5406-A-43	4.2 4.1 RPD:2	A11/5406-A-61	104%
Cadmium	mg/kg	[NT]	A11/5406-A-43	<1.0 <1.0	A11/5406-A-61	107%
Chromium	mg/kg	[NT]	A11/5406-A-43	12 12 RPD:0	A11/5406-A-61	99%
Copper	mg/kg	[NT]	A11/5406-A-43	4.7 4.7 RPD:0	A11/5406-A-61	102%
Mercury	mg/kg	[NT]	A11/5406-A-43	<0.1 <0.1	A11/5406-A-61	#
Nickel	mg/kg	[NT]	A11/5406-A-43	1.5 1.5 RPD:0	A11/5406-A-61	94%
Lead	mg/kg	[NT]	A11/5406-A-43	10 10 RPD:0	A11/5406-A-61	99%
Zinc	mg/kg	[NT]	A11/5406-A-43	7.1 7.1 RPD:0	A11/5406-A-61	101%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-51	87.9 88.2 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	[NT]	A11/5406-A-51	6.3 6.3 RPD:0	A11/5406-A-81	92%
Cadmium	mg/kg	[NT]	A11/5406-A-51	<1.0 <1.0	A11/5406-A-81	106%
Chromium	mg/kg	[NT]	A11/5406-A-51	8.2 8.2 RPD:0	A11/5406-A-81	94%
Copper	mg/kg	[NT]	A11/5406-A-51	17 17 RPD:0	A11/5406-A-81	104%
Mercury	mg/kg	[NT]	A11/5406-A-51	0.11 0.11 RPD:0	A11/5406-A-81	100%
Nickel	mg/kg	[NT]	A11/5406-A-51	4.1 4.1 RPD:0	A11/5406-A-81	91%
Lead	mg/kg	[NT]	A11/5406-A-51	70 70 RPD:0	A11/5406-A-81	82%
Zinc	mg/kg	[NT]	A11/5406-A-51	130 130 RPD:0	A11/5406-A-81	81%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-61	88.9 88.3 RPD:1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5406-A-61	8.1 8.1 RPD:0
Cadmium	mg/kg	[NT]	A11/5406-A-61	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5406-A-61	5.3 5.3 RPD:0
Copper	mg/kg	[NT]	A11/5406-A-61	18 18 RPD:0
Mercury	mg/kg	[NT]	A11/5406-A-61	5.0 4.1 RPD:20
Nickel	mg/kg	[NT]	A11/5406-A-61	4.2 4.2 RPD:0
Lead	mg/kg	[NT]	A11/5406-A-61	290 290 RPD:0
Zinc	mg/kg	[NT]	A11/5406-A-61	140 140 RPD:0

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Released



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-71	90.5 87.3 RPD: 4

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5406-A-71	9.4 9.5 RPD: 1
Cadmium	mg/kg	[NT]	A11/5406-A-71	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5406-A-71	7.1 7.1 RPD: 0
Copper	mg/kg	[NT]	A11/5406-A-71	4.6 4.6 RPD: 0
Mercury	mg/kg	[NT]	A11/5406-A-71	<0.1 <0.1
Nickel	mg/kg	[NT]	A11/5406-A-71	1.6 1.6 RPD: 0
Lead	mg/kg	[NT]	A11/5406-A-71	7.6 7.6 RPD: 0
Zinc	mg/kg	[NT]	A11/5406-A-71	17 17 RPD: 0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-81	90.9 90.0 RPD: 1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5406-A-81	5.0 5.0 RPD: 0
Cadmium	mg/kg	[NT]	A11/5406-A-81	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5406-A-81	160 160 RPD: 0
Copper	mg/kg	[NT]	A11/5406-A-81	74 74 RPD: 0
Mercury	mg/kg	[NT]	A11/5406-A-81	0.15 0.15 RPD: 0
Nickel	mg/kg	[NT]	A11/5406-A-81	110 110 RPD: 0
Lead	mg/kg	[NT]	A11/5406-A-81	15 15 RPD: 0
Zinc	mg/kg	[NT]	A11/5406-A-81	77 17 RPD: 128

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5406-A-92	93.9 94.7 RPD: 1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5406-A-92	8.6 8.6 RPD: 0
Cadmium	mg/kg	[NT]	A11/5406-A-92	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5406-A-92	13 13 RPD: 0
Copper	mg/kg	[NT]	A11/5406-A-92	6.4 6.4 RPD: 0
Mercury	mg/kg	[NT]	A11/5406-A-92	<0.1 <0.1
Nickel	mg/kg	[NT]	A11/5406-A-92	10 10 RPD: 0
Lead	mg/kg	[NT]	A11/5406-A-92	20 20 RPD: 0
Zinc	mg/kg	[NT]	A11/5406-A-92	29 29 RPD: 0

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Release



Batch Number: A11/5406-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPHC6-C9	mg/kg	[NT]	A11/5406-A-2	<25 <25
TPHC10-C14	mg/kg	[NT]	A11/5406-A-2	<50 <50
TPHC15-C28	mg/kg	[NT]	A11/5406-A-2	<100 <100
TPHC29-C36	mg/kg	[NT]	A11/5406-A-2	130 210 RPD:47
Surrogate Recovery	%	[NT]	A11/5406-A-2	108 105 RPD:3

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPHC6-C9	mg/kg	[NT]	A11/5406-A-24	<25 [NT]
TPHC10-C14	mg/kg	[NT]	A11/5406-A-24	<50 <50
TPHC15-C28	mg/kg	[NT]	A11/5406-A-24	<100 <100
TPHC29-C36	mg/kg	[NT]	A11/5406-A-24	<100 <100
Surrogate Recovery	%	[NT]	A11/5406-A-24	104 105 RPD:1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPHC6-C9	mg/kg	[NT]	A11/5406-A-44	<25 [NT]
TPHC10-C14	mg/kg	[NT]	A11/5406-A-44	<50 <50
TPHC15-C28	mg/kg	[NT]	A11/5406-A-44	<100 <100
TPHC29-C36	mg/kg	[NT]	A11/5406-A-44	<100 <100
Surrogate Recovery	%	[NT]	A11/5406-A-44	104 109 RPD:5

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPHC6-C9	mg/kg	[NT]	A11/5406-A-96	<25 <25
TPHC10-C14	mg/kg	[NT]	A11/5406-A-96	<50 <50
TPHC15-C28	mg/kg	[NT]	A11/5406-A-96	100 120 RPD:18
TPHC29-C36	mg/kg	[NT]	A11/5406-A-96	110 140 RPD:24
Surrogate Recovery	%	[NT]	A11/5406-A-96	100 100 RPD:0

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD:

Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

REPORT OF ANALYSIS



Laboratory Reference: A11/5406-B [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 4236
Project: Bowen Hills
Sample Type: Water
No. of Samples: 1
Date Received: 10/11/2011
Date Completed: 16/11/2011

Contact: sch4p4(6)

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Perso
Technical Enquiries:
Telephone: +61 73268 1228
Fax: +61 73268 1238
Email: brisbane@advancedanalytical.com.au
sch4p4(6) Pe@advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal inform

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 17 November 2011

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Batch Number: A11/5406-B [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/1
Client Reference:	-	-	TB101111
Date Sampled:	-	-	10/11/2011
Analysis Description	Method	Units	
BTEX			
Benzene	04-021	µg/L	<1.0
Toluene	04-021	µg/L	<2.0
Ethyl Benzene	04-021	µg/L	<2.0
m+p xylenes	04-021	µg/L	<4.0
o-xylene	04-021	µg/L	<2.0
Total BTEX	04-021	µg/L	<11
Surrogate 1 Recovery	04-021	%	112
Surrogate 2 Recovery	04-021	%	101
Surrogate 3 Recovery	04-021	%	105
Date Extracted	04-021	-	15/11/11
Date Analysed	04-021	-	15/11/11
Total Petroleum Hydrocarbons			
TPHC6-C9	04-021	µg/L	<25
Surrogate Recovery	04-030	%	105
Date Extracted	04-030	-	15/11/11
Date Analysed	04-030	-	15/11/11

Method	Method Description
04-021	TPH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TPH by GC-FID, µg/L

Result Comments

[<] Less than
[INS] Insufficient sample for this test
[NA] Test not required

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Release



Batch Number: A11/5406-B [R00]
Project Reference: BowenHills

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	µg/L	<1.0	[NT]	[NT]	External	100%
Toluene	µg/L	<2.0	[NT]	[NT]	External	98%
Ethyl Benzene	µg/L	<2.0	[NT]	[NT]	External	99%
m+p xylenes	µg/L	<4.0	[NT]	[NT]	External	98%
o-xylene	µg/L	<2.0	[NT]	[NT]	External	100%
total BTEX	µg/L	<11	[NT]	[NT]	External	99%
Surrogate 1 Recovery	%	106	[NT]	[NT]	External	96%
Surrogate 2 Recovery	%	97	[NT]	[NT]	External	97%
Surrogate 3 Recovery	%	99	[NT]	[NT]	External	100%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	<25	[NT]	[NT]	External	95%
TPH C10-14	µg/L	NT	[NT]	[NT]	External	NT
TPH C15-28	µg/L	NT	[NT]	[NT]	External	NT
TPH C29-36	µg/L	NT	[NT]	[NT]	External	NT
Surrogate Recovery	%	99	[NT]	[NT]	External	100%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD:

Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

Issue Date: 17 November 2011

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Release

SAMPLE RECEIPT NOTIFICATION



Attention : sch4p4(6) F

Client : Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Telephone : 07 3852 3800

Facsimile : 07 3852 3808

Project : Bowen Hills

Order Number : 4236

Laboratory Reference : A11/5406-A

Completed Chain of Custody accompanied samples.

Samples were received in good condition and correctly preserved for all tests.

Samples were received in sufficient time to allow laboratory to meet holding times.

Samples were received chilled/chilling (if required).

YES

YES

YES

YES

Date samples received : 10/11/2011

Matrix : Soil

No. of samples : 99

Scheduled reporting date : 17/11/11

Customer Services Officer : sch4p4(6) Pers

Telephone : 07 3268 1228

Email : brisbane@advancedanalytical.com.au

Contact your Customer Services Officer for all queries and issues regarding this sample batch.

Note: Turnaround time begins at time of receipt at laboratory, surcharges may apply for fast turnaround.

Water samples will be appropriately stored for 1 month from date of receipt of samples.

Soil / Sediment samples will be appropriately stored for 2 months from date of receipt of samples.

COMMENTS:

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brisbane@advancedanalytical.com.au
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SAMPLE RECEIPT NOTIFICATION



Attention : sch4p4(6) P

Client : Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Telephone : 07 3852 3800

Facsimile : 07 3852 3808

Project : Bowen Hills

Order Number : 4236

Laboratory Reference : A11/5406-B

Completed Chain of Custody accompanied samples.

YES

Samples were received in good condition and correctly preserved for all tests.

YES

Samples were received in sufficient time to allow laboratory to meet holding times.

YES

Samples were received chilled/chilling (if required).

YES

Date samples received : 10/11/2011

Matrix : Water

No. of samples : 1

Scheduled reporting date : 17/11/11

Customer Services Officer : sch4p4(6) Perso

Telephone : 07 3268 1228

Email : brisbane@advancedanalytical.com.au

Contact your Customer Services Officer for all queries and issues regarding this sample batch.

Note: Turnaround time begins at time of receipt at laboratory, surcharges may apply for fast turnaround.

Water samples will be appropriately stored for 1 month from date of receipt of samples.

Soil / Sediment samples will be appropriately stored for 2 months from date of receipt of samples.

COMMENTS:

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Hamilton QLD 4007 Australia

Ph: + 61 7 3268 1228
Fax: + 61 7 3268 1238
brisbane@advancedanalytical.com.au
www.advancedanalytical.com.au

Quotation Number: _____
 Project Manager: _____
 Sampled By: _____
 Results To: _____
 Relinquished by: _____
 Due Date: 5 Day TAT
 Special Instructions: _____

Lab Sample No.	Sample Reference	Sample Depth	Sample Type	No. of Jars/Vials	Date Sampled	TPH	TPHTEX	TPHTEX/6 Areas	TPHTEX/6	TPHTEX/PAH	OC Picocolor	PAH	TCL PMS, Cd, Cr, Cu, Hg, Ni, Pb, Zn	TCL P (PAH)	TC-C (TEX)
1	TP6-1	0.1	Soil	1	9-Nov-11	X									
2	TP6-2	0.5	Soil	1	9-Nov-11	X				X					
3	TP6-3	1.0	Soil	1	9-Nov-11	X					X				
4	TP6-4	1.5	Soil	1	9-Nov-11	X						X			
5	TP6-5	2.0	Soil	1	9-Nov-11	X									
6	TP6-6	2.5	Soil	1	9-Nov-11	X									
7	TP6-7	3.0	Soil	1	9-Nov-11	X									
8	TP7-1	0.1	Soil	1	9-Nov-11	X									
9	TP7-2	0.5	Soil	1	9-Nov-11	X					X	X			
10	TP7-3	1.0	Soil	1	9-Nov-11	X						X			
11	TP7-4	1.5	Soil	1	9-Nov-11	X									
12	TP7-5	2.0	Soil	1	9-Nov-11	X						X			
13	TP7-6	2.5	Soil	1	9-Nov-11	X									
14	TP7-7	3.0	Soil	1	9-Nov-11	X									
15	TP8-1	0.1	Soil	1	9-Nov-11	X									
16	TP8-2	0.5	Soil	1	9-Nov-11	X									
17	TP8-3	1.0	Soil	1	9-Nov-11	X				X					
18	TP8-4	1.5	Soil	1	9-Nov-11	X									
19	TP8-5	2.0	Soil	1	9-Nov-11	X									
20	TP9-6	2.5	Soil	1	9-Nov-11	X									
21	TP9-7	3.0	Soil	1	9-Nov-11	X									
22	TP9-1	0.1	Soil	1	9-Nov-11	X						X			
23	TP9-2	0.5	Soil	1	9-Nov-11	X						X			
24	TP9-3	1.0	Soil	1	9-Nov-11	X				X	X				
25	TP9-4	1.5	Soil	1	9-Nov-11	X				X					

sch4p4(

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Butler Partners Pty Ltd

PO Box 2267, Fortitude Valley BC Qld 4006
(79 Doggett Street, Newstead Qld 4006)
Ph: 07 3552 1800 Fax: 07 3552 2008

Job No: 011-1658 Order No: 4237
Site: Bowen Hills CDC No: 011-1658/3

Advanced Analytical

Advanced Analytical Australia
Unit 1, 452 Kingsford Smith Drive, Hamilton NSW

Ph: 3268 1238
Fax: 3268 1238

Quotation Number: Project Manager: Sampled By: Results To: Relinquished by: Due Date: 5 Day TAT Special Instructions:						sch4p4(6)										8 metals TPH/TEX TPH/TEX/AB/PAHs TPH/TEX/PAH OC Polycyclics PAH TCLP (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) TCLP (PAH) (C-Ca)TEX									
Lab Sample No.	Sample Reference	Sample Depth	Sample Type	No. of Jars/Vials	Date Sampled																				
TP9-5	1.0	Soil	1	9-Nov-11	X																				
TP9-4	1.5	Soil	1	9-Nov-11	X																				
TP9-7	3.0	Soil	1	9-Nov-11																					
TP10-1	0-0.1	Soil	1	10-Nov-11	X																				
TP10-2	0.5	Soil	1	10-Nov-11	X																				
TP10-3	1.0	Soil	1	10-Nov-11	X																				
TP10-4	1.5	Soil	1	10-Nov-11	X																				
TP10-5	2.0	Soil	1	10-Nov-11	X																				
TP10-6	2.5	Soil	1	10-Nov-11	X																				
TP10-7	3.0	Soil	1	10-Nov-11																					
TP11-1	0-0.1	Soil	1	10-Nov-11	X																				
TP11-2	0.5	Soil	1	10-Nov-11	X																				
TP11-3	1.0	Soil	1	10-Nov-11	X																				
TP11-4	1.5	Soil	1	10-Nov-11	X																				
TP11-5	2.0	Soil	1	10-Nov-11	X																				
TP11-6	2.5	Soil	1	10-Nov-11																					
TP11-7	3.0	Soil	1	10-Nov-11	X																				
TP12-1	0-0.1	Soil	1	10-Nov-11	X																				
TP12-2	0.1-0.2	Soil	1	10-Nov-11	X																				
TP12-3	0.5	Soil	1	10-Nov-11	X																				
TP12-4	1.0	Soil	1	10-Nov-11	X																				
TP12-5	1.5	Soil	1	10-Nov-11	X																				
TP12-6	2.0	Soil	1	10-Nov-11																					
TP12-7	2.5	Soil	1	10-Nov-11	X																				
TP12-8	3.0	Soil	1	10-Nov-11																					

Reviewed By:
Date:
By: (Town of Glenbury - Suburban Integrity) - Version 1 - 10/12/07

Approved By:
Date:

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sch4p4

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Ph: 07 3852 1800 Fax: 07 3852 1806

Job No:

Site

Q11-1858

Brown Hills

Order No:

COC No.

4237

011-165BJ3

Advanced Analytical

Unit 1, 882 Kingsford Smith Drive, Hamilton 4007

Ph: 3268 1228

$$F_{\text{max}}: 3.268 \pm 2.68$$

PO: 07-3852-3800 Fax: 07-3852-3808 Site: Bowen Hills COC No: 011-150503

Quotation Number: _____
 Project Manager: _____
 Sampled By: _____
 Results To: _____
 Relinquished by: _____
 Due Date: 5 Day TAT
 Special Instructions: _____

Lab Sample No.	Sample Reference	Sample Depth	Sample Type	No. of Jars/Vials	Date Sampled	8 negas	TPH/TEX	TPH/TEX (Mn)	TPH/TEX-Pb	TPH/TEX-PH	OC Picolact	PAH	TC-P (As, Cd, Cr, Cu, Hg, Mn, Pb, Zn)	TC-P (Pb)	TC-C (BTEX)
TP13-1	0-0.1	Soil	1	10-Nov-11	X							X			
TP13-2	0.5	Soil	1	10-Nov-11	X										
TP13-3	1.0	Soil	1	10-Nov-11	X							X			
TP13-4	1.5	Soil	1	10-Nov-11	X										
TP13-5	2.0	Soil	1	10-Nov-11	X										
TP13-6	2.5	Soil	1	10-Nov-11	X										
TP13-7	3.0	Soil	1	10-Nov-11	X										
TP14-1	0-0.1	Soil	1	10-Nov-11	X										
TP14-2	0.5	Soil	1	10-Nov-11	X										
TP14-3	1.0	Soil	1	10-Nov-11	X										
TP14-4	1.5	Soil	1	10-Nov-11	X					X					
TP14-5	2.0	Soil	1	10-Nov-11	X							X			
TP14-6	2.5	Soil	1	10-Nov-11	X										
TP14-7	3.0	Soil	1	10-Nov-11	X										
TP15-1	0-0.1	Soil	1	10-Nov-11	X										
TP15-2	0.5	Soil	1	10-Nov-11	X							X			
TP15-3	1.0	Soil	1	10-Nov-11	X										
TP15-4	1.5	Soil	1	10-Nov-11	X										
TP15-5	2.0	Soil	1	10-Nov-11	X							X			
TP15-6	2.5	Soil	1	10-Nov-11	X										
TP15-7	3.0	Soil	1	10-Nov-11	X										
TP16-1	0-0.1	Soil	1	10-Nov-11	X					X	X				
TP16-2	0.5	Soil	1	10-Nov-11	X										
TP16-3	1.0	Soil	1	10-Nov-11	X										
TP16-4	1.5	Soil	1	10-Nov-11	X										

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 (butterpartners.com.au)
 5 Day TAT

sch4p4

Received by:
Date:
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TPID	Depth (m)	Soil Type	Moisture (%)	Temperature (°C)	Location	Notes
TP1-1	0.5	Soil	1	10-Nov-11	X	
TP1-2	0.5	Soil	1	10-Nov-11	X	
TP1-3	1.0	Soil	1	10-Nov-11	X	
TP1-4	1.5	Soil	1	10-Nov-11	X	
TP1-5	2.0	Soil	1	10-Nov-11	X	
TP1-6	2.5	Soil	1	10-Nov-11	X	
TP1-7	3.0	Soil	1	10-Nov-11	X	
TP1-8	3.5	Soil	1	10-Nov-11	X	
TP1-9	4.0	Soil	1	10-Nov-11	X	
TP1-10	4.5	Soil	1	10-Nov-11	X	
TP1-11	5.0	Soil	1	10-Nov-11	X	
TP1-12	5.5	Soil	1	10-Nov-11	X	
TP1-13	6.0	Soil	1	10-Nov-11	X	
TP1-14	6.5	Soil	1	10-Nov-11	X	
TP1-15	7.0	Soil	1	10-Nov-11	X	
TP1-16	7.5	Soil	1	10-Nov-11	X	
TP1-17	8.0	Soil	1	10-Nov-11	X	
TP1-18	8.5	Soil	1	10-Nov-11	X	
TP1-19	9.0	Soil	1	10-Nov-11	X	
TP1-20	9.5	Soil	1	10-Nov-11	X	

Butler Partners Pty Ltd

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Job No: 011-1055 Order No: 4237
Site: Bowen Hills COC No: 011-165B/3

Advanced Analytical

Advanced Analytical Australia
Unit 1, 482 Kingsford Smith Drive, Hamilton 4007

Ph: 5268 1228
Fax: 5268 1238

Quotation Number: Project Manager: sch4p4(6) Sampled By: Results To: Relinquished by: Due Date: 5 Day TAT Special Instructions:						B metals TPH/TEX TPH/TEX/PAHs TPH/TEX/PAH TPH/TEX/PAH OC Residues PAH TCLP (As, Cd, Cr, Cu, Pb, Ni, Fe, Zn) TCLP (PAH) (C-C-BTEX)														
Lab Sample No.	Sample Reference	Sample Depths	Sample Type	No. of Jars/Vials	Date Sampled															
76	TP16-5	2.0	Soil	1	10-Nov-11	X														
77	TP16-6	2.5	Soil	1	10-Nov-11	X														
78	TP16-7	3.0	Soil	1	10-Nov-11	X														
79	TP17-1	0.5	Soil	1	10-Nov-11	X														
80	TP17-2	0.5	Soil	1	10-Nov-11	X														
81	TP17-3	1.0	Soil	1	10-Nov-11	X														
82	TP17-4	1.5	Soil	1	10-Nov-11	X														
83	TP17-5	2.0	Soil	1	10-Nov-11	X														
84	TP17-6	2.5	Soil	1	10-Nov-11	X														
85	TP17-7	3.0	Soil	1	10-Nov-11	X														
86	TP18-1	0.5	Soil	1	10-Nov-11	X														
87	TP18-2	0.5	Soil	1	10-Nov-11	X														
88	TP18-3	1.0	Soil	1	10-Nov-11	X														
89	TP18-4	1.5	Soil	1	10-Nov-11	X														
90	TP18-5	2.0	Soil	1	10-Nov-11	X														
91	TP18-6	2.5	Soil	1	10-Nov-11	X														
92	TP18-7	3.0	Soil	1	10-Nov-11	X														
93	QC-03	-	Soil	1	10-Nov-11	X														
94	QC-05	-	Soil	1	10-Nov-11	X														
95	QC-07	-	Soil	1	10-Nov-11	X														
96	QC-09	-	Soil	1	10-Nov-11	X														
97	QC-11	-	Soil	1	10-Nov-11	X														
98	TR10111	-	water	2	10-Nov-11	X														
99	XS-1	-	Soil	1	10-Nov-11	X														
100	XS-2	-	Soil	1	10-Nov-11	X														
TOTALS:						98														

Reviewed By:
Date: 10/11/2011
AF-02 - Chief of Quality - Advanced Analytical - Version 1 - 10/11/2011

Organisation:
Date:

Published on DES Disclosure Log
RTI Act 2009

sch4p4

REPORT OF ANALYSIS



Laboratory Reference: A11/5545-A [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 4892
Project: Bowen Hills
Sample Type: Soil
No. of Samples: 41
Date Received: 18/11/2011
Date Completed: 25/11/2011

Contact: sch4p4(6)

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Per
Technical Enquiries:
Telephone: +61 7 3268 1228
Fax: +61 7 3268 1238
Email: brisbane@advancedanalytical.com.au
sch4p4(6) Pe@advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal info

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 25 November 2011

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP 19 - 1	TP 19 - 2	TP 19 - 3	TP 19 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	93.8	90.3	89.0	92.3
Trace Elements						
Arsenic	04-001	mg/kg	8.1	4.9	5.0	6.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	6.5	5.4	6.0	6.6
Copper	04-001	mg/kg	16	37	22	10
Mercury	04-002	mg/kg	0.13	0.27	0.31	<0.1
Nickel	04-001	mg/kg	4.9	19	7.5	4.0
Lead	04-001	mg/kg	120	780	210	270
Zinc	04-001	mg/kg	120	210	220	100
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	84	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	88	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	78	[NA]	[NA]
Date Extracted	04-021	-	[NA]	22/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	23/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	[NA]	<100	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	100	[NA]	[NA]
Date Extracted	04-020	-	[NA]	23/11/2011	[NA]	[NA]
Date Analysed	04-020	-	[NA]	23/11/2011	[NA]	[NA]
Polyaromatic Hydrocarbons						

Issue Date: 25 November 2011

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Page 2 of 33

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Batch Number: A11/5545-A [R00]

Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP 19 - 1	TP 19 - 2	TP 19 - 3	TP 19 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	0.60	0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	2.9	1.5	[NA]
Pyrene	04-022	mg/kg	[NA]	3.0	1.5	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	2.4	1.1	[NA]
Chrysene	04-022	mg/kg	[NA]	2.3	0.90	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	5.2	2.2	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	2.8	1.3	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	1.9	0.80	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	0.50	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	1.8	1.1	[NA]
Coronene*	04-022	mg/kg	[NA]	0.60	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	2.0	0.90	[NA]
Perylene*	04-022	mg/kg	[NA]	0.80	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	87	79	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	82	76	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	95	88	[NA]
Rate Extracted	04-022	-	[NA]	23/11/2011	23/11/2011	[NA]
Date Analysed	04-022	-	[NA]	25/11/2011	24/11/2011	[NA]
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
beta-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
gamma-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
delta-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Heptachlor	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Aldrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]

Issue Date: 25 November 2011

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Release



Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1	/2	/3	/4
Client Reference:	-	-	TP 19 - 1	TP 19 - 2	TP 19 - 3	TP 19 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
cis-Chlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
alpha-Endosulfan	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDE	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Dieldrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDD	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDT	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Methoxychlor	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin ketone	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Oxychlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Surrogate Recovery	04-024	%	99	[NA]	[NA]	[NA]
Date Extracted	04-024	-	23/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-024	-	24/11/2011	[NA]	[NA]	[NA]

Issue Date: 25 November 2011

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/5	/6	/7	/8
Client Reference:	-	-	TP 19 - 5	TP 19 - 6	TP 19 - 7	TP 20 - 1
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	91.6	94.9	86.8	89.7
Trace Elements						
Arsenic	04-001	mg/kg	5.5	6.4	2.8	4.4
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.0	4.2	3.2	4.6
Copper	04-001	mg/kg	3.3	3.1	2.2	3.6
Mercury	04-002	mg/kg	<0.1	<0.1	<0.1	0.13
Nickel	04-001	mg/kg	1.1	1.4	<1.0	8.7
Lead	04-001	mg/kg	6.7	6.2	8.2	560
Zinc	04-001	mg/kg	5.9	20	5.8	300
BTEX						
Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Toluene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
m+p xylenes	04-021	mg/kg	<0.40	[NA]	[NA]	[NA]
o-xylene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Total BTEX	04-021	mg/kg	<1.2	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	84	[NA]	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	83	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	78	[NA]	[NA]	[NA]
Date Extracted	04-021	-	22/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-021	-	23/11/2011	[NA]	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	<25	[NA]	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	<50	[NA]	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	<100	[NA]	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	<100	[NA]	[NA]	[NA]
Surrogate Recovery	04-020	%	103	[NA]	[NA]	[NA]
Date Extracted	04-020	-	23/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-020	-	23/11/2011	[NA]	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/5	/6	/7	/8
Client Reference:	-	-	TP 19 - 5	TP 19 - 6	TP 19 - 7	TP 20 - 1
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Acenaphthene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Fluorene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Phenanthrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Fluoranthene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Chrysene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Coronene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Benzo(c)pyrene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Perylene*	04-022	mg/kg	<0.50	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	81	[NA]	[NA]	[NA]
Surrogate 2 Recovery	04-022	%	80	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	108	[NA]	[NA]	[NA]
Date Extracted	04-022	-	23/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-022	-	24/11/2011	[NA]	[NA]	[NA]
Organochlorine Pesticides						

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	TP 20 - 2	TP 20 - 3	TP 20 - 4	TP 20 - 5
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	88.0	89.7	84.5	87.2
Trace Elements						
Arsenic	04-001	mg/kg	5.4	4.4	5.7	4.4
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	6.2	4.5	4.3	4.0
Copper	04-001	mg/kg	41	95	5.4	7.5
Mercury	04-002	mg/kg	0.17	0.76	<0.1	0.14
Nickel	04-001	mg/kg	8.6	3.0	1.6	1.5
Lead	04-001	mg/kg	500	91	23	59
Zinc	04-001	mg/kg	310	75	27	39
BTEX						
Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	<0.20
Toluene	04-021	mg/kg	<0.20	[NA]	[NA]	<0.20
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	<0.20
m+p xylenes	04-021	mg/kg	<0.40	[NA]	[NA]	<0.40
o-xylene	04-021	mg/kg	<0.20	[NA]	[NA]	<0.20
Total BTEX	04-021	mg/kg	<1.2	[NA]	[NA]	<1.2
Surrogate 1 Recovery	04-021	%	84	[NA]	[NA]	83
Surrogate 2 Recovery	04-021	%	86	[NA]	[NA]	82
Surrogate 3 Recovery	04-021	%	76	[NA]	[NA]	76
Date Extracted	04-021	-	22/11/2011	[NA]	[NA]	22/11/2011
Date Analysed	04-021	-	23/11/2011	[NA]	[NA]	24/11/2011
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	<25	[NA]	[NA]	<25
TPHC10-C14	04-020	mg/kg	<50	[NA]	[NA]	<50
TPHC15-C28	04-020	mg/kg	<100	[NA]	[NA]	<100
TPHC29-C36	04-020	mg/kg	130	[NA]	[NA]	<100
Surrogate Recovery	04-020	%	100	[NA]	[NA]	97
Date Extracted	04-020	-	23/11/2011	[NA]	[NA]	23/11/2011
Date Analysed	04-020	-	23/11/2011	[NA]	[NA]	23/11/2011
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	TP 20 - 2	TP 20 - 3	TP 20 - 4	TP 20 - 5
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	1.2	<0.50	[NA]	<0.50
Pyrene	04-022	mg/kg	1.2	<0.50	[NA]	<0.50
Benz(a)anthracene	04-022	mg/kg	0.90	<0.50	[NA]	<0.50
Chrysene	04-022	mg/kg	0.80	<0.50	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	2.0	<1.0	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	1.1	<0.50	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	0.70	<0.50	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	0.90	<0.50	[NA]	<0.50
Coronene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	0.80	<0.50	[NA]	<0.50
Perylene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	89	81	[NA]	79
Surrogate 2 Recovery	04-022	%	78	79	[NA]	79
Surrogate 3 Recovery	04-022	%	99	98	[NA]	105
Date Extracted	04-022	-	23/11/2011	23/11/2011	[NA]	23/11/2011
Date Analysed	04-022	-	24/11/2011	24/11/2011	[NA]	24/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Hexachlorobenzene	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
beta-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
gamma-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
delta-BHC	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Heptachlor	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Aldrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Heptachlor epoxide	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
trans-Chlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
cis-Chlordane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/9	/10	/11	/12
Client Reference:	-	-	TP 20 - 2	TP 20 - 3	TP 20 - 4	TP 20 - 5
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
alpha-Endosulfan	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDE	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Dieldrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
beta-Endosulfan	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDD	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin aldehyde	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endosulfan sulphate	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
pp-DDT	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Methoxychlor	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Endrin ketone	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Oxychlorodane	04-024	mg/kg	<0.05	[NA]	[NA]	[NA]
Surrogate Recovery	04-024	%	104	[NA]	[NA]	[NA]
Date Extracted	04-024	-	23/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-024	-	24/11/2011	[NA]	[NA]	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/13	/14	/15	/16
Client Reference:	-	-	TP 20 - 6	TP 20 - 7	TP 21 - 1	TP 21 - 2
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	84.8	80.1	93.9	83.0
Trace Elements						
Arsenic	04-001	mg/kg	7.5	9.2	15	8.9
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	6.4	8.6	16	14
Copper	04-001	mg/kg	4.7	7.2	45	96
Mercury	04-002	mg/kg	<0.1	<0.1	1.7	2.3
Nickel	04-001	mg/kg	1.3	1.7	8.3	9.1
Lead	04-001	mg/kg	7.8	10	150	320
Zinc	04-001	mg/kg	7.7	10	300	880
BTEX						
Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Toluene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
m+p xylenes	04-021	mg/kg	[NA]	[NA]	<0.40	[NA]
o-xylene	04-021	mg/kg	[NA]	[NA]	<0.20	[NA]
Total BTEX	04-021	mg/kg	[NA]	[NA]	<1.2	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	[NA]	93	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	[NA]	94	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	[NA]	89	[NA]
Date Extracted	04-021	-	[NA]	[NA]	22/11/2011	[NA]
Date Analysed	04-021	-	[NA]	[NA]	24/11/2011	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	[NA]	<25	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	[NA]	<50	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	[NA]	<100	[NA]
TPHC29-C36	04-020	mg/kg	[NA]	[NA]	<100	[NA]
Surrogate Recovery	04-020	%	[NA]	[NA]	112	[NA]
Date Extracted	04-020	-	[NA]	[NA]	23/11/2011	[NA]
Date Analysed	04-020	-	[NA]	[NA]	23/11/2011	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/13	/14	/15	/16
Client Reference:	-	-	TP 20 - 6	TP 21 - 7	TP 21 - 1	TP 21 - 2
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Acenaphthene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Fluorene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Phenanthrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Fluoranthene	04-022	mg/kg	[NA]	[NA]	0.80	0.50
Pyrene	04-022	mg/kg	[NA]	[NA]	0.70	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Chrysene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	[NA]	<1.0	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Coronene*	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Perylene*	04-022	mg/kg	[NA]	[NA]	<0.50	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	[NA]	86	83
Surrogate 2 Recovery	04-022	%	[NA]	[NA]	79	75
Surrogate 3 Recovery	04-022	%	[NA]	[NA]	94	93
Date Extracted	04-022	-	[NA]	[NA]	23/11/2011	23/11/2011
Date Analysed	04-022	-	[NA]	[NA]	24/11/2011	24/11/2011
Organochlorine Pesticides						
alpha-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Hexachlorobenzene	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
beta-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
gamma-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
delta-BHC	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Heptachlor	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Aldrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Heptachlor epoxide	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
trans-Chlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
cis-Chlordane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/13	/14	/15	/16
Client Reference:	-	-	TP 20 - 6	TP 20 - 7	TP 21 - 1	TP 21 - 2
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
alpha-Endosulfan	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDE	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Dieldrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
beta-Endosulfan	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDD	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin aldehyde	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endosulfan sulphate	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
pp-DDT	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Methoxychlor	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Endrin ketone	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Oxychlorane	04-024	mg/kg	[NA]	[NA]	<0.05	[NA]
Surrogate Recovery	04-024	%	[NA]	[NA]	100	[NA]
Date Extracted	04-024	-	[NA]	[NA]	23/11/2011	[NA]
Date Analysed	04-024	-	[NA]	[NA]	24/11/2011	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/17	/18	/19	/20
Client Reference:	-	-	TP 21 - 3	TP 21 - 4	TP 21 - 5	TP 21 - 7
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	84.5	79.2	76.8	78.8
Trace Elements						
Arsenic	04-001	mg/kg	14	2.5	5.5	5.2
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	13	2.8	5.4	13
Copper	04-001	mg/kg	25	2.8	5.9	6.3
Mercury	04-002	mg/kg	0.32	<0.1	<0.1	<0.1
Nickel	04-001	mg/kg	5.9	<1.0	2.3	1.5
Lead	04-001	mg/kg	120	16	14	9.6
Zinc	04-001	mg/kg	130	89	24	7.8
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	<0.20
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	<0.20
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	<0.20
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	<0.40
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	<0.20
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	<1.2
Surrogate 1 Recovery	04-021	%	[NA]	88	[NA]	86
Surrogate 2 Recovery	04-021	%	[NA]	85	[NA]	90
Surrogate 3 Recovery	04-021	%	[NA]	78	[NA]	85
Date Extracted	04-021	-	[NA]	22/11/2011	[NA]	22/11/2011
Date Analysed	04-021	-	[NA]	24/11/2011	[NA]	24/11/2011
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	<25
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	<50
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	<100
TPHC29-C36	04-020	mg/kg	[NA]	<100	[NA]	<100
Surrogate Recovery	04-020	%	[NA]	100	[NA]	106
Date Extracted	04-020	-	[NA]	23/11/2011	[NA]	23/11/2011
Date Analysed	04-020	-	[NA]	23/11/2011	[NA]	23/11/2011
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/17	/18	/19	/20
Client Reference:	-	-	TP 21 - 3	TP 21 - 4	TP 21 - 5	TP 21 - 7
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Phenanthrene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Fluoranthene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Chrysene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	<1.0	<1.0	<1.0
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	0.80	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Coronene*	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	<0.50	<0.50
Perylene*	04-022	mg/kg	[NA]	<0.50	1.0	<0.50
Surrogate 1 Recovery	04-022	%	[NA]	88	89	87
Surrogate 2 Recovery	04-022	%	[NA]	79	78	75
Surrogate 3 Recovery	04-022	%	[NA]	108	107	107
Date Extracted	04-022	-	[NA]	23/11/2011	23/11/2011	23/11/2011
Date Analysed	04-022	-	[NA]	24/11/2011	24/11/2011	24/11/2011
Organochlorine Pesticides						

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/21	/22	/23	/24
Client Reference:	-	-	TP 22 - 1	TP 22 - 2	TP 22 - 3	TP 22 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	97.6	93.8	90.9	80.9
Trace Elements						
Arsenic	04-001	mg/kg	7.4	15	1.3	2.4
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	12	12	3.3	4.2
Copper	04-001	mg/kg	12	30	<1.0	<1.0
Mercury	04-002	mg/kg	0.18	0.22	<0.1	<0.1
Nickel	04-001	mg/kg	8.8	7.9	<1.0	<1.0
Lead	04-001	mg/kg	32	98	4.8	6.4
Zinc	04-001	mg/kg	77	180	10	3.5
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	84	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	90	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	82	[NA]	[NA]
Date Extracted	04-021	-	[NA]	22/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	24/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	[NA]	<100	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	107	[NA]	[NA]
Date Extracted	04-020	-	[NA]	23/11/2011	[NA]	[NA]
Date Analysed	04-020	-	[NA]	23/11/2011	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/21	/22	/23	/24
Client Reference:	-	-	TP 22 - 1	TP 22 - 2	TP 22 - 3	TP 22 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Phenanthrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Fluoranthene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Chrysene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	<1.0	<1.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Perylene*	04-022	mg/kg	[NA]	<0.50	<0.50	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	85	73	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	79	78	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	96	106	[NA]
Date Extracted	04-022	-	[NA]	23/11/2011	23/11/2011	[NA]
Date Analysed	04-022	-	[NA]	24/11/2011	24/11/2011	[NA]
Organochlorine Pesticides						

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/25	/26	/27	/28
Client Reference:	-	-	TP 22 - 5	TP 22 - 6	TP 23 - 1	TP 23 - 2
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	83.9	88.3	93.3	91.7
Trace Elements						
Arsenic	04-001	mg/kg	5.7	2.3	20	22
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	4.6	4.0	19	18
Copper	04-001	mg/kg	2.3	<1.0	20	23
Mercury	04-002	mg/kg	<0.1	<0.1	0.13	0.19
Nickel	04-001	mg/kg	<1.0	<1.0	9.5	10
Lead	04-001	mg/kg	12	5.4	78	120
Zinc	04-001	mg/kg	21	3.5	150	230
BTEX						
Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Toluene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
m+p xylenes	04-021	mg/kg	[NA]	<0.40	[NA]	[NA]
o-xylene	04-021	mg/kg	[NA]	<0.20	[NA]	[NA]
Total BTEX	04-021	mg/kg	[NA]	<1.2	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	[NA]	79	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	[NA]	84	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	[NA]	78	[NA]	[NA]
Rate Extracted	04-021	-	[NA]	22/11/2011	[NA]	[NA]
Date Analysed	04-021	-	[NA]	24/11/2011	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	[NA]	<25	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	[NA]	<50	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	[NA]	<100	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	[NA]	<100	[NA]	[NA]
Surrogate Recovery	04-020	%	[NA]	97	[NA]	[NA]
Date Extracted	04-020	-	[NA]	23/11/2011	[NA]	[NA]
Date Analysed	04-020	-	[NA]	23/11/2011	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/25	/26	/27	/28
Client Reference:	-	-	TP 22 - 5	TP 22 - 6	TP 23 - 1	TP 23 - 2
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Phenanthrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluoranthene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Chrysene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	<1.0	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Perylene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	71	[NA]	[NA]
Surrogate 2 Recovery	04-022	%	[NA]	78	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	108	[NA]	[NA]
Date Extracted	04-022	-	[NA]	23/11/2011	[NA]	[NA]
Date Analysed	04-022	-	[NA]	24/11/2011	[NA]	[NA]
Organochlorine Pesticides						

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/29	/30	/31	/32
Client Reference:	-	-	TP 23 - 3	TP 23 - 4	TP 23 - 5	TP 23 - 6
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	91.6	84.7	81.9	78.5
Trace Elements						
Arsenic	04-001	mg/kg	13	9.9	4.7	4.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	13	14	6.8	5.5
Copper	04-001	mg/kg	20	19	6.7	8.0
Mercury	04-002	mg/kg	0.12	0.22	0.15	0.24
Nickel	04-001	mg/kg	7.9	4.8	2.5	2.2
Lead	04-001	mg/kg	110	51	36	47
Zinc	04-001	mg/kg	210	77	81	50
BTEX						
Total Petroleum Hydrocarbons						
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthylene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Acenaphthene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluorene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Phenanthrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Fluoranthene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benz(a)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Chrysene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	[NA]	<1.0	[NA]	[NA]
Benzo(a)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Dibenz(a,h)anthracene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Coronene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Benzo(e)pyrene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Perylene*	04-022	mg/kg	[NA]	<0.50	[NA]	[NA]
Surrogate 1 Recovery	04-022	%	[NA]	77	[NA]	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/29	/30	/31	/32
Client Reference:	-	-	TP 23 - 3	TP 23 - 4	TP 23 - 5	TP 23 - 6
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Surrogate 2 Recovery	04-022	%	[NA]	79	[NA]	[NA]
Surrogate 3 Recovery	04-022	%	[NA]	96	[NA]	[NA]
Date Extracted	04-022	-	[NA]	23/11/2011	[NA]	[NA]
Date Analysed	04-022	-	[NA]	24/11/2011	[NA]	[NA]
Organochlorine Pesticides						

Laboratory Reference:	-	-	/33	/34	/35	/36
Client Reference:	-	-	TP 24 - 1	TP 24 - 2	TP 24 - 3	TP 24 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	95.7	92.6	89.1	82.9
Trace Elements						
Arsenic	04-001	mg/kg	11	14	3.7	2.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	12	12	3.0	1.2
Copper	04-001	mg/kg	20	26	3.4	<1.0
Mercury	04-002	mg/kg	0.21	0.17	<0.1	<0.1
Nickel	04-001	mg/kg	8.3	6.8	1.0	<1.0
Lead	04-001	mg/kg	85	240	20	16
Zinc	04-001	mg/kg	150	310	130	69
BTEX						
Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Toluene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
m+p xylenes	04-021	mg/kg	<0.40	[NA]	[NA]	[NA]
o-xylene	04-021	mg/kg	<0.20	[NA]	[NA]	[NA]
Total BTEX	04-021	mg/kg	<1.2	[NA]	[NA]	[NA]
Surrogate 1 Recovery	04-021	%	71	[NA]	[NA]	[NA]
Surrogate 2 Recovery	04-021	%	82	[NA]	[NA]	[NA]
Surrogate 3 Recovery	04-021	%	75	[NA]	[NA]	[NA]

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/33	/34	/35	/36
Client Reference:	-	-	TP 24 - 1	TP 24 - 2	TP 24 - 3	TP 24 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Date Extracted	04-021	-	22/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-021	-	24/11/2011	[NA]	[NA]	[NA]
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	mg/kg	<25	[NA]	[NA]	[NA]
TPHC10-C14	04-020	mg/kg	<50	[NA]	[NA]	[NA]
TPHC15-C28	04-020	mg/kg	<100	[NA]	[NA]	[NA]
TPHC29-C36	04-020	mg/kg	<100	[NA]	[NA]	[NA]
Surrogate Recovery	04-020	%	110	[NA]	[NA]	[NA]
Date Extracted	04-020	-	23/11/2011	[NA]	[NA]	[NA]
Date Analysed	04-020	-	23/11/2011	[NA]	[NA]	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Acenaphthylene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Acenaphthene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluorene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Phenanthrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Fluoranthene	04-022	mg/kg	1.1	<0.50	[NA]	<0.50
Pyrene	04-022	mg/kg	1.0	<0.50	[NA]	<0.50
Benz(a)anthracene	04-022	mg/kg	0.60	<0.50	[NA]	<0.50
Chrysene	04-022	mg/kg	0.50	<0.50	[NA]	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	1.1	<1.0	[NA]	<1.0
Benzo(a)pyrene	04-022	mg/kg	0.70	<0.50	[NA]	<0.50
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	0.60	<0.50	[NA]	<0.50
Coronene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Perylene*	04-022	mg/kg	<0.50	<0.50	[NA]	<0.50
Surrogate 1 Recovery	04-022	%	89	86	[NA]	80
Surrogate 2 Recovery	04-022	%	85	79	[NA]	80
Surrogate 3 Recovery	04-022	%	98	100	[NA]	111
Date Extracted	04-022	-	23/11/2011	23/11/2011	[NA]	23/11/2011

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/33	/34	/35	/36
Client Reference:	-	-	TP 24 - 1	TP 24 - 2	TP 24 - 3	TP 24 - 4
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Date Analysed	04-022	-	24/11/2011	24/11/2011	[NA]	24/11/2011
Organochlorine Pesticides						

Laboratory Reference:	-	-	/37	/38	/39	/40
Client Reference:	-	-	TP 24 - 5	TP 24 - 7	QC - 13	QC - 17
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	81.6	86.8	88.5	83.5
Trace Elements						
Arsenic	04-001	mg/kg	2.6	2.3	4.2	2.3
Cadmium	04-001	mg/kg	<1.0	<1.0	<1.0	<1.0
Chromium	04-001	mg/kg	5.2	4.0	5.5	1.1
Copper	04-001	mg/kg	<1.0	<1.0	39	<1.0
Mercury	04-002	mg/kg	<0.1	<0.1	0.27	<0.1
Nickel	04-001	mg/kg	<1.0	<1.0	20	<1.0
Lead	04-001	mg/kg	7.5	5.7	400	18
Zinc	04-001	mg/kg	4.3	3.6	190	91
BTEX						
Benzene	04-021	mg/kg	<0.20	[NA]	<0.20	[NA]
Toluene	04-021	mg/kg	<0.20	[NA]	<0.20	[NA]
Ethyl Benzene	04-021	mg/kg	<0.20	[NA]	<0.20	[NA]
m+p xylenes	04-021	mg/kg	<0.40	[NA]	<0.40	[NA]
o-xylene	04-021	mg/kg	<0.20	[NA]	<0.20	[NA]
Total BTEX	04-021	mg/kg	<1.2	[NA]	<1.2	[NA]
Surrogate 1 Recovery	04-021	%	82	[NA]	78	[NA]
Surrogate 2 Recovery	04-021	%	85	[NA]	81	[NA]
Surrogate 3 Recovery	04-021	%	79	[NA]	74	[NA]
Date Extracted	04-021	-	22/11/2011	[NA]	22/11/2011	[NA]
Date Analysed	04-021	-	24/11/2011	[NA]	24/11/2011	[NA]
Total Petroleum Hydrocarbons						

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/37	/38	/39	/40
Client Reference:	-	-	TP 24 - 5	TP 24 - 7	QC - 13	QC - 17
Date Sampled:	-	-	17/11/2011	17/11/2011	17/11/2011	17/11/2011
Analysis Description	Method	Units				
TPH C6-C9	04-021	mg/kg	<25	[NA]	<25	[NA]
TPH C10-C14	04-020	mg/kg	<50	[NA]	<50	[NA]
TPH C15-C28	04-020	mg/kg	<100	[NA]	<100	[NA]
TPH C29-C36	04-020	mg/kg	<100	[NA]	<100	[NA]
Surrogate Recovery	04-020	%	105	[NA]	101	[NA]
Date Extracted	04-020	-	23/11/2011	[NA]	23/11/2011	[NA]
Date Analysed	04-020	-	23/11/2011	[NA]	23/11/2011	[NA]
Polyaromatic Hydrocarbons						
Naphthalene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Acenaphthylene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Acenaphthene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Fluorene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Phenanthrene	04-022	mg/kg	<0.50	[NA]	0.60	[NA]
Anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Fluoranthene	04-022	mg/kg	<0.50	[NA]	2.3	[NA]
Pyrene	04-022	mg/kg	<0.50	[NA]	2.2	[NA]
Benz(a)anthracene	04-022	mg/kg	<0.50	[NA]	1.8	[NA]
Chrysene	04-022	mg/kg	<0.50	[NA]	1.6	[NA]
Benzo(b)&(k)fluoranthene	04-022	mg/kg	<1.0	[NA]	4.0	[NA]
Benzo(a)pyrene	04-022	mg/kg	<0.50	[NA]	2.2	[NA]
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50	[NA]	1.4	[NA]
Benzo(a,h)anthracene	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50	[NA]	1.6	[NA]
Coronene*	04-022	mg/kg	<0.50	[NA]	<0.50	[NA]
Benzo(e)pyrene*	04-022	mg/kg	<0.50	[NA]	1.6	[NA]
Perylene*	04-022	mg/kg	<0.50	[NA]	0.50	[NA]
Surrogate 1 Recovery	04-022	%	82	[NA]	83	[NA]
Surrogate 2 Recovery	04-022	%	75	[NA]	81	[NA]
Surrogate 3 Recovery	04-022	%	112	[NA]	93	[NA]
Date Extracted	04-022	-	23/11/2011	[NA]	23/11/2011	[NA]
Date Analysed	04-022	-	24/11/2011	[NA]	24/11/2011	[NA]
Organochlorine Pesticides						

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Batch Number: A11/5545-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/41
Client Reference:	-	-	EX - 3
Date Sampled:	-	-	17/11/2011
Analysis Description	Method	Units	
Total Solids			
Total Solids	04-004	%	98.6
Trace Elements			
Arsenic	04-001	mg/kg	6.0
Cadmium	04-001	mg/kg	<1.0
Chromium	04-001	mg/kg	11
Copper	04-001	mg/kg	21
Mercury	04-002	mg/kg	<0.1
Nickel	04-001	mg/kg	6.1
Lead	04-001	mg/kg	130
Zinc	04-001	mg/kg	160
BTEX			
Benzene	04-021	mg/kg	<0.20
Toluene	04-021	mg/kg	<0.20
Ethyl Benzene	04-021	mg/kg	<0.20
m+p xylenes	04-021	mg/kg	<0.40
o-xylene	04-021	mg/kg	<0.20
Total BTEX	04-021	mg/kg	<1.2
Surrogate 1 Recovery	04-021	%	89
Surrogate 2 Recovery	04-021	%	92
Surrogate 3 Recovery	04-021	%	80
Date Extracted	04-021	-	22/11/2011
Date Analysed	04-021	-	24/11/2011
Total Petroleum Hydrocarbons			
TPHC6-C9	04-021	mg/kg	<25
TPHC10-C14	04-020	mg/kg	<50
TPHC15-C28	04-020	mg/kg	<100
TPHC29-C36	04-020	mg/kg	<100
Surrogate Recovery	04-020	%	105
Date Extracted	04-020	-	23/11/2011
Date Analysed	04-020	-	23/11/2011
Polyaromatic Hydrocarbons			
Naphthalene	04-022	mg/kg	<0.50

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/41
Client Reference:	-	-	EX - 3
Date Sampled:	-	-	17/11/2011
Analysis Description	Method	Units	
Acenaphthylene	04-022	mg/kg	<0.50
Acenaphthene	04-022	mg/kg	<0.50
Fluorene	04-022	mg/kg	<0.50
Phenanthrene	04-022	mg/kg	<0.50
Anthracene	04-022	mg/kg	<0.50
Fluoranthene	04-022	mg/kg	0.80
Pyrene	04-022	mg/kg	0.80
Benz(a)anthracene	04-022	mg/kg	<0.50
Chrysene	04-022	mg/kg	<0.50
Benzo(b)&(k)fluoranthene	04-022	mg/kg	1.1
Benzo(a)pyrene	04-022	mg/kg	0.70
Indeno(1,2,3-cd)pyrene	04-022	mg/kg	<0.50
Dibenz(a,h)anthracene	04-022	mg/kg	<0.50
Benzo(g,h,i)perylene	04-022	mg/kg	<0.50
Coronene*	04-022	mg/kg	<0.50
Benzo(e)pyrene*	04-022	mg/kg	<0.50
Perylene*	04-022	mg/kg	<0.50
Surrogate 1 Recovery	04-022	%	88
Surrogate 2 Recovery	04-022	%	80
Surrogate 3 Recovery	04-022	%	92
Date Extracted	04-022	-	23/11/2011
Date Analysed	04-022	-	24/11/2011
Organochlorine Pesticides			
alpha-BHC	04-024	mg/kg	<0.05
Hexachlorobenzene	04-024	mg/kg	<0.05
beta-BHC	04-024	mg/kg	<0.05
gamma-BHC	04-024	mg/kg	<0.05
delta-BHC	04-024	mg/kg	<0.05
Heptachlor	04-024	mg/kg	<0.05
Aldrin	04-024	mg/kg	<0.05
Heptachlor epoxide	04-024	mg/kg	<0.05
trans-Chlordane	04-024	mg/kg	<0.05
cis-Chlordane	04-024	mg/kg	<0.05

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Batch Number: A11/5545-A [R00]
Project Reference: Bowen Hills

Laboratory Reference:	-	-	/41
Client Reference:	-	-	EX - 3
Date Sampled:	-	-	17/11/2011
Analysis Description	Method	Units	
alpha-Endosulfan	04-024	mg/kg	<0.05
pp-DDE	04-024	mg/kg	<0.05
Dieldrin	04-024	mg/kg	<0.05
Endrin	04-024	mg/kg	<0.05
beta-Endosulfan	04-024	mg/kg	<0.05
pp-DDD	04-024	mg/kg	<0.05
Endrin aldehyde	04-024	mg/kg	<0.05
Endosulfan sulphate	04-024	mg/kg	<0.05
pp-DDT	04-024	mg/kg	<0.05
Methoxychlor	04-024	mg/kg	<0.05
Endrin ketone	04-024	mg/kg	<0.05
Oxychlordane	04-024	mg/kg	<0.05
Surrogate Recovery	04-024	%	102
Date Extracted	04-024	-	23/11/2011
Date Analysed	04-024	-	24/11/2011

Method	Method Description
04-004	Total Solids by gravimetric, %
04-001	Metals by ICP-OES, mg/kg
04-002	Mercury by CVAAS, mg/kg
04-021	TPH C6-9 & BTEX by P&T GCMS, mg/kg
04-020	TPH by GC-FID, mg/kg
04-022	PAHs & Phenols by GCMS, mg/kg
04-024	OC & OP Pesticides by GCMS, mg/kg

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

- Spike recoveries for some PAH and OC not included due to matrix effects.

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	N/T	A11/5545-A-1	93.8 91.8 RPD: 2

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	<1.0	A11/5545-A-1	8.1 8.1 RPD: 0	[NR]	[NR]
Cadmium	mg/kg	<1.0	A11/5545-A-1	<1.0 <1.0	[NR]	[NR]
Chromium	mg/kg	<1.0	A11/5545-A-1	6.5 6.5 RPD: 0	[NR]	[NR]
Copper	mg/kg	<1.0	A11/5545-A-1	16 16 RPD: 0	[NR]	[NR]
Mercury	mg/kg	<0.1	A11/5545-A-1	0.13 0.12 RPD: 8	A11/5545-A-2	94%
Nickel	mg/kg	<1.0	A11/5545-A-1	4.9 5.0 RPD: 2	[NR]	[NR]
Lead	mg/kg	<1.0	A11/5545-A-1	120 120 RPD: 0	[NR]	[NR]
Zinc	mg/kg	<1.0	A11/5545-A-1	120 130 RPD: 8	[NR]	[NR]

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	<0.20	A11/5545-A-2	<0.20 <0.20	A11/5545-A-2	75%
Toluene	mg/kg	<0.20	A11/5545-A-2	<0.20 <0.20	A11/5545-A-2	71%
Ethyl Benzene	mg/kg	<0.20	A11/5545-A-2	<0.20 <0.20	A11/5545-A-2	73%
m+p xylenes	mg/kg	<0.40	A11/5545-A-2	<0.40 <0.40	A11/5545-A-2	74%
o-xylene	mg/kg	<0.20	A11/5545-A-2	<0.20 <0.20	A11/5545-A-2	76%
Total BTEX	mg/kg	<1.2	A11/5545-A-2	<1.2 <1.2	A11/5545-A-2	74%
Surrogate 1 Recovery	%	99	A11/5545-A-2	84 85 RPD: 1	A11/5545-A-2	84%
Surrogate 2 Recovery	%	103	A11/5545-A-2	88 86 RPD: 2	A11/5545-A-2	84%
Surrogate 3 Recovery	%	96	A11/5545-A-2	78 78 RPD: 0	A11/5545-A-2	78%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	mg/kg	<25	A11/5545-A-2	<25 <25	A11/5545-A-2	73%
TPH C10-C14	mg/kg	<50	A11/5545-A-2	<50 <50	A11/5545-A-2	85%
TPH C15-C28	mg/kg	<100	A11/5545-A-2	<100 <100	A11/5545-A-2	89%
TPH C29-C36	mg/kg	<100	A11/5545-A-2	<100 <100	A11/5545-A-2	86%
Surrogate Recovery	%	103	A11/5545-A-2	100 105 RPD: 5	A11/5545-A-2	110%

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	<0.50	A11/5545-A-2	<0.50 <0.50	A11/5545-A-41	83%
Acenaphthylene	mg/kg	<0.50	A11/5545-A-2	<0.50 <0.50	A11/5545-A-41	107%
Acenaphthene	mg/kg	<0.50	A11/5545-A-2	<0.50 <0.50	A11/5545-A-41	93%
Fluorene	mg/kg	<0.50	A11/5545-A-2	<0.50 <0.50	A11/5545-A-41	82%
Phenanthrene	mg/kg	<0.50	A11/5545-A-2	0.60 <0.50	A11/5545-A-41	#
Anthracene	mg/kg	<0.50	A11/5545-A-2	<0.50 <0.50	A11/5545-A-41	105%
Fluoranthene	mg/kg	<0.50	A11/5545-A-2	2.9 2.4 RPD: 19	A11/5545-A-41	#
Pyrene	mg/kg	<0.50	A11/5545-A-2	3.0 2.4 RPD: 22	A11/5545-A-41	#
Benz(a)anthracene	mg/kg	<0.50	A11/5545-A-2	2.4 1.9 RPD: 23	A11/5545-A-41	#
Chrysene	mg/kg	<0.50	A11/5545-A-2	2.3 2.2 RPD: 4	A11/5545-A-41	#
Benzo(b)&(k)fluoranthene	mg/kg	<1.0	A11/5545-A-2	5.2 5.4 RPD: 4	A11/5545-A-41	135%
Benzo(a)pyrene	mg/kg	<0.50	A11/5545-A-2	2.8 2.9 RPD: 4	A11/5545-A-41	118%
Indeno(1,2,3-cd)pyrene	mg/kg	<0.50	A11/5545-A-2	1.9 1.9 RPD: 0	A11/5545-A-41	#
Dibenz(a,h)anthracene	mg/kg	<0.50	A11/5545-A-2	0.50 0.50 RPD: 0	A11/5545-A-41	83%
Benzo(g,h,i)perylene	mg/kg	<0.50	A11/5545-A-2	1.8 1.8 RPD: 0	A11/5545-A-41	#
Coronene*	mg/kg	<0.50	A11/5545-A-2	0.60 0.60 RPD: 0	A11/5545-A-41	NT
Benzo(e)pyrene*	mg/kg	<0.50	A11/5545-A-2	2.0 2.2 RPD: 10	A11/5545-A-41	#
Perylene*	mg/kg	<0.50	A11/5545-A-2	0.80 0.70 RPD: 13	A11/5545-A-41	#
Surrogate 1 Recovery	%	75	A11/5545-A-2	87 84 RPD: 4	A11/5545-A-41	89%
Surrogate 2 Recovery	%	73	A11/5545-A-2	82 81 RPD: 1	A11/5545-A-41	71%
Surrogate 3 Recovery	%	111	A11/5545-A-2	95 91 RPD: 4	A11/5545-A-41	95%

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	81%
Hexachlorobenzene	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	89%
beta-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	101%
gamma-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	94%
delta-BHC	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	66%
Heptachlor	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	56%
Aldrin	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	86%
Heptachlor epoxide	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	92%
trans-Chlordane	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	99%
cis-Chlordane	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	102%
gamma-Endosulfan	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	89%
pp-DDE	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	121%
Dieldrin	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	98%
Endrin	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	72%
beta-Endosulfan	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	102%
pp-DDD	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	90%
Endrin aldehyde	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	84%
Endosulfan sulphate	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	61%
pp-DDT	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	54%
Methoxychlor	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	#
Endrin ketone	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	89%
Oxychlordane	mg/kg	<0.05	[NT]	[NT]	A11/5545-A-41	NT
Surrogate Recovery	%	128	[NT]	[NT]	A11/5545-A-41	105%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	N/T	A11/5545-A-11	84.5 85.1 RPD: 1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	<1.0	A11/5545-A-11	5.7 5.6 RPD: 2	[NA]	100%
Cadmium	mg/kg	<1.0	A11/5545-A-11	<1.0 <1.0	[NA]	104%
Chromium	mg/kg	<1.0	A11/5545-A-11	4.3 4.2 RPD: 2	[NA]	100%
Copper	mg/kg	<1.0	A11/5545-A-11	5.4 5.4 RPD: 0	[NA]	103%
Mercury	mg/kg	<0.1	A11/5545-A-11	<0.1 <0.1	[NA]	88%
Nickel	mg/kg	<1.0	A11/5545-A-11	1.6 1.6 RPD: 0	[NA]	95%
Lead	mg/kg	<1.0	A11/5545-A-11	23 23 RPD: 0	[NA]	88%
Zinc	mg/kg	<1.0	A11/5545-A-11	27 27 RPD: 0	[NA]	89%

Issue Date: 25 November 2011

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Benzene	mg/kg	[NT]	A11/5545-A-41	<0.20 <0.20
Toluene	mg/kg	[NT]	A11/5545-A-41	<0.20 <0.20
Ethyl Benzene	mg/kg	[NT]	A11/5545-A-41	<0.20 <0.20
m+p xylenes	mg/kg	[NT]	A11/5545-A-41	<0.40 <0.40
o-xylene	mg/kg	[NT]	A11/5545-A-41	<0.20 <0.20
Total BTEX	mg/kg	[NT]	A11/5545-A-41	<1.2 <1.2
Surrogate 1 Recovery	%	[NT]	A11/5545-A-41	89 94 RPD:5
Surrogate 2 Recovery	%	[NT]	A11/5545-A-41	92 94 RPD:2
Surrogate 3 Recovery	%	[NT]	A11/5545-A-41	80 83 RPD:4

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	mg/kg	[NT]	A11/5545-A-41	<25 <25	External	[NT]
TPH C10-C14	mg/kg	[NT]	A11/5545-A-41	<50 <50	External	97%
TPH C15-C28	mg/kg	[NT]	A11/5545-A-41	<100 <100	External	99%
TPH C29-C36	mg/kg	[NT]	A11/5545-A-41	<100 <100	External	95%
Surrogate Recovery	%	[NT]	A11/5545-A-41	105 108 RPD:3	External	117%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Naphthalene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	78%
Acenaphthylene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	85%
Acenaphthene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	93%
Fluorene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	82%
Phenanthrene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	73%
Anthracene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	77%
Fluoranthene	mg/kg	[NT]	A11/5545-A-41	0.80 0.80 RPD:0	External	100%
Pyrene	mg/kg	[NT]	A11/5545-A-41	0.80 0.80 RPD:0	External	98%
Benz(a)anthracene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	77%
Chrysene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	100%
Benzo(b)&(k)fluoranthene	mg/kg	[NT]	A11/5545-A-41	1.1 1.1 RPD:0	External	105%
Benzo(a)pyrene	mg/kg	[NT]	A11/5545-A-41	0.70 0.70 RPD:0	External	84%
Indeno(1,2,3-cd)pyrene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	71%
Dibenz(a,h)anthracene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	78%
Benzo(g,h,i)perylene	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	89%
Coronene*	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	NT
Benzo(e)pyrene*	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	100%
Perylene*	mg/kg	[NT]	A11/5545-A-41	<0.50 <0.50	External	120%
Surrogate 1 Recovery	%	[NT]	A11/5545-A-41	88 87 RPD:1	External	93%
Surrogate 2 Recovery	%	[NT]	A11/5545-A-41	80 77 RPD:4	External	74%
Surrogate 3 Recovery	%	[NT]	A11/5545-A-41	92 91 RPD:1	External	108%

Issue Date: 25 November 2011

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Batch Number: A11/5545-A [R00]
Project Reference: Bowen Hills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
alpha-BHC	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	72%
Hexachlorobenzene	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	93%
beta-BHC	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	72%
gamma-BHC	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	72%
delta-BHC	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	97%
Heptachlor	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	80%
Aldrin	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	83%
Heptachlor epoxide	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	114%
trans-Chlordane	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	123%
cis-Chlordane	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	124%
gamma-Endosulfan	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	104%
pp-DDE	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	130%
Dieldrin	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	125%
Endrin	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	90%
beta-Endosulfan	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	115%
pp-DDD	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	108%
Endrin aldehyde	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	105%
Endosulfan sulphate	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	111%
pp-DDT	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	99%
Methoxychlor	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	87%
Endrin ketone	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	83%
Oxychlordane	mg/kg	[NT]	A11/5545-A-41	<0.05 <0.05	External	NT
Surrogate Recovery	%	[NT]	A11/5545-A-41	102 102 RPD:0	External	122%

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Batch Number: A11/5545-A [R00]
Project Reference: Bowen Hills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	N/T	A11/5545-A-21	97.6 97.4 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	<1.0	A11/5545-A-21	7.4 7.3 RPD:1	A11/5545-A-41	101%
Cadmium	mg/kg	<1.0	A11/5545-A-21	<1.0 <1.0	A11/5545-A-41	103%
Chromium	mg/kg	<1.0	A11/5545-A-21	12 12 RPD:0	A11/5545-A-41	97%
Copper	mg/kg	<1.0	A11/5545-A-21	12 12 RPD:0	A11/5545-A-41	103%
Mercury	mg/kg	<0.1	A11/5545-A-21	0.18 0.18 RPD:0	A11/5545-A-41	92%
Nickel	mg/kg	<1.0	A11/5545-A-21	8.8 8.8 RPD:0	A11/5545-A-41	94%
Lead	mg/kg	<1.0	A11/5545-A-21	32 32 RPD:0	A11/5545-A-41	92%
Zinc	mg/kg	<1.0	A11/5545-A-21	77 76 RPD:1	A11/5545-A-41	104%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5545-A-31	81.9 80.7 RPD:1

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Arsenic	mg/kg	[NT]	A11/5545-A-31	4.7 4.6 RPD:2	A11/5545-A-1	104%
Cadmium	mg/kg	[NT]	A11/5545-A-31	<1.0 <1.0	A11/5545-A-1	103%
Chromium	mg/kg	[NT]	A11/5545-A-31	6.8 6.8 RPD:0	A11/5545-A-1	101%
Copper	mg/kg	[NT]	A11/5545-A-31	6.7 6.7 RPD:0	A11/5545-A-1	103%
Mercury	mg/kg	[NT]	A11/5545-A-31	0.15 0.14 RPD:7	A11/5545-A-1	N/T
Nickel	mg/kg	[NT]	A11/5545-A-31	2.5 2.5 RPD:0	A11/5545-A-1	95%
Lead	mg/kg	[NT]	A11/5545-A-31	36 36 RPD:0	A11/5545-A-1	76%
Zinc	mg/kg	[NT]	A11/5545-A-31	81 81 RPD:0	A11/5545-A-1	91%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NT]	A11/5545-A-41	98.6 98.5 RPD:0

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
Arsenic	mg/kg	[NT]	A11/5545-A-41	6.0 6.0 RPD:0
Cadmium	mg/kg	[NT]	A11/5545-A-41	<1.0 <1.0
Chromium	mg/kg	[NT]	A11/5545-A-41	11 11 RPD:0
Copper	mg/kg	[NT]	A11/5545-A-41	21 20 RPD:5
Mercury	mg/kg	[NT]	A11/5545-A-41	<0.1 <0.1
Nickel	mg/kg	[NT]	A11/5545-A-41	6.1 6.0 RPD:2
Lead	mg/kg	[NT]	A11/5545-A-41	130 130 RPD:0
Zinc	mg/kg	[NT]	A11/5545-A-41	160 160 RPD:0

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Batch Number: A11/5545-A [R00]
Project Reference: BowenHills

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPH C6-C9	mg/kg	[NT]	A11/5545-A-41	<25 <25
TPH C10-C14	mg/kg	[NT]	A11/5545-A-41	<50 <50
TPH C15-C28	mg/kg	[NT]	A11/5545-A-41	<100 <100
TPH C29-C36	mg/kg	[NT]	A11/5545-A-41	<100 <100
Surrogate Recovery	%	[NT]	A11/5545-A-41	105 108 RPD: 3

TEST	Units	Blank	Duplicate Sm#	Duplicate Results
TPH C6-C9	mg/kg	[NT]	A11/5545-A-2	<25 <25
TPH C10-C14	mg/kg	[NT]	A11/5545-A-2	<50 <50
TPH C15-C28	mg/kg	[NT]	A11/5545-A-2	<100 <100
TPH C29-C36	mg/kg	[NT]	A11/5545-A-2	<100 <100
Surrogate Recovery	%	[NT]	A11/5545-A-2	100 105 RPD: 5

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

Issue Date: 25 November 2011

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REPORT OF ANALYSIS



Laboratory Reference: A11/5545-B [R00]

Client: Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006

Order No: 4892
Project: Bowen Hills
Sample Type: Water
No. of Samples: 1
Date Received: 18/11/2011
Date Completed: 24/11/2011

Contact: sch4p4(6)

Laboratory Contact Details:

Client Services Manager: sch4p4(6) Perso
Technical Enquiries:
Telephone: +61 73268 1228
Fax: +61 73268 1238
Email: brisbane@advancedanalytical.com.au
sch4p4(6) Pe@advancedanalytical.com.au

Attached Results Approved By:

sch4p4(6) Personal infor

Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this batch number. This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 25 November 2011

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Batch Number: A11/5545-B [R00]
Project Reference: BowenHills

Laboratory Reference:	-	-	/1
Client Reference:	-	-	TB181111
Date Sampled:	-	-	18/11/2011
Analysis Description	Method	Units	
BTEX			
Benzene	04-021	µg/L	<1.0
Toluene	04-021	µg/L	<2.0
Ethyl Benzene	04-021	µg/L	<2.0
m+p xylenes	04-021	µg/L	<4.0
o-xylene	04-021	µg/L	<2.0
Total BTEX	04-021	µg/L	<11
Surrogate 1 Recovery	04-021	%	94
Surrogate 2 Recovery	04-021	%	95
Surrogate 3 Recovery	04-021	%	90
Date Extracted	04-021	-	23/11/11
Date Analysed	04-021	-	23/11/11
Total Petroleum Hydrocarbons			
TPHC6-C9	04-021	µg/L	<25
Surrogate Recovery	04-030	%	90
Date Extracted	04-030	-	23/11/11
Date Analysed	04-030	-	23/11/11

Method	Method Description
04-021	TPH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TPH by GC-FID, µg/L

Result Comments

[<] Less than
[INS] Insufficient sample for this test
[NA] Test not required

Issue Date: 25 November 2011

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Batch Number: A11/5545-B [R00]
Project Reference: BowenHills

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	µg/L	<1.0	A11/5545-B-1	<1.0 <1.0	A11/5545-B-1	103%
Toluene	µg/L	<2.0	A11/5545-B-1	<2.0 <2.0	A11/5545-B-1	96%
Ethyl Benzene	µg/L	<2.0	A11/5545-B-1	<2.0 <2.0	A11/5545-B-1	98%
m+p xylenes	µg/L	<4.0	A11/5545-B-1	<4.0 <4.0	A11/5545-B-1	97%
o-xylene	µg/L	<2.0	A11/5545-B-1	<2.0 <2.0	A11/5545-B-1	97%
Total BTEX	µg/L	<11	A11/5545-B-1	<11 <11	A11/5545-B-1	98%
Surrogate 1 Recovery	%	97	A11/5545-B-1	94 96 RPD:2	A11/5545-B-1	101%
Surrogate 2 Recovery	%	95	A11/5545-B-1	95 93 RPD:2	A11/5545-B-1	106%
Surrogate 3 Recovery	%	92	A11/5545-B-1	90 88 RPD:2	A11/5545-B-1	97%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	<25	A11/5545-B-1	<25 <25	A11/5545-B-1	93%
TPH C10-14	µg/L	NT	[NT]	[NT]	A11/5545-B-1	NT
TPH C15-28	µg/L	NT	[NT]	[NT]	A11/5545-B-1	NT
TPH C29-36	µg/L	NT	[NT]	[NT]	A11/5545-B-1	NT
Surrogate Recovery	%	92	A11/5545-B-1	90 88 RPD:2	A11/5545-B-1	97%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits

Results > 10 times LOR: 0% - 50%

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

Issue Date: 25 November 2011

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SAMPLE RECEIPT NOTIFICATION



Attention : sch4p4(6) P

Client : Butler Partners Pty Ltd
79 Doggett Street
Fortitude Valley QLD 4006
Telephone : 07 3852 3800
Facsimile : 07 3852 3808

Project : Bowen Hills

Order Number : 4892

Laboratory Reference : A11/5545-A

Completed Chain of Custody accompanied samples.	YES
Samples were received in good condition and correctly preserved for all tests.	YES
Samples were received in sufficient time to allow laboratory to meet holding times.	YES
Samples were received chilled/chilling (if required).	YES

Date samples received : 18/11/2011
Matrix : Soil
No. of samples : 41
Scheduled reporting date : 25/11/11

Customer Services Officer : sch4p4(6) Pers

Telephone : 07 3268 1228
Email : brisbane@advancedanalytical.com.au

Contact your Customer Services Officer for all queries and issues regarding this sample batch.

Note: Turnaround time begins at time of receipt at laboratory, surcharges may apply for fast turnaround.

Water samples will be appropriately stored for 1 month from date of receipt of samples.
Soil / Sediment samples will be appropriately stored for 2 months from date of receipt of samples.

COMMENTS:

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Butler Partners Pty Ltd

PO Box 2267, Portludis Valley BC Qld 4906
(79 Doggett Street, Newstead Qld 4006)
Ph: 07 3852 2800 Fax: 07 3852 3808

All 15645 A+B

Job No: 011-1658 Order No: 4892
Site: Bowen Hills COC No: 011-165814

Advanced Analytical

Advanced Analytical Australia
Unit 1, 482 Kangaroo Smith Drive, Hamlet NSW

Ph: 1248 1228
Fax: 1244 1258

Quotation Number: _____
Project Manager: sch4p4(6) R _____
Sampled By: _____
Results To: _____
Relinquished by: _____
Due Date: 5 Day TAT
Special Instructions: _____

Lab Sample No.	Sample Reference	Sample Depth	Sample Type	No. of Jars/Vials	Date Sampled	9 metals	TPH/TEX	TPH/TEX/Depth	TPH/TEX/PAH	TPH/TEX/PAH	OC Fluo/Depth	PAH	TC/PC (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn)	TC/PC (PAH)	TC/PC (BTEX)
1	TP19-1	0.1	Soil	1	17-Nov-11	X					X				
2	TP19-2	0.5	Soil	1	17-Nov-11	X			X						
3	TP19-3	1.0	Soil	1	17-Nov-11	X						X			
4	TP19-4	1.5	Soil	1	17-Nov-11	X									
5	TP19-5	2.0	Soil	1	17-Nov-11	X			X						
6	TP19-6	2.5	Soil	1	17-Nov-11	X									
7	TP19-7	3.0	Soil	1	17-Nov-11	X									
8	TP20-1	0.1	Soil	1	17-Nov-11	X									
9	TP20-2	0.5	Soil	1	17-Nov-11	X			X		X				
10	TP20-3	1.0	Soil	1	17-Nov-11	X						X			
11	TP20-4	1.5	Soil	1	17-Nov-11	X									
12	TP20-5	2.0	Soil	1	17-Nov-11	X			X						
13	TP20-6	2.5	Soil	1	17-Nov-11	X									
14	TP20-7	3.0	Soil	1	17-Nov-11	X									
15	TP21-1	0.1	Soil	1	17-Nov-11	X			X		X				
16	TP21-2	0.5	Soil	1	17-Nov-11	X						X			
17	TP21-3	1.0	Soil	1	17-Nov-11	X									
18	TP21-4	1.5	Soil	1	17-Nov-11	X			X						
19	TP21-5	2.0	Soil	1	17-Nov-11	X						X			
20	TP21-6	2.5	Soil	1	17-Nov-11	X									
21	TP21-7	3.0	Soil	1	17-Nov-11	X			X						
22	TP22-1	0.1	Soil	1	17-Nov-11	X									
23	TP22-2	0.5	Soil	1	17-Nov-11	X			X						
24	TP22-3	1.0	Soil	1	17-Nov-11	X						X			
25	TP22-4	1.5	Soil	1	17-Nov-11	X									

sch4p4

Published on DES Disclosure Log
RTI Act 2009

CERTIFICATE OF ANALYSIS

Work Order	: EB1124552	Page	: 1 of 5
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Per	Contact	: sch4p4(6) Pe
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4(6)@butlerpartners.com.au	E-mail	: sch4p4(6) P@alsenviro.com
Telephone	: +61 38523800	Telephone	: 61-7-32437222
Facsimile	: +61 07 38523808	Facsimile	: 61-7-32437218
Project	: 011-165B	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 4894	Date Samples Received	: 18-NOV-2011
C-O-C number	: 011-165B/R	Issue Date	: 25-NOV-2011
Sampler	: sch4p4(6)	No. of samples received	: 3
Site	: Bowen Hills	No. of samples analysed	: 2
Quote number	: BN/329/10		

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

This document is issued in accordance with NATA accreditation requirements.

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

sch4p4(6)

Position

Senior Inorganic Chemist
Senior Organic Chemist
Senior Organic Chemist

Accreditation Category

Brisbane Inorganics
Brisbane Inorganics
Brisbane Organics

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Environmental Division Brisbane | 64 009 936 029 Part of the ALS Group | A Campbell Brothers Limited Company

Environmental

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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.

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

- EG005T (Total Metals): LCS recoveries fall outside Dynamic Control Limits. They are however within ALS Static Control Limits and hence deemed acceptable.

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Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID	QC14	QC18			
				Client sampling date / time	17-NOV-2011 15:00	17-NOV-2011 15:00			
					EB1124552-001	EB1124552-003			
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		11.8	16.3			
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5			
Cadmium	7440-43-9	1	mg/kg		<1	<1			
Chromium	7440-47-3	2	mg/kg		4	<2			
Copper	7440-50-8	5	mg/kg		39	<5			
Lead	7439-92-1	5	mg/kg		384	13			
Nickel	7440-02-0	2	mg/kg		20	<2			
Zinc	7440-66-6	5	mg/kg		149	71			
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.2	<0.1			
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5				
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5				
Acenaphthene	83-32-9	0.5	mg/kg		<0.5				
Fluorene	86-73-7	0.5	mg/kg		<0.5				
Phenanthrene	85-01-8	0.5	mg/kg		<0.5				
Anthracene	120-12-7	0.5	mg/kg		<0.5				
Fluoranthene	206-44-0	0.5	mg/kg		2.6				
Pyrene	129-00-0	0.5	mg/kg		2.8				
Benz(a)anthracene	56-55-3	0.5	mg/kg		2.0				
Chrysene	218-01-9	0.5	mg/kg		2.2				
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		2.0				
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		1.3				
Benzo(a)pyrene	50-32-6	0.5	mg/kg		2.4				
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		1.1				
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		1.3				
Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg		17.7				
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	-----	10	mg/kg		<10				
C10 - C14 Fraction	-----	50	mg/kg		<50				
C15 - C28 Fraction	-----	100	mg/kg		<100				
C29 - C36 Fraction	-----	100	mg/kg		<100				
C10 - C36 Fraction (sum)	-----	50	mg/kg		<50				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	QC14	QC18			
Client sampling date / time					17-NOV-2011 15:00	17-NOV-2011 15:00			
Compound	CAS Number	LOR	Unit	EB1124552-001	EB1124552-003				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft - Continued									
C6 - C10 Fraction	---	10	mg/kg	<10	---	---	---	---	---
C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	---	---	---	---	---
>C10 - C16 Fraction	---	50	mg/kg	<50	---	---	---	---	---
>C16 - C34 Fraction	---	100	mg/kg	<100	---	---	---	---	---
>C34 - C40 Fraction	---	100	mg/kg	<100	---	---	---	---	---
>C10 - C40 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---	---
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg	<0.2	---	---	---	---	---
Toluene	108-88-3	0.5	mg/kg	<0.5	---	---	---	---	---
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	---	---	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	---	---	---	---	---
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	---	---	---	---	---
EP080: BTEXN									
Sum of BTEX	---	0.2	mg/kg	<0.2	---	---	---	---	---
Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	---	---	---	---	---
Naphthalene	91-20-3	1	mg/kg	<1	---	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	97.0	---	---	---	---	---
2-Chlorophenol-D4	93951-73-6	0.1	%	101	---	---	---	---	---
2,4,6-Tribromophenol	118-79-6	0.1	%	90.4	---	---	---	---	---
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	92.8	---	---	---	---	---
Anthracene-d10	1719-06-8	0.1	%	81.8	---	---	---	---	---
4-Terphenyl-d14	1718-51-0	0.1	%	135	---	---	---	---	---
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	75.4	---	---	---	---	---
Toluene-D8	2037-26-5	0.1	%	84.7	---	---	---	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	76.8	---	---	---	---	---

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Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM): Phenolic Compound Surrogates			
Phenol-d6	13127-89-3	34.8	154.5
2-Chlorophenol-D4	93951-73-6	41.9	152.8
2,4,6-Tribromophenol	118-79-6	26.0	156.8
EP075(SIM): PAH Surrogates			
2-Fluorobiphenyl	321-60-8	33.8	156.5
Anthracene-d10	1719-06-8	36.9	153.1
4-Terphenyl-d14	1718-51-0	41.8	172.2
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	128.6

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QUALITY CONTROL REPORT

Work Order	: EB1124552	Page	: 1 of 7
Client	: BUTLER PARTNERS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Pe	Contact	: sch4p4(6) Pe
Address	: P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4(6)@butlerpartners.com.au	E-mail	: sch4p4(6) Pe@alsenviro.com
Telephone	: +61 38523800	Telephone	: 61-7-32437222
Facsimile	: +61 07 38523808	Facsimile	: 61-7-32437218
Project	: 011-165B	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Bowen Hills		
C-O-C number	: 011-165B/6	Date Samples Received	: 18-NOV-2011
Sampler	: sch4p4(6)	Issue Date	: 25-NOV-2011
Order number	: 4894	No. of samples received	: 3
Quote number	: BN/329/10	No. of samples analysed	: 2

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

This document is issued in accordance with NATA accreditation requirements.

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
sch4p4(6)	Senior Inorganic Chemist	Brisbane Inorganics
	Senior Organic Chemist	Brisbane Inorganics
	Senior Organic Chemist	Brisbane Organics

Address: 32 Shand Street Stafford QLD Australia 4053 Telephone: +61-7-3243 7222 Facsimile: +61-7-3243 7218
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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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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 QW1-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 (%)
EB1124485-004	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	31.0	30.8	0.6	0% - 20%
EB1124428-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	6	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	33	23	37.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	15	14	10.7	No Limit
EB1124458-017	Anonymous	EG005T: Zinc	7440-66-6	5	mg/kg	37	37	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	26	33	23.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	38	37	4.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	28	28	0.0	No Limit
EB1124428-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
		EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1124458-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

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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 (%)
EB1124458-001	Anonymous	EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1124485-001	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
EB1124458-001	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
EB1124485-001	Anonymous	EP080: C6 - C10 Fraction	---	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	---	10	mg/kg	<10	<10	0.0	No Limit
EB1124458-001	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
EB1124485-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	---	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	106-38-3	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: Total Xylenes	1330-20-7	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

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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

Sub-Matrix: SOIL	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EG005T: Total Metals by ICP-AES (QCLot: 2052241)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	# 86.8	90	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	88.1	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	# 88.5	89	126
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	# 87.1	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	87.2	83	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	88.5	86	124
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	# 82.8	86	124
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2052242)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	84.1	73	127
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QCLot: 2052167)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	104	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	101	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	101	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	103	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	101	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	103	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	107	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	107	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	104	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	106	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	94.2	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	# 128	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	114	50	116
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	112	47	130
EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	111	41	129
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	113	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2052152)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	110	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2052166)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	312 mg/kg	92.1	65	112
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	500 mg/kg	95.2	76.2	122
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2052152)								

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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 (%)		Recovery Limits (%)	
						LCS		Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2052152) - continued									
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	18.5 mg/kg	111		71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2052166)									
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	413 mg/kg	91.6		63	112
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	360 mg/kg	93.7		74	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----		----	----
EP080: BTEXN (QCLot: 2052152)									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	88.2		78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	84.1		78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	82.0		72	119
EP080: meta- & para-Xylene	106-38-3	0.5	mg/kg	<0.5	2 mg/kg	83.0		81	121
	106-42-3								
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	82.6		70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.3		77.1	117

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INTERPRETIVE QUALITY CONTROL REPORT

Work Order	EB1124552	Page	1 of 5
Client	BUTLER PARTNERS PTY LTD	Laboratory	Environmental Division Brisbane
Contact	Sch4p4(6) Pel	Contact	Sch4p4(6) Pel
Address	P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	32 Shand Street Stafford QLD Australia 4053
E-mail	Sch4p4(6)@butlerpartners.com.au	E-mail	Sch4p4(6) P@alsenviro.com
Telephone	+61 7 38523800	Telephone	61-7-32437222
Facsimile	+61 07 38523808	Facsimile	61-7-32437218
Project	011-165B	QC Level	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	Bowen Hills	Date Samples Received	18-NOV-2011
C-O-C number	011-165B/6	Issue Date	25-NOV-2011
Sampler	Sch4p4(6)	No. of samples received	3
Order number	4894	No. of samples analysed	2
Quote number	BN/329/10		

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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Environmental Division Brisbane | Ref: 84 009 936 029 Part of the ALS Group | A Campbell Brothers Limited Company

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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 (1996). 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: x = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103) QC14,	QC18	17-NOV-2011	---	---	---	21-NOV-2011	01-DEC-2011	✓
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) QC14,	QC18	17-NOV-2011	23-NOV-2011	15-MAY-2012	✓	23-NOV-2011	15-MAY-2012	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) QC14,	QC18	17-NOV-2011	23-NOV-2011	15-DEC-2011	✓	24-NOV-2011	15-DEC-2011	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP071) QC14		17-NOV-2011	22-NOV-2011	01-DEC-2011	✓	23-NOV-2011	01-JAN-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) QC14		17-NOV-2011	22-NOV-2011	01-DEC-2011	✓	23-NOV-2011	01-JAN-2012	✓
EP080: BTEX								
Soil Glass Jar - Unpreserved (EP080) QC14		17-NOV-2011	21-NOV-2011	01-DEC-2011	✓	23-NOV-2011	01-DEC-2011	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080) QC14		17-NOV-2011	21-NOV-2011	01-DEC-2011	✓	23-NOV-2011	01-DEC-2011	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
Soil Glass Jar - Unpreserved (EP080) QC14		17-NOV-2011	21-NOV-2011	01-DEC-2011	✓	23-NOV-2011	01-DEC-2011	✓

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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(ware) 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	Method	Count		Rate (%)		Evaluation	Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	9	11.1	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	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	9	11.1	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	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	9	11.1	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	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	9	11.1	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	1	13	7.7	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	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 Description
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)
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)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Preparation Methods	Method	Matrix	Method Description
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
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, Na ₂ SO ₄ and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.

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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							
EG005T: Total Metals by ICP-AES	2427989-003	---	Arsenic	7440-38-2	86.8 %	90-130%	Recovery less than lower control limit
EG005T: Total Metals by ICP-AES	2427989-003	---	Chromium	7440-47-3	88.5 %	89-126%	Recovery less than lower control limit
EG005T: Total Metals by ICP-AES	2427989-003	---	Copper	7440-50-8	87.1 %	89-125%	Recovery less than lower control limit
EG005T: Total Metals by ICP-AES	2427989-003	---	Zinc	7440-66-6	82.8 %	88-124%	Recovery less than lower control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2427943-006	---	Benzo(k)fluoranthene	207-08-9	128 %	48-124%	Recovery greater than upper 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

- 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.

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SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EB1124552**

Client	BUTLER PARTNERS PTY LTD	Laboratory	Environmental Division Brisbane
Contact	sch4p4(6) Pd	Contact	sch4p4(6) Pd
Address	P O BOX 2267 FORTITUDE VALLEY BC QLD, AUSTRALIA 4006	Address	32 Shand Street Stafford QLD Australia 4053
E-mail	sch4p4(6)@butlerpartners.com.au	E-mail	sch4p4(6) Pd@alsenviro.com
Telephone	+61 7 38523800	Telephone	61-7-32437222
Facsimile	+61 07 38523808	Facsimile	61-7-32437218
Project	011-165B	Page	1 of 2
Order number	4894	Quote number	EB2010BUTPAR0327 (BN/329/10)
C-O-C number	011-165B/6	QC Level	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	Bowen Hills		
Sampler	sch4p4(6)		

Dates

Date Samples Received	18-NOV-2011	Issue Date	21-NOV-2011 13:37
Client Requested Due Date	25-NOV-2011	Scheduled Reporting Date	25-NOV-2011

Delivery Details

Mode of Delivery	Carrier	Temperature	11.2°C - Ice bricks present
No. of coolers/boxes	1 SMALL	No. of samples received	3
Security Seal	Intact.	No. of samples analysed	2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.
- Please be advised that sample QC16 (ALS #2) has no analysis assigned to it. This sample will be put on hold unless notified.
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: SOIL

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-07 TPH/BTEX/PAH (SIM)
EB1124552-001	17-NOV-2011 15:00	QC14		✓	✓
EB1124552-002	17-NOV-2011 15:00	QC16	✓		
EB1124552-003	17-NOV-2011 15:00	QC18		✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

sch4p4(6) Pe

- AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QC1 Rep) (QC1)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)

Email
Email
Email
Email
Email
Email

sch4p4(6)

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sch4p4(6) Personal info

- A4 - AU Tax Invoice (INV)

Email

sch4p4(6)

butlerpartners.com.a

Butler Partners Pty Ltd

PO Box 2257, Fortitude Valley BC Qld 4006
 79 Doggett Street, Newstead Qld 4006
 Ph: 07 3852 3600 Fax: 07 3852 3608

Job No:
 Site:

011-1658
 Bowen Hills

Order No:
 COC No:

4894
 011-1658/5

ALS Environmental

Australian Laboratory Services Pty Ltd
 32 Shand Street, STAFFORD QLD 4053

Ph: 3243 7222
 Fax: 3243 7218

Quotation Number: BN194/09 Project Manager: sch4p4(6) P Sampled By: Results To: Relinquished by: Due Date: 5 day TAT Special Instructions:						(8 metals) (TPHBTX) (TPHBTX8 Metals) (TPHBTX(PH) (TPHBTX(PAH) OC Pesticides PAH (TPHBTX(PAH) (TPHBTX(PAH)OCPOB (8 Metals) (TPHBTX(PAH)OCPOB (8 Metals) (TPHBTX(PAH)OCPOB (8 Metals) (TPHBTX(PAH)OCPOB (8 Metals) PAH Cr Sulfide SPOCAS TCLP (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) TCLP (Pb) Vinyl Chloride (1ug/L) (C ₁₀ -BTX)															
Lab Sample No.	Sample Reference	Sample Depth	Sample Type	No. of Jars/Vials	Date Sampled	S-2	S-4	S-6	S-8	S-10	S-12	S-14	S-16	S-18	S-20	S-22	S-24	S-26	S-28	S-30	W-18
1	QC14		Soil	1	17-Nov-11	X															
2	QC16		Soil	1	17-Nov-11																
3	QC18		Soil	1	17-Nov-11	X															
TOTALS:						2															

Environmental Division
 sch4p4(Brisbane sch4p4
 Work Order
31124552



Telephone : +61-7-3243 7222

sch4p4(6)

Received By:
 Date:
 File: - C:\

18/11/11
 Version 1 - 18/11/2011

Organisation: ALS
 Time: 1300

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Butler Partners Pty Ltd
ABN 14 516 574 869
79 Deggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

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Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au



UBD Reference: Map 19 Grid B7 (53rd Edition) NTS

RNA SHOWGROUND DEVELOPMENT ENABLING WORKS - STAGE 1

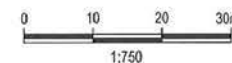
RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

LOCALITY PLAN AND TEST LOCATIONS

CLIENT:

L&D CONTRACTING

SCALE AT A3:



DATE: NOVEMBER 2011

DRAWN: FD

APPROVED:

PROJECT No: 011-165B

DRAWING No: 1 REV: A

LEGEND

- TP1 Test Pit
- Area Investigated

DRAFT

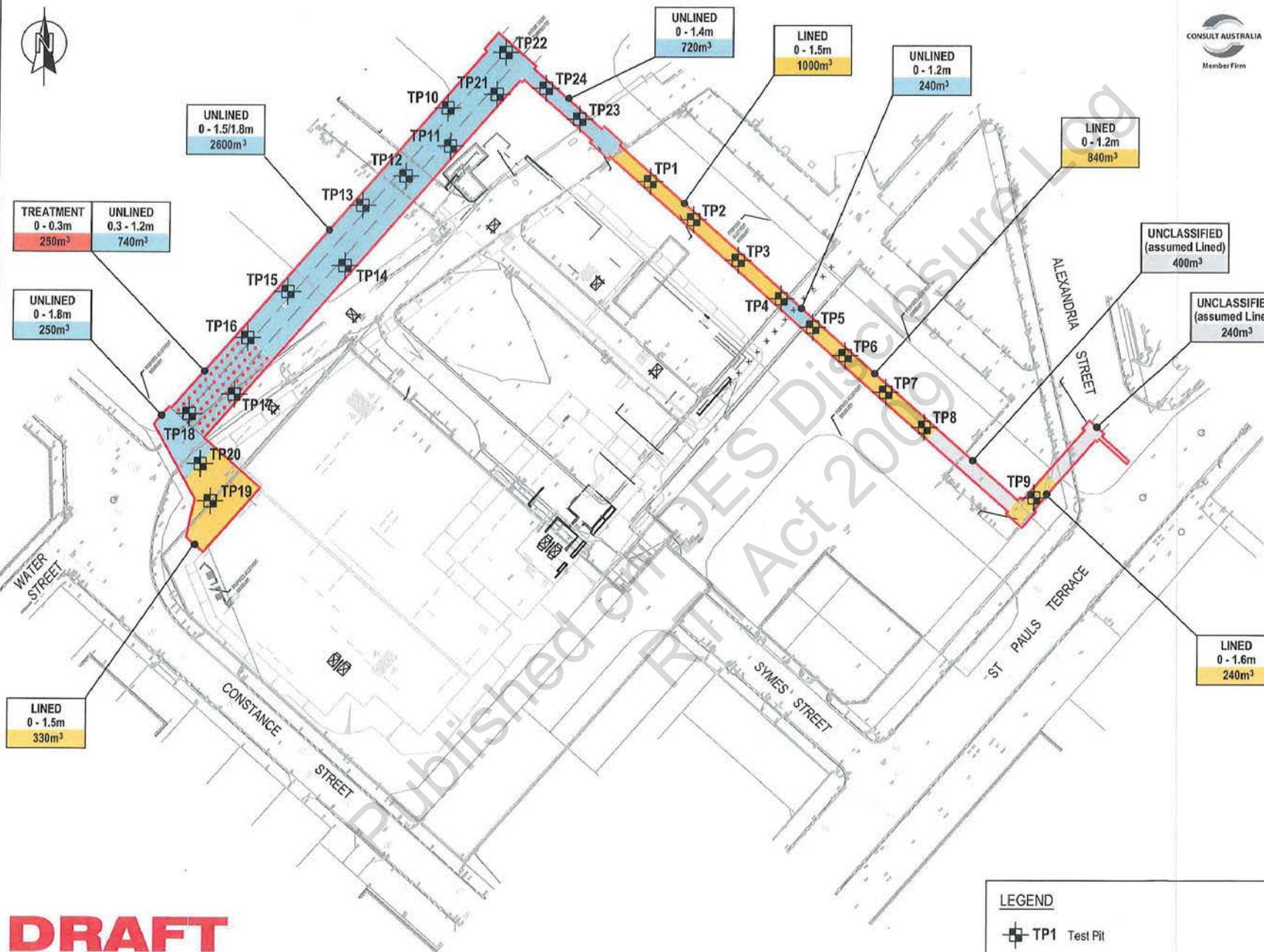
Reference: Cardno (Qld) Pty Ltd's 'Stormwater Drainage Layout Plan', Drawing No. 161163-050-CD-C-301-1032(00), dated 07.10.2011.



Butler Partners Pty Ltd
ABN 14 616 574 048
79 Doggett Street
Newstead, Queensland 4006
P.O. Box 2267
Fortitude Valley BC
Queensland 4006

www.butlerpartners.com.au

Ph: 61 7 3852 3800
Fx: 61 7 3852 3808
enquiries@butlerpartners.com.au



DISPOSAL CLASSIFICATION

- Unclassified, assumed Lined
- Unlined
- Lined
- Treatment / Unlined

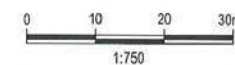
**RNA SHOWGROUND DEVELOPMENT
ENABLING WORKS - STAGE 1**

RNA SHOWGROUNDS, ST PAULS TERRACE, BOWEN HILLS

LANDFILL DISPOSAL CLASSIFICATIONS

CLIENT: **L&D CONTRACTING**

SCALE AT A3:



DATE: NOVEMBER 2011

DRAWN: FD

APPROVED:

PROJECT No: 011-165B

DRAWING No: 3 REV: A

LEGEND

- TP1

 Test Pit
- Proposed Stormwater Culvert Alignment

DRAFT

Reference: Cardno (Qld) Pty Ltd's 'Stormwater Drainage Layout Plan', Drawing No. 161163-050-CD-C-301-1032(00), dated 07.10.2011.

BCC.

160 Ann Street • Brisbane, Queensland • PO Box 155 • BRISBANE ALBERT STREET QLD 4002 • AUSTRALIA
Telephone (07) 3227 6422 • Facsimile (07) 3227 7677 • www.env.qld.gov.au

copied to each
lot

Enquiries Kim Denning
Telephone (07) 3227 6674
Your reference
Our reference 900770

16 March 2000

Contaminated Land Unit
Brisbane City Council
GPO Box 1434
BRISBANE QLD 4001

Attn: Patrick Gilfuis

Dear Patrick

**Re: 574 Gregory Terrace, Bowen Hills; 345 & 480 SL4550, 481 SL4551, 485 - 487
SL4553, 641 SL6183 and 484 SL4553**

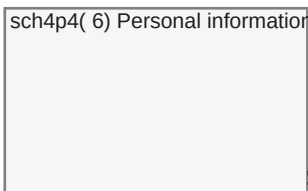
Thank you for your fax of 8 February 2000, providing information on fuel storage at the above property.

We have subsequently written to the owners, Royal National Agricultural and Industrial Association, to try to obtain further information on the location of notifiable activities at the site. As a result, three lots have been listed on the Environmental Management Register. Enclosed are notices advising of the listing of lots 487 SL4553, 345 SL4550 and 480 SL4550.

I also enclose a copy of the letter and map from RNAIA showing the location of the tanks, for your records. The other lots will not be listed at this time, as there is no evidence a notifiable activity has occurred.

If you have any inquiries or concerns, please do not hesitate to contact the officer referenced above, at the Contaminated Land Unit.

sch4p4(6) Personal information



Registrar
Contaminated Land Unit
enc.

160 Ann Street • Brisbane, Queensland • PO Box 155 • BRISBANE ALBERT STREET QLD 4002 • AUSTRALIA
Telephone (07) 3227 6422 • Facsimile (07) 3227 7677 • www.env.qld.gov.au

Enquiries Kim Denning
Telephone (07) 3227 6674
Your reference JRM:AF
Our reference 900770

copied to
345+480 SL4550

16 March 2000

[sch4p4(6) Personal info]

Royal National Agricultural and
Industrial Association of Queensland
Exhibition Grounds
Gregory Terrace
FORTITUDE VALLEY QLD 4006

Dear [sch4p4(6) Perso]

Re: Exhibition Grounds, Fortitude Valley

Thank you for your letter of 8 March 2000, providing information on fuel storage at the above property.

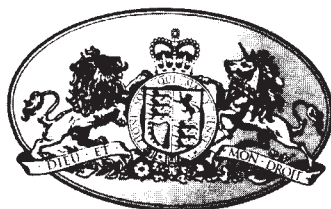
Lots 487 SL4553, 345 SL4550 and 480 SL4550 have been listed on the Environmental Management Register. Notices are enclosed advising you of this.

Thank you again for your assistance. If you have any inquiries or concerns, please do not hesitate to contact the officer referenced above, at the Contaminated Land Unit.

Yours sincerely

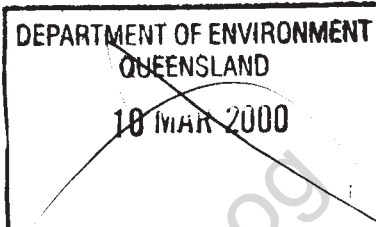
[sch4p4(6) Personal information]

Registrar
Contaminated Land Unit
enc.



ROYAL NATIONAL AGRICULTURAL & INDUSTRIAL ASSOCIATION OF QUEENSLAND

484-487 SL4553



JRM:AF

Wednesday, March 08, 2000

Ms A Milinovich
Contaminated Land Unit
Environmental Protection Agency
P O Box 155
BRISBANE ALBERT STREET. 4002

2000/ 251

Dear Ms Milinovich

RE: EXHIBITION GROUNDS, FORTITUDE VALLEY

In reply to your letter of 6th February 2000 we provide the following information.

LOT 487 SL4553

601 A GREGORY TERRACE, BOWEN HILLS Q 4006

An underground fuel tank was previously installed on this site to provide fuel for the Association's vehicles. I am unsure of the capacity however, I would imagine approximately 1000 gallons. This tank was completely removed approximately 20 years ago.

LOT 345 SL4550

1 BOWEN BRIDGE ROAD, HERSTON Q 4006

An underground fuel tank was installed on this site to store diesel fuel for generators during the running of the Royal Queensland Show in August each year. I understand that it has not been used from some time due to the RNA's increased electricity supply to that area. Various Sideshow operators would have arranged the fuel tank installation. They would have obtained the necessary permits etc. from the Brisbane City Council. I am unsure of the capacity, however 500 or 1000 gallons would be the most likely.



Offa send 118/H(3)-N1 - Notices for
Lot 487 SL4553, Lot 345 SL4550 and Lot
480 SL4550.

② Print, update BCC records + forward copy of
this letter + map to BCC for file

Thanks

sch4p4(6)

13/3/00

LOT 480 SL4550

1 BOWEN BRIDGE ROAD, HERSTON 84006

Entered
15/3/00 'N'
Tr. ID. 29612

sch4p4

An underground fuel tank is installed for the purpose of providing lead free petrol for a car ride during the annual Show. I am advised that the tank is emptied at the conclusion of the Show and filled with a solution for the period between shows. It is most likely a 500 gallon tank.

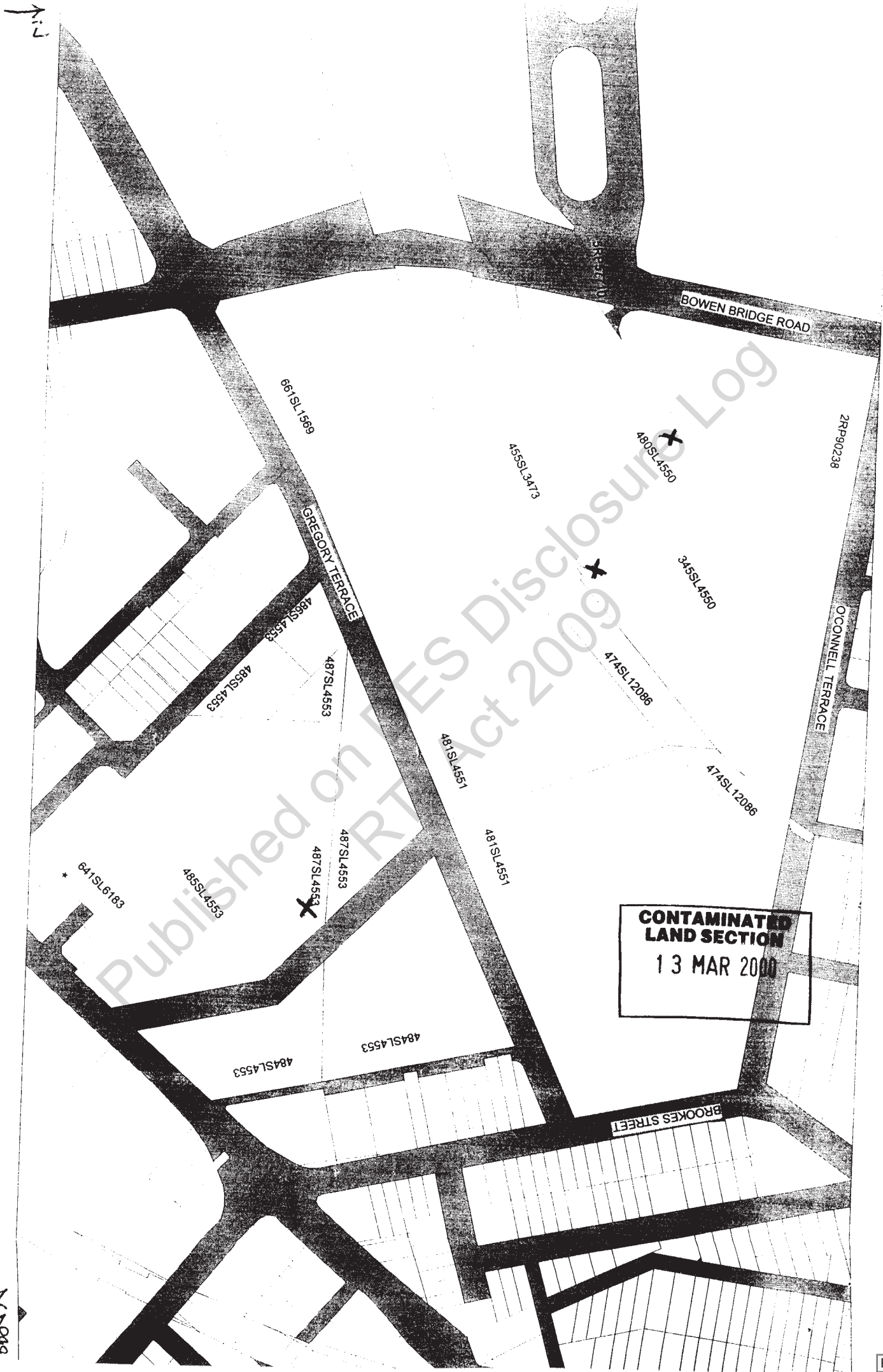
I have indicated the approximate location of the tanks mentioned above on the map provided.

Yours faithfully

sch4p4(6) Personal information



Published on DES Disclosure Log
RTI Act 2009



**CONTAMINATED
LAND SECTION**
13 MAR 2000

14/2/00

14/2/00

160 Ann Street • Brisbane, Queensland • PO Box 155 • BRISBANE ALBERT STREET QLD 4002 • AUSTRALIA
Telephone (07) 3227 6422 • Facsimile (07) 3227 7677 • www.env.qld.gov.au

Enquiries Kim Denning
Telephone (07) 3227 6674
Your reference
Our reference 900770

16 February 2000

Royal National Agricultural and Industrial Association
Exhibition Grounds
Gregory Terrace
FORTITUDE VALLEY QLD 4006

Dear Sir/Madam

Re: Exhibition Grounds, Fortitude Valley

I refer to the above property, comprising of a number of land parcels between Bowen Bridge Road and Brookes Street, Fortitude Valley. Brisbane City Council have advised that a number of underground fuel tanks have been stored on the site in the past.

Underground fuel tanks fit the 'notifiable activity' definition of 'petroleum product or oil storage'. Sites on which a notifiable activity has occurred are required to be listed on the Environmental Management Register. Refer to the enclosed information sheets for further details.

In order for the correct lots to be listed on the Register, please advise which lots have held underground fuel tanks, or any other notifiable activities. Please provide details of the activities, for example for fuel storage: types and volumes of fuel, and whether above or below ground. You may wish to mark the location of fuel tanks or any other activities on the enclosed map and return it to this Agency.

Thank you for your assistance. If you have any inquiries, please feel free to contact the officer referenced above, at the Contaminated Land Unit.

Yours sincerely

sch4p4(6) Personal informa

Ariane Milinovich

Registrar

Contaminated Land Unit

enc.

F A C S I M I L E



Brisbane City

Another helpful reply
from Patrick!
When he rang this morning
he said something about a
5000L tank which he didn't tell
us about. As he didn't want us to
get confused! He said he'd put it in
here (fax), but it's not.
Write to owner? [sch4] 10/2/00

Brisbane City Council

TO
Environmental Protection Agency

FACSIMILE NO:
3227 7677

ATTENTION:

Date:

No. Of Pages
(incl this one)
1

Kim Denning

10/02/2000

FROM

Patrick Gilfuis

Phone No:

3403 5564

Facsimile No.

3403 6567

SUBJECT **Reviewed Site**

574 Gregory Tce, Bowen Hills

L 345 & L 480 SL 4550 & L 481 SL 4551

L485/487 SL 4553 & L641 SL6183 &

L484 SL 4553

Technical Support Group
Development Assessment,
Development & Regulatory Services
Customer & Community Services Division

Team Leader, Denis Verner
Legislation & Appeals, Phillip Smith
Heritage, Laurie Jones

Natural Environment, Bill Manners

Public Health, Shane Worley

Hazards, Rodney Ringe

Transport & Traffic, Rod Mogg

Water & Sewerage, Lew Maguire

Waterways, Firoz Ahmed

Erosion & Sediment, Scott Palen

Facsimile

3403 6567

3403 6153

3403 6718

3403 4059

3403 9585

3403 4514

3403 4681

3403 5338

3403 4978

3403 5487

3403 4735

all on data bank except 345 SL4550

**CONTAMINATED
LAND SECTION**
10 FEB 2000

Hello Kim,

Regarding your fax 10 February 2000 to the above property.

The file does not indicate that a new 2 500 litre tank was installed each time just that
licence was renewed each year and only the 300-litre tank was removed. The site
diagrams accompany [sch4p4(6) Person] application and no site plans showing the location or
lot / plans for the other tank.

If you have any questions, please contact me.

Regards

Patrick Gilfuis
Land Contamination Support
Technical Support

Kim, pls draft letter to RNA/A - Re. VSTS
on site & notify other stakeholders -
enclose map + list of V/A's + info sheet.
~~take them out~~ Note that land through
active may be administered by Qhair(?)
+ CC to Qhair

[sch4p4(6) Person]

11/2/00

Facsimile cover sheet

Contaminated Land Unit, Environmental Operations

11th Floor, 160 Ann St, Brisbane, Qld • PO Box 155, BRISBANE ALBERT STREET QLD 4002 • AUSTRALIA
Phone enquiries (07) 3227 6422 • Facsimile (07) 3227 7677

Please deliver to	Date	10 February 2000	Time sent	
	Name	Patrick Gilfuis	Fax number	(07) 3403 9158
From	Business/Section	EH - Brisbane City Council		
	Name	Kim Denning	Telephone	(07) 3227 6674
	Unit	Contaminated Land Unit		
Subject	574 Gregory Tce, Bowen Hills			
Number of pages	(including facsimile cover sheet) 1			
Special precedence	☐ Urgent	☐ Confidential	Original is being forwarded	☐ Yes ☐ No

Privacy and confidentiality notice

The information contained in this facsimile is intended for the named recipient/s only. It may contain privileged and confidential information and if you are not an intended recipient, you must not copy, distribute or take any action in reliance on it. If you have received this facsimile in error, please notify the sender.

Message

Thank you for your fax of 8 February 2000 regarding the above property.

The information you provided indicated three underground tanks have been on site:

- 1 x 300L motor spirits (removed) [sch4p4(6) Perso]
- 1 x 2500L motor spirits - [sch4p4(6) Perso]
- and 1 x 2500L distillate - Durkin Amusements Pty Ltd

Does the site diagram you provided in the fax refer to the F & C for Durkin Amusements, ie the 2500L underground distillate tank?

If so, do you have any diagrams or maps showing the locations or lot/plans of the other two tanks?

Thank you for your assistance. If you have any inquiries, please feel free to call me.

Yours sincerely

[sch4p4(6) Personal inform]

Kim Denning

Validation Officer

Contaminated Land Unit

569 of 702

F A C S I M I L E



Brisbane City

Brisbane City Council

TO
Environmental Protection AgencyFACSIMILE NO:
3227 1677Technical Support Group
Development Assessment,
Development & Regulatory Services
Customer & Community Services Division

ATTENTION:

Date:

No. Of Pages
(incl this one)

Ariane Milinovich

08/02/2000

2

Team Leader, David Vamer	3403 6133
Legislation & Appeals, Philip Smith	3403 6718
Heritage, Laurie Jones	3403 4050
Natural Environment, Bill Manners	3403 9505
Public Health, Rhona Worley	3403 4514
Hazards, Rodney Kings	3403 4681
Transport & Traffic, Rod Mogg	3403 5338
Water & Sewerage, Low MacQuinn	3403 4076
Waste, Piroz Ahmed	3403 5437
Fire & Safety, Scott Paton	3403 4726
Facsimile	3403 6567

FROM

Phone No:

Facsimile No.

Patrick Gilfuis

3403 5564

3103 6567

SUBJECT **Reviewed Site**

574 Gregory Tce, Bowen Hills
L 345 & L 480 SL 4550 & L 481 SL 4551
L485/487 SL 4553 & L641 SL6183 &
L484 SL 4553

Hello Ariane,

A recent check of Council's records, about the above address, confirms that the site did have an F & C licence which was approved 19 July 1979 ^{sch4p4(6) Pers} The licence was for one (1) 300 litre underground tank for motor spirits. In May 1980 approval was given for the removal of the 300 litre underground tank and for one (1) 2 500 litre underground tank for motor spirits to be installed. ^{300L UST removed}

In August 1986 Durkin Amusements Pty Ltd. was given approval for one (1) 2 500 litre underground tank for distillate. The licences was cancelled in September 1997. The file does not show if they removed the tanks. Attach is a site plan, unfortunately it does not show what lot and plan number the tanks are/where on. ^{2500L UST not shown}

If you have any questions, please contact me.

Regards

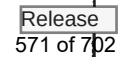
Patrick Gilfuis
Land Contamination Support
Technical Support

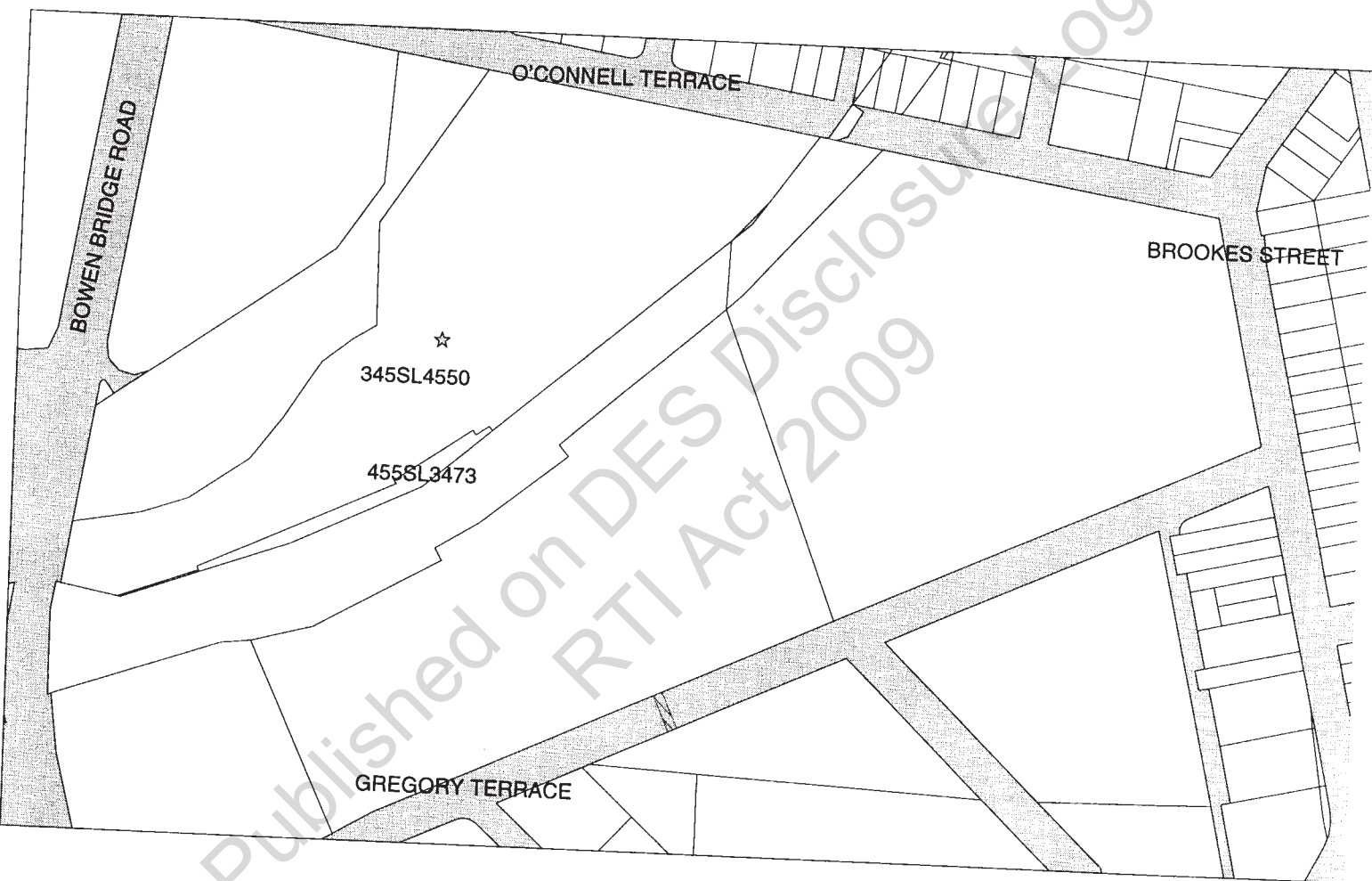
Our Business - A Better Brisbane

Kim, please check ownership of all blocks between Penn Street - Gregory - Brooks - O'Connell Streets.
Please check with Council whether the attached plan refers to the F & C Lic by Durkin P/L to the 2500L UST? Do Council have a map showing the location or lot/plans of the other USTs?
From Council's map there appears to be a UST on either lot 455 or lot 473 or lot 45 SL4550. We will need to write to the owner.

sch4p4(6)

P.1/2





SUBMENU OPTION: ARCHIVE TRANSACTION

Reflection2 - MAGPOD.B2W

File Edit Terminal Connection Options Window Help

ESATD01

CONTAMINATED SITES REGISTER
ARCHIVE TRANSACTION DATA

08 MAR 1996 17:38

Archive Date: 08/03/1996

Archive(Do) Exit(PF3)

VT300-7 - TELNET:MGH(machon)

Compose Num Caps Hold

Published on DES Disclosure Log
RTI Act 2009

not on cor

LGA: BRISBANE CITY

SITE NAME: 574 GREGORY TCE BOWEN HILLS

LOCN STREET: 574 GREGORY TCE

LOCN SUBURB: BOWEN HILLS

LOCN PCODE: 4006

SITE LOT: 487

✓ current plan

SITE PLAN: SL4553

VOL:

FOLIO: 0

OWNER ADR1: RNA&I ASSN OF QLD C/- THE SECRETARY

✓ current owner (IVAC)

OWNER ADR2: EXHIBITION GROUNDS

OWNER ADR3:

OWNER ADR4: GREGORY TCE

OWNER ADR5: BRISBANE

OWNER PCODE: 4000

CURR USE: 1411

PAST USE: 0

COMMENTS: BOWEN HILLS L345 SL4550 L480 SL4550 L481 SL4551
L484/487 SL4553 L641 SL6183. PREMISES LICENSED
UNDER THE FLAMMABLE & COMBUSTIBLE LIQUID
REGULATIONS 1990.

Published in DES Disclosure Log
RTI Act 2009

Amy

Please list the following lists for hazardous contaminant:

✓ L481/SP196765

Lead up to 812 mg/kg
Benzo (a) Pyrene up to 71.9 mg/kg
PAH up to 960.7 mg/kg
TPH up to 3270 mg/kg

Added 4/3/10 sch4p4(6)
Site 10 - 88841

L484/SL4553

sch4p4(6) Personal

Lead up to 749 mg/kg
Benzo (a) Pyrene up to 39.4 mg/kg
PAH up to 352 mg/kg
TPH up to 1680 mg/kg

Already listed — Site 10 - 87190
with haz cont. levels
as listed. only added
PAH (max concentration 352 mg/kg)
to list. 4/3/10 sch4p4(6)

L485/SP192466

Lead up to 9910 mg/kg
Benzo (a) Pyrene up to 47.1 mg/kg
PAH up to 556.3 mg/kg
TPH up to 3120 mg/kg

Added 4/3/10 sch4p4(6) Per
Site 10 - 88842

L487/SP196776

Lead up to 939 mg/kg
Benzo (a) Pyrene up to 9.2 mg/kg
PAH up to 217.9 mg/kg

← B.P. L487 SL4553. ←
make NP and mention in comments its subdivided from. And update
NP to include

Please list the following site as 'U' for 'hazardous contaminant':

✓ L3/SP190738 — BP — L345 SL4550 (managed)

Lead up to 392 mg/kg
Benzo (a) Pyrene up to 19.3 mg/kg
PAH up to 174.8 mg/kg
TPH up to 160 mg/kg

LOT	PLAN	SAMPLE LOCATION	CONTAMINANT (mg/kg) >HIL-A + depth (metres)					
			Lead	benzo(a) pyrene	PAH	TPH 15-28	TPH 29-36	TPH 10-36 [total]
3	SP190738	GA29						
		GA30	392 [0.4-0.5]					
		GA31		1.1 [0.17-0.13]				
		GA32				160 [0.3-0.5]		
		GA33						
		GA34		19.3 [0.9-1.2]	174.8 [0.9-1.2]			
		GA35						
		GA36						
		GA37						
481	SP196765	GA23						
		GA24						
		GA25						
		GA26						
		GA27						
		GA28						
		GA38						
		GA39						
		GA40						
		GA41						
		GA42		1.0 [0.2-0.3]				
		GA43						
		GA44	812 [0.4-0.5]; 348 [1.3-1.4]	1.0 [0.14-0.3]; 71.9 [0.4-0.5]; 8.2 [1.3-1.4]	960.7 [0.4-0.5]; 87.6 [1.3-1.4]	2100 [0.4-0.5]; 400 [1.3-1.4]	1160 [0.4-0.5]; 640 [1.3-1.4]	3270 [0.4-0.5]; 1040 [1.3-1.4]
		GA48						
		GA49						
		GA50						
484	SI 1553	GA21	749 [1.8-2.0]	39.4 [0.9-1.0]; 19.4 [1.8-2.0]	352 [0.9-1.0]; 172 [1.8-2.0]	730 [0.9-1.0]	950 [0.9-1.0]	1680 [0.9-1.0]
		GA22	306 [0.8-1.0]	3.8 [0.8-1.0]	39.3 [0.8-1.0]			
		GA62						
		GA63						
		GA64						

		GA65						
		GA66						
		BH01						
		BH02						
		BH03						
		BH04						
485	SP192466	GA17		47.1 [0.2-0.3]; 19.4 [0.4-0.5]	556.3 [0.2-0.3]; 182 [0.4-0.5]	1550 [0.2-0.3]	1580 [0.2-0.3]	3120 [0.2-0.3]
		GA19						
		GA52						
		GA54						
		GA55						
		GA61	9910 [1.3-1.4]					
487	SP196776	GA18						
		GA20						
		GA51		9.2 [0.4-0.4]	64.3 [0.4-0.5]			
		GA53						
		GA56	939 [0.07-0.3]					
		GA57	381 [0.4-0.5]; 390 [0.9-1.0]		42.9 [0.4-0.5]			
		GA58						
		GA59		1.8 [0.4-0.5]				
		GA60			217.9 [0.21-0.3]			

Darryl Byers

From: Darryl Byers
Sent: Tuesday, 16 February 2010 2:13 PM
To: sch4p4(6) Personal information
Subject: Notification of Land

sch4p4(6)

I refer your notifications of land for Lots 481 on SP196765, 487 on SP196776 and 485 on SP192466. There is currently insufficient information to be able to list these parcels of land for hazardous contaminant. Could you please forward through details of lab results and bore logs. My contact number is 3330 5686.

Regards

Darryl Byers
Senior Administration Officer, Contaminated Land Unit
Telephone: 07 3330 5686 Facsimile: 07 3330 5754

www.derm.qld.gov.au

Department of Environment and Resource Management, Level 8, 400 George Street, Brisbane Q 4000
PO Box 15155, City East Q 4002

19/02/10
Wade
pl tabulate
RPD & Max concs
for Darryl to
list above parcels
for haz contam.

19/02/10
Darryl
pl list as
per table to
be prepared by
Wade.

19/02/10
sch4p4(6)

Kim,
Is there sufficient
information to list
these lots for
hazardous
contaminant?
The RNA have
provided borelogs
and sample
plan

19/02/10
sch4p4(6)
Amy, please list the lots below for hazardous contaminant (owner notified)
✓ L481/SP196765 Lead up to 812 mg/kg
Ben

sch4p4(6) Person

17/2/2010



RNA

THE ROYAL NATIONAL
AGRICULTURAL AND
INDUSTRIAL ASSOCIATION
OF QUEENSLAND

9 February 2010

Eco Access Customer Service Unit
DERM – Contaminated Land
PO BOX 15155
CITY EAST QLD 4002

RECEIVED

11 FEB 2009

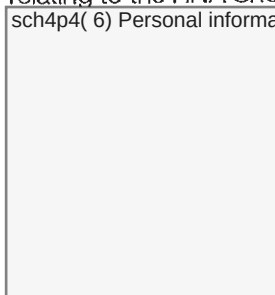
ECCL

Dear Sirs

Notification of Land

I enclose a Contaminated Land Notification Form and associated attachments relating to the RNA Showgrounds, in accordance with Schedule 2 of the *Environmental* sch4p4(6) Personal informa

further information please contact me via the details below.



Project Director

Direct: (07) 3253 3967

Email: sch4p4(6) Personal inform



RNA Showgrounds
600 Gregory Terrace
Bowen Hills Brisbane
Queensland Australia

Locked Bag 1010
Albion Queensland
Australia 4010

T +61 7 3852 1831
F +61 7 3257 1428

enquiries@rna.org.au
www.rna.org.au
ABN 41 417 513 726



Notification of Land

This form should be used by people providing notification to the Environmental Protection Agency of contaminated land or land use for a notifiable activity in accordance with Schedule 2 of the *Environmental Protection Act 1994*. This form relates specifically to Sections 371 and 372 of the *Environmental Protection Act 1994*.

NOTE: You must complete all questions below and use a separate form for each lot.

1. Person making notification

NAME sch4p4(6) Personal inform	TELEPHONE 07 3253 3967
COMPANY/ORGANISATION Royal National Agricultural and Industrial Association of Queensland	
POSTAL ADDRESS Locked Bag 1010 Albion Qld 4010	
EMAIL sch4p4(6) Personal information	FACSIMILE 07 3854 0857

2. Site details

2.1. Name by which the property is known locally?

RNA Showgrounds – Gregory Tce, Fortitude Valley Qld 4006

2.2. Please provide details of the Lot on Plan to which the notification applies

Please note that a separate notification form must be used for each Lot on Plan.

FULL STREET ADDRESS OF THE SITE 600 Gregory Terrace, Fortitude Valley Qld 4006	
LOT(S) 481	PLAN(S) SP196765
LOCAL GOVERNMENT AUTHORITY Brisbane City Council	

2.3. Area of land parcel in square metres? 80,093 m²

Notification of Land

2.4. Describe the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination. List all notifiable activities that the land has been used for and provide details.

If you require additional space attach the information on a separate sheet and make reference to that sheet here.

Hazardous contaminants – Benzo(a)pyrene (maximum concentration of 71.9 mg/kg), PAHs (maximum concentration of 960.7 mg/kg)

2.5. Has a map or locality plan been attached to this notification?

The processing of this information is greatly assisted by the inclusion of a map or locality plan that shows the respective Lot.

☐

NO

X YES

3. Details of land owner

<p>NAME Royal National Agricultural and Industrial Association of Qld</p>	<p>TELEPHONE 07 3253 3967</p>
<p>POSTAL ADDRESS Locked Bag 1010 Albion Qld 4010</p>	
<p>EMAIL sch4p4(6) Personal information</p>	<p>FACSIMILE 07 3854 0857</p>

4. Declaration

Please read the certification below before signing.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*.
- I understand that information or with this application form may be disclosed publicly in accordance with the *Information Act 1992* and the *Evidence Act 1977*.

<p>NOTIFYING PERSON'S SIGNATURE</p>	<p>DATE 09/02/2010</p>
-------------------------------------	----------------------------

You may apply for exemption from the provisions of the *Environment Protection Act 1994* contained in a document submitted, or proposed to be submitted with this notification (see Section 564 of the *Environment Protection Act 1994*)

5. Applicant checklist

- ✓ Notifying person's details correct.
- ✓ Notification form completed and signed.
- ✓ Supporting information attached.

Please return the completed notification to:

**Contaminated Land Unit
Environmental Protection Agency**

GPO Box 2771
Brisbane
Queensland 4001

Enquiries: (07) 3227 7370
Facsimile: (07) 3247 3278

Notification of Land

This form should be used by people providing notification to the Environmental Protection Agency of contaminated land or land use for a notifiable activity in accordance with Schedule 2 of the *Environmental Protection Act 1994*. This form relates specifically to Sections 371 and 372 of the *Environmental Protection Act 1994*.

NOTE: You must complete all questions below and use a separate form for each lot.

Site ID 29610

1. Person making notification

NAME sch4p4(6) Personal inform	TELEPHONE 07 3253 3967
COMPANY/ORGANISATION Royal National Agricultural and Industrial Association of Queensland	
POSTAL ADDRESS Locked Bag 1010 Albion Qld 4010	
EMAIL sch4p4(6) Personal information	FACSIMILE 07 3854 0857

2. Site details

2.1. Name by which the property is known locally?

RNA Showgrounds – Gregory Tce, Fortitude Valley Qld 4006
--

2.2. Please provide details of the Lot on Plan to which the notification applies

Please note that a separate notification form must be used for each Lot on Plan.

FULL STREET ADDRESS OF THE SITE 631 Gregory Terrace, Fortitude Valley Qld 4006	
LOT(S) Lot 487	PLAN(S) SP196776
LOCAL GOVERNMENT AUTHORITY Brisbane City Council	

2.3. Area of land parcel in square metres? 23,540 m²

Notification of Land

2.4. Describe the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination. List all notifiable activities that the land has been used for and provide details.

If you require additional space attach the information on a separate sheet and make reference to that sheet here.

Hazardous contaminants – lead (maximum concentration of 9,910 mg/kg) and benzo(a)pyrene (maximum concentration of 9.2 mg/kg)

2.5. Has a map or locality plan been attached to this notification?

The processing of this information is greatly assisted by the inclusion of a map or locality plan that shows the respective Lot.

☐

NO

X YES

3. Details of land owner

NAME Royal National Agricultural and Industrial Association of Qld	TELEPHONE 07 3253 3967
POSTAL ADDRESS Locked Bag 1010 Albion Qld 4010	
EMAIL sch4p4(6) Personal information	FACSIMILE 07 3854 0857

4. Declaration

Please read the certification below before signing.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1867.
- Information supplied on or with this application form may be disclosed publicly in the Freedom of Information Act 1992 and the Evidence Act 1977.

NOTIFYING PERSON sch4p4(6) Personal info	DATE 09/02/2010
--	--------------------

You may be liable for disclosing information contained in a document submitted, or proposed to be submitted with this notification (see Section 564 of the Environment Protection Act 1994)

5. Applicant checklist

- ✓ Notifying person's details correct.
- ✓ Notification form completed and signed.
- ✓ Supporting information attached.

Please return the completed notification to:

**Contaminated Land Unit
Environmental Protection Agency**

GPO Box 2771
Brisbane
Queensland 4001

Enquiries: (07) 3227 7370
Facsimile: (07) 3247 3278

Contaminated Land

Notification of Land

This form should be used by people providing notification to the Environmental Protection Agency of contaminated land or land use for a notifiable activity in accordance with Schedule 2 of the *Environmental Protection Act 1994*. This form relates specifically to Sections 371 and 372 of the *Environmental Protection Act 1994*.

NOTE: You must complete all questions below and use a separate form for each lot.

1. Person making notification

NAME sch4p4(6) Personal	TELEPHONE 07 3253 3967
COMPANY/ORGANISATION Royal National Agricultural and Industrial Association of Queensland	
POSTAL ADDRESS Locked Bag 1010 Albion Qld 4010	
EMAIL sch4p4(6) Personal information	FACSIMILE 07 3854 0857

2. Site details

2.1. Name by which the property is known locally?

RNA Showgrounds – Symes Street, Fortitude Valley Qld 4006

2.2. Please provide details of the Lot on Plan to which the notification applies

Please note that a separate notification form must be used for each Lot on Plan.

FULL STREET ADDRESS OF THE SITE 11 Symes Street, Fortitude Valley Qld 4006	
LOT(S) Lot 485	PLAN(S) SP192466
LOCAL GOVERNMENT AUTHORITY Brisbane City Council	

2.3. Area of land parcel in square metres? 23,310 m²

Notification of Land

2.4. Describe the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination. List all notifiable activities that the land has been used for and provide details.

If you require additional space attach the information on a separate sheet and make reference to that sheet here.

Hazardous contaminants – benzo(a)pyrene (maximum concentration 47.1 mg/kg), PAHs (maximum concentration 556.3 mg/kg), TPH C₁₅-C₂₈ (maximum concentration 1,550 mg/kg) and TPH C₂₉-C₃₆ (maximum concentration 1,580 mg/kg)

2.5. Has a map or locality plan been attached to this notification?

The processing of this information is greatly assisted by the inclusion of a map or locality plan that shows the respective Lot.

☐

NO

X YES

3. Details of land owner

<p>NAME Royal National Agricultural and Industrial Association of Qld</p>	<p>TELEPHONE 07 3253 3967</p>
<p>POSTAL ADDRESS Locked Bag 1010 Albion Qld 4010</p>	
<p>EMAIL sch4p4(6) Personal information</p>	<p>FACSIMILE 07 3854 0857</p>

4. Declaration

Please read the certification below before signing.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1867.
- I declare that the information supplied on or with this application form may be disclosed publicly in form of Information Act 1992 and the Evidence Act 1977.

<p>NOTIFYING </p>	<p>DATE 09/02/2010</p>
--	----------------------------

You may supply supporting information closing information contained in a document submitted, or proposed to be submitted with this notification (see Section 564 of the Environment Protection Act 1994)

5. Applicant checklist

- ✓ Notifying person's details correct.
- ✓ Notification form completed and signed.
- ✓ Supporting information attached.

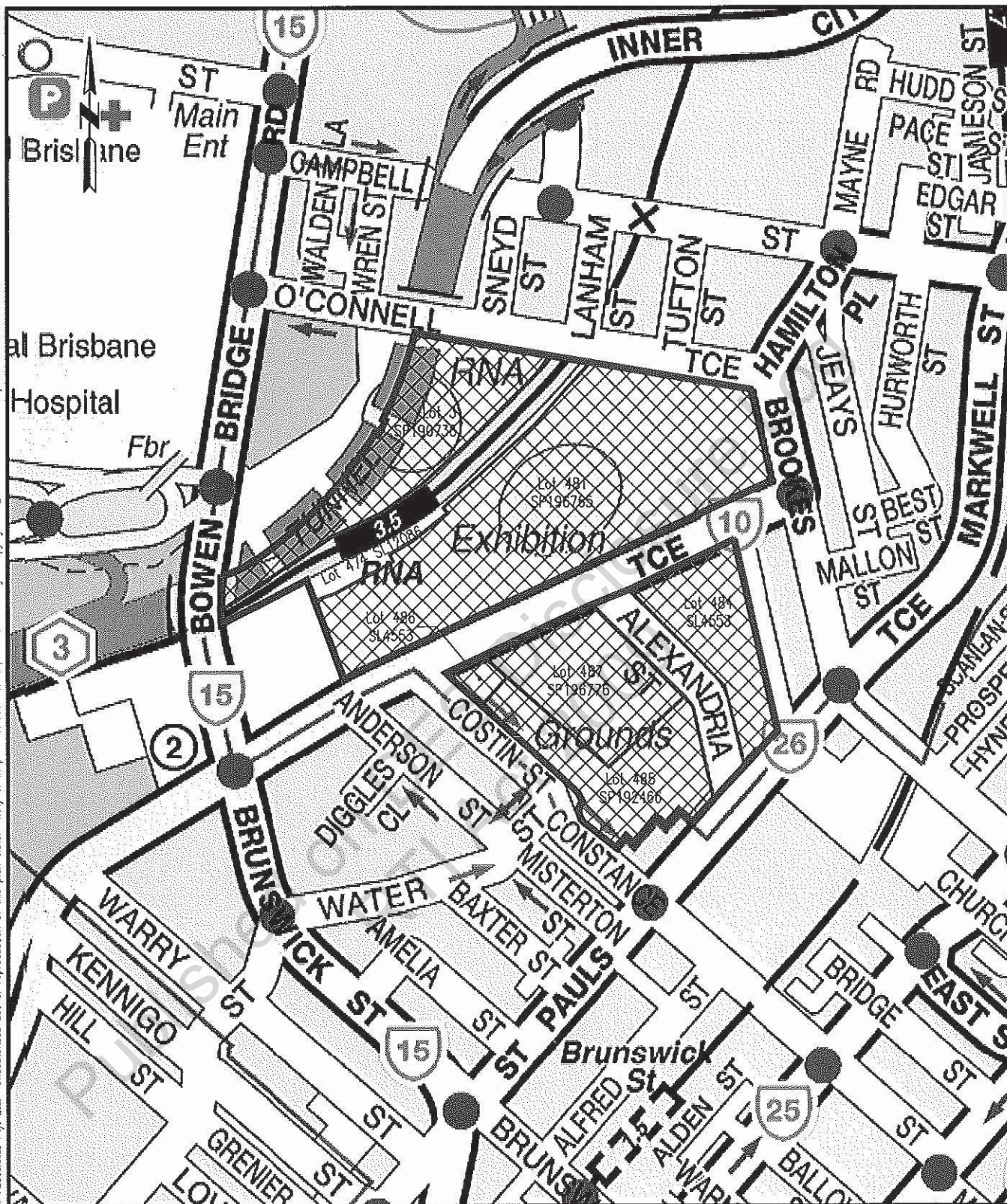
Please return the completed notification to:

**Contaminated Land Unit
Environmental Protection Agency**

GPO Box 2771
Brisbane
Queensland 4001

Enquiries: (07) 3227 7370
Facsimile: (07) 3247 3278

Information contained on this drawing is the copyright of Golder Associates Pty. Ltd. Unauthorised use or reproduction of this plan either wholly or in part without written permission infringes copyright. © Golder Associates Pty. Ltd.



LEGEND:



SITE AREA

INTERPRETIVE ONLY
DO NOT SCALE

NOTE:

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1:6000



NOTE: THE * BESIDE THE TYPED INITIALS DENOTES THE ORIGINAL DRAWING ISSUE WAS SIGNED OR INITIALLED BY THAT RESPECTIVE PERSON.

	CLIENT s.73 Irrelevant information		PROJECT RNA Showgrounds Re-development	
	DRAWN REJ	DATE 30/11/09	TITLE SITE LOCATION AND LOT PLAN	
	CHECKED *HEP	DATE 30/11/09		
	SCALE 1:6000		PROJECT No 097632038-217	FIGURE No 1
			REV No 0	A4

K:\Geo\2009\097632038\Figures\097632038-217-R-FIG1.dwg Dec 02, 2009 ~ 9:50am



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0917655	Page	: 1 of 56
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal inform	Contact	: sch4p4(6) Pers
Address	: P O BOX 1734 MILTON QLD, AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4(6) golder.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: 3721 5400	Telephone	: +61-7-3243 7222
Facsimile	: 3721 5401	Facsimile	: +61-7-3243 7218
Project	: 097632038	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: —	Date Samples Received	: 06-NOV-2009
C-O-C number	: —	Issue Date	: 17-NOV-2009
Sampler	: AS	No. of samples received	: 153
Site	: RNA	No. of samples analysed	: 86
Quote number	: EN/002/09		

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

This document is issued in
accordance with NATA
accreditation requirements.

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
sch4p4(6) Persona	Senior Inorganic Chemist	Inorganics
	Organic Chemist	Organics

Environmental Division Brisbane
Part of the **ALS Laboratory Group**
32 Shand Street Stafford QLD Australia 4053
Tel. +61-7-3243 7222 Fax. +61-7-3243 7218 www.alsglobal.com
A Campbell Brothers Limited Company

Page : 2 of 56
Work Order : EB0917655
Client : GOLDER ASSOCIATES
Project : 097632038



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 date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

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

- EG005T (Total Metals): Sample EB0917655-077 (GA41 0.4-0.5) shows poor matrix recovery for Zinc due to matrix interference. Confirmed by visual confirmation.
- EG005T (Total Metals): Sample EB0917655-077 (GA41 0.4-0.5) shows poor matrix spike recovery for Zinc due to matrix interference. Confirmed by visual inspection.
- EG005T (Total Metals): Sample EB0917655-113 (GA51 0.4-0.5) shows poor matrix spike recovery for Lead due to matrix interference. Confirmed by visual inspection.
- EG005T (Total Metals): Sample EB0917655-152 (GA59 0.4-0.5) shows poor matrix spike recovery for Lead due to matrix interference. Confirmed by visual confirmation.
- Volatile TPH/BTEX: Sample GA55 1.9-2.0 shows poor surrogate recovery due to matrix interference. Confirmed by re-extraction and re-analysis.

Published on DES
RTI Act 2005

Page : 3 of 56
 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA29 0.3-0.4	GA29 1.0-1.2	GA30 0.4-0.5	GA30 0.9-1.0	GA31 0.17-0.3
				02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-002	EB0917655-003	EB0917655-005	EB0917655-006	EB0917655-009
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	16.6	11.0	16.6	16.6	16.3
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	13	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	7	3	4	5
Copper	7440-50-8	5	mg/kg	20	10	11	<5	20
Lead	7439-92-1	5	mg/kg	36	34	392	10	127
Nickel	7440-02-0	2	mg/kg	9	4	<2	<2	4
Zinc	7440-66-6	5	mg/kg	76	58	114	<5	112
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	<0.1	0.1	<0.1	0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.1
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.2
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.8
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.8
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.7
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	60	<50
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	<50	50	60	<50
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

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA29 0.3-0.4	GA29 1.0-1.2	GA30 0.4-0.5	GA30 0.9-1.0	GA31 0.17-0.3
				02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-002	EB0917655-003	EB0917655-005	EB0917655-006	EB0917655-009
EP080: BTEX - Continued								
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 108-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	100	90.8	104	77.4	87.6
2-Chlorophenol-D4	93951-73-6	0.1	%	87.3	85.8	88.7	129	96.5
2,4,6-Tribromophenol	118-79-6	0.1	%	81.5	106	104	113	99.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	106	77.7	80.0	132	99.4
Anthracene-d10	1719-06-8	0.1	%	86.8	74.3	84.5	114	71.9
4-Terphenyl-d14	1718-51-0	0.1	%	133	109	115	140	112
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	91.7	81.9	92.2	86.9	80.0
Toluene-D8	2037-26-5	0.1	%	92.8	83.2	88.1	84.4	83.9
4-Bromofluorobenzene	460-00-4	0.1	%	90.8	78.5	85.9	83.2	79.8

Page : 5 of 56
 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA31 0.9-1.0	GA31 1.9-2.0	GA31 2.9-3.0	GA32 0.3-0.5	GA32 0.9-1.0
				02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-011	EB0917655-012	EB0917655-013	EB0917655-018	EB0917655-019
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	---	1.0	%	22.9	17.8	14.4	21.2	16.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	8	<5	27	7
Cadmium	7440-43-8	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	6	11	4	2	3
Copper	7440-50-8	5	mg/kg	7	7	<5	27	5
Lead	7439-92-1	5	mg/kg	15	10	<5	21	36
Nickel	7440-02-0	2	mg/kg	3	<2	<2	4	<2
Zinc	7440-66-6	5	mg/kg	9	<5	<5	30	40
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	---	0.10	mg/kg	<0.10	---	---	---	---
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	---	---	---	---
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	---	---	---	---
beta-BHC	319-85-7	0.05	mg/kg	<0.05	---	---	---	---
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	---	---	---	---
delta-BHC	319-86-8	0.05	mg/kg	<0.05	---	---	---	---
Heptachlor	76-44-8	0.05	mg/kg	<0.05	---	---	---	---
Aldrin	309-00-2	0.05	mg/kg	<0.05	---	---	---	---
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	---	---	---	---
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	---	---	---	---
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	---	---	---	---
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	---	---	---	---
Dieldrin	60-57-1	0.05	mg/kg	<0.05	---	---	---	---
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	---	---	---	---
Endrin	72-20-8	0.05	mg/kg	<0.05	---	---	---	---
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	---	---	---	---
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	---	---	---	---
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	---	---	---	---
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	---	---	---	---
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	---	---	---	---
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	---	---	---	---
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	---	---	---	---
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	---	---	---	---

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA31 0.9-1.0	GA31 1.9-2.0	GA31 2.9-3.0	GA32 0.3-0.5	GA32 0.9-1.0
				02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-011	EB0917655-012	EB0917655-013	EB0917655-018	EB0917655-019
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	—	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	—	—	—
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	—	—	—
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	—	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	—	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	—	—	—
Malathion	121-75-5	0.05	mg/kg	<0.05	—	—	—	—
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	—	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	—	—	—
Parathion	56-38-2	0.2	mg/kg	<0.2	—	—	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	—	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	—	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	—	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	—	—	—
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	—	—	—
Ethion	563-12-2	0.05	mg/kg	<0.05	—	—	—	—
Carbophenothion	788-19-6	0.05	mg/kg	<0.05	—	—	—	—
Azinphos Methyl	—	0.05	mg/kg	<0.05	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	70	60	50	<50	<50

Page : 7 of 56
 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA31 0.9-1.0	GA31 1.9-2.0	GA31 2.9-3.0	GA32 0.3-0.5	GA32 0.9-1.0
				Client sampling date / time	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-011	EB0917655-012	EB0917655-013	EB0917655-018	EB0917655-019
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	---	100	mg/kg		<100	<100	<100	160	<100
C29 - C36 Fraction	---	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	---	50	mg/kg		70	60	50	160	<50
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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		55.4	---	---	---	---
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		62.6	---	---	---	---
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		73.6	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		101	106	92.4	78.2	99.4
2-Chlorophenol-D4	93951-73-6	0.1	%		84.2	92.6	79.8	79.8	99.4
2,4,6-Tribromophenol	118-79-6	0.1	%		94.0	100	88.6	80.2	108
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		81.4	97.8	86.3	76.8	110
Anthracene-d10	1719-06-8	0.1	%		78.0	101	109	75.5	87.9
4-Terphenyl-d14	1718-51-0	0.1	%		100	119	112	110	100
EP080S: TPH(M)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		84.4	85.2	88.2	101	95.4
Toluene-D8	2037-26-5	0.1	%		84.0	85.4	91.8	87.5	86.2
4-Bromofluorobenzene	460-00-4	0.1	%		79.0	82.7	89.4	76.8	83.0

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL				Client sample ID	GA32 1.9-2.0	GA33 0-0.3	GA33 0.9-1.0	QC1a	QC3a
Client sampling date / time					02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-020	EB0917655-022	EB0917655-023	EB0917655-024	EB0917655-025
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	—	1.0	%		13.2	5.4	16.1	13.8	14.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		<2	8	3	<2	3
Copper	7440-50-8	5	mg/kg		<5	16	<5	<5	<5
Lead	7439-92-1	5	mg/kg		57	38	6	60	9
Nickel	7440-02-0	2	mg/kg		<2	4	<2	<2	<2
Zinc	7440-66-6	5	mg/kg		28	146	7	26	10
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.1	<0.1	<0.1	0.2	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	—	0.10	mg/kg		—	2.90	—	—	—
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		—	<0.05	—	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		—	<0.05	—	—	—
beta-BHC	319-85-7	0.05	mg/kg		—	<0.05	—	—	—
gamma-BHC	58-89-9	0.05	mg/kg		—	<0.05	—	—	—
delta-BHC	319-86-8	0.05	mg/kg		—	<0.05	—	—	—
Heptachlor	76-44-8	0.05	mg/kg		—	<0.05	—	—	—
Aldrin	309-00-2	0.05	mg/kg		—	<0.05	—	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg		—	<0.05	—	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg		—	<0.05	—	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg		—	<0.05	—	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg		—	<0.05	—	—	—
Dieldrin	60-57-1	0.05	mg/kg		—	<0.05	—	—	—
4,4'-DDE	72-55-9	0.05	mg/kg		—	<0.05	—	—	—
Endrin	72-20-8	0.05	mg/kg		—	<0.05	—	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg		—	<0.05	—	—	—
4,4'-DDD	72-54-8	0.05	mg/kg		—	<0.05	—	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg		—	<0.05	—	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg		—	<0.05	—	—	—
4,4'-DDT	50-29-3	0.2	mg/kg		—	<0.2	—	—	—
Endrin ketone	53494-70-5	0.05	mg/kg		—	<0.05	—	—	—
Methoxychlor	72-43-5	0.2	mg/kg		—	<0.2	—	—	—
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		—	<0.05	—	—	—

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 Client : GOLDER ASSOCIATES
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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA32 1.9-2.0	GA33 0-0.3	GA33 0.9-1.0	QC1a	QC3a
				02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-020	EB0917655-022	EB0917655-023	EB0917655-024	EB0917655-025
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	—	—
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	—	—
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	—	—
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	—	—
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	—	—	—
Prothiofos	34843-46-4	0.05	mg/kg	—	<0.05	—	—	—
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	—	—
Azinphos Methyl	—	0.05	mg/kg	—	<0.05	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	205-44-0	0.5	mg/kg	3.4	<0.5	<0.5	0.6	<0.5
Pyrene	129-00-0	0.5	mg/kg	3.6	<0.5	<0.5	0.7	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	1.9	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	1.6	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.2	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	1.9	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	2.2	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	0.9	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.2	<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

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	GA32 1.9-2.0	GA33 0-0.3	GA33 0.9-1.0	QC1a	QC3a
Client sampling date / time					02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00	02-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-020	EB0917655-022	EB0917655-023	EB0917655-024	EB0917655-025
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	—	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg		<50	<50	<50	<50	<50
EP080: 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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		—	53.8	—	—	—
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		—	68.0	—	—	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		—	77.8	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		95.0	102	94.6	102	100
2-Chlorophenol-D4	93951-73-6	0.1	%		90.3	102	95.2	106	98.0
2,4,6-Tribromophenol	118-79-6	0.1	%		99.0	83.8	99.6	98.8	81.3
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		97.8	104	100	92.3	93.0
Anthracene-d10	1719-06-8	0.1	%		81.6	86.7	78.3	74.8	82.4
4-Terphenyl-d14	1718-51-0	0.1	%		110	108	120	91.2	118
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		87.8	98.5	80.2	90.1	90.2
Toluene-D8	2037-26-5	0.1	%		87.5	94.5	81.0	87.8	87.0
4-Bromofluorobenzene	460-00-4	0.1	%		83.3	86.9	75.8	81.5	81.6

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				QC7a	QC9a	GA60 0.21-0.3	GA60 0.9-1.0	GA60 1.9-2.0
				05-NOV-2009 11:00	05-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-027	EB0917655-028	EB0917655-029	EB0917655-031	EB0917655-032
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	11.4	10.0	12.9	17.9	14.8
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	7	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	3	<2	7	<2	7
Copper	7440-50-8	5	mg/kg	<5	<5	24	<5	<5
Lead	7439-92-1	5	mg/kg	<5	<5	165	17	11
Nickel	7440-02-0	2	mg/kg	<2	<2	14	<2	2
Zinc	7440-66-6	5	mg/kg	<5	<5	122	82	8
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	<0.10	—	<0.10	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	<0.05	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	QC7a	QC9a	GA60 0.21-0.3	GA60 0.9-1.0	GA60 1.9-2.0
				05-NOV-2009 11:00	05-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00
				EB0917655-027	EB0917655-028	EB0917655-029	EB0917655-031	EB0917655-032
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	<0.2	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Azinphos Methyl	—	0.05	mg/kg	<0.05	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.7	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	2.6	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	13.6	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	4.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	34.2	0.8	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	33.0	0.8	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	18.0	0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	16.3	0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	17.4	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	19.0	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	28.4	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	12.0	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	3.2	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	15.0	<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	60

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 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				QC7a	QC9a	GA60 0.21-0.3	GA60 0.9-1.0	GA60 1.9-2.0
				05-NOV-2009 11:00	05-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-027	EB0917655-028	EB0917655-029	EB0917655-031	EB0917655-032
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	---	100	mg/kg	<100	<100	530	<100	<100
C29 - C36 Fraction	---	100	mg/kg	<100	<100	380	<100	<100
^ C10 - C36 Fraction (sum)	---	50	mg/kg	<50	<50	910	<50	60
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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	64.9	---	106	---	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	70.8	---	62.3	---	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	81.8	---	52.9	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	88.4	93.1	92.4	106	105
2-Chlorophenol-D4	93951-73-6	0.1	%	96.8	95.1	94.9	111	97.9
2,4,6-Tribromophenol	118-79-6	0.1	%	90.4	95.9	99.7	106	105
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	103	108	86.9	108	88.7
Anthracene-d10	1719-06-8	0.1	%	92.0	120	83.5	92.9	103
4-Terphenyl-d14	1718-51-0	0.1	%	124	129	113	114	142
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	89.3	81.9	110	97.5	86.0
Toluene-D8	2037-26-5	0.1	%	92.2	90.6	99.2	100	85.1
4-Bromofluorobenzene	460-00-4	0.1	%	84.7	86.4	81.9	94.0	79.8

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 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA60 3.9-4.0	GA61 0.4-0.5	GA61 0.9-1.0	GA61 1.9-2.0	GA61 1.3-1.4
				06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-034	EB0917655-037	EB0917655-038	EB0917655-039	EB0917655-040
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	21.8	8.6	15.5	11.1	15.8
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	5	<5	<5	17
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	2	7	16	<2	15
Copper	7440-50-8	5	mg/kg	<5	7	15	7	49
Lead	7439-92-1	5	mg/kg	6	15	19	42	9910
Nickel	7440-02-0	2	mg/kg	<2	2	12	4	18
Zinc	7440-66-6	5	mg/kg	6	45	31	71	2670
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	—	—	<0.10	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg	—	—	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg	—	—	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	—	<0.05	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA60 3.9-4.0	GA61 0.4-0.5	GA61 0.9-1.0	GA61 1.9-2.0	GA61 1.3-1.4
				06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-034	EB0917655-037	EB0917655-038	EB0917655-039	EB0917655-040
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	—	<0.05	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	—	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	—	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	—	<0.05	—
Bromophos-ethyl	4824-76-6	0.05	mg/kg	—	—	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	—	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	—	<0.05	—
Azinphos Methyl	—	0.05	mg/kg	—	—	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	1.3	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	1.3	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.7	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	0.8	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	0.8	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
EP080/074: 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

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA60 3.9-4.0	GA61 0.4-0.5	GA61 0.9-1.0	GA61 1.9-2.0	GA61 1.3-1.4
				06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00	06-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-034	EB0917655-037	EB0917655-038	EB0917655-039	EB0917655-040
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
A C10 - C36 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	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	—	—	—	57.6	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	—	68.3	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	—	76.7	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	99.4	103	95.1	98.6	92.3
2-Chlorophenol-D4	93951-73-6	0.1	%	82.3	81.4	80.4	80.1	88.7
2,4,6-Tribromophenol	118-79-6	0.1	%	77.1	101	113	113	90.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-80-8	0.1	%	93.4	83.8	91.4	73.9	81.2
Anthracene-d10	1719-06-8	0.1	%	84.2	118	122	75.8	119
4-Terphenyl-d14	1718-51-0	0.1	%	121	118	116	100	117
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	89.9	101	97.2	107	114
Toluene-D8	2037-26-5	0.1	%	81.3	86.0	92.4	83.5	87.2
4-Bromofluorobenzene	460-00-4	0.1	%	80.5	82.0	86.0	75.8	75.0

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA34 0.05-0.2	GA34 0.9-1.2	GA35 0.4-0.5	GA35 0.7-0.8	GA35 1.9-2.0
				03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-045	EB0917655-047	EB0917655-049	EB0917655-050	EB0917655-051
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	6.0	7.9	15.4	8.2	19.8
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	<5	18	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	5	9	4	<2
Copper	7440-50-8	5	mg/kg	17	10	30	20	<5
Lead	7439-92-1	5	mg/kg	137	65	86	51	7
Nickel	7440-02-0	2	mg/kg	5	3	5	4	<2
Zinc	7440-66-6	5	mg/kg	120	94	90	111	27
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	<0.1	0.2	0.2	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	—	<0.10	<0.10	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.05	—	—
alpha-Endosulfan	959-88-8	0.05	mg/kg	—	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	—	—	<0.05	—	—
beta-Endosulfan	33213-85-9	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.05	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA34 0.05-0.2	GA34 0.9-1.2	GA35 0.4-0.5	GA35 0.7-0.8	GA35 1.9-2.0
				03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-045	EB0917655-047	EB0917655-049	EB0917655-050	EB0917655-051
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.05	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	—	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	—	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	—	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.05	—	—
Azinphos Methyl	—	0.05	mg/kg	—	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.6	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2.7	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.7	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	15.2	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	4.9	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	0.6	28.0	0.6	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	0.6	24.1	0.6	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	18.0	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	13.1	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	13.5	0.6	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	15.0	0.6	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	19.3	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	8.3	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2.4	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	9.0	<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

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA34 0.05-0.2	GA34 0.9-1.2	GA35 0.4-0.5	GA35 0.7-0.8	GA35 1.9-2.0
				03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-045	EB0917655-047	EB0917655-049	EB0917655-050	EB0917655-051
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	---	100	mg/kg	<100	340	<100	<100	<100
C29 - C36 Fraction	---	100	mg/kg	<100	280	<100	<100	<100
^ C10 - C36 Fraction (sum)	---	50	mg/kg	<50	630	<50	<50	<50
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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	---	---	62.8	59.0	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	---	---	68.6	---	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	---	---	75.7	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	101	99.4	105	98.0	101
2-Chlorophenol-D4	93951-73-6	0.1	%	85.9	85.8	84.5	82.8	85.0
2,4,6-Tribromophenol	118-79-6	0.1	%	85.2	88.0	87.2	78.9	96.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	85.3	93.8	89.0	85.9	90.7
Anthracene-d10	1719-06-8	0.1	%	89.7	74.2	78.8	89.3	88.4
4-Terphenyl-d14	1718-51-0	0.1	%	101	98.5	103	103	95.7
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	108	121	116	94.0	94.8
Toluene-D8	2037-26-5	0.1	%	85.2	95.0	88.1	90.3	84.7
4-Bromofluorobenzene	460-00-4	0.1	%	74.6	83.4	78.0	83.3	82.6

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA36 0.4-0.5	GA36 0.9-1.0	GA37 0.4-0.5	GA37 0.7-0.75	GA37 0.9-1.0
				03-NOV-2009 11:00	03-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-055	EB0917655-056	EB0917655-058	EB0917655-059	EB0917655-060
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	—	1.0	%	8.2	7.4	13.6	19.0	17.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	30	34	<5	6	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	43	4	4	8
Copper	7440-50-8	5	mg/kg	23	38	<5	25	6
Lead	7439-92-1	5	mg/kg	183	83	13	11	14
Nickel	7440-02-0	2	mg/kg	4	6	<2	5	2
Zinc	7440-66-6	5	mg/kg	99	179	25	50	13
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	<0.10	—	—	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	0.24	—	—	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	0.44	—	—	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	—	—	—

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	GA36 0.4-0.5	GA36 0.9-1.0	GA37 0.4-0.5	GA37 0.7-0.75	GA37 0.9-1.0
Client sampling date / time					03-NOV-2009 11:00	03-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-055	EB0917655-056	EB0917655-058	EB0917655-059	EB0917655-060
EP068B: Organophosphorus Pesticides (OP) - Continued									
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	---	---	---	---
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	---	---	---	---
Dimethoate	60-51-5	0.05	mg/kg		<0.05	---	---	---	---
Diazinon	333-41-5	0.05	mg/kg		<0.05	---	---	---	---
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	---	---	---	---
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	---	---	---	---
Malathion	121-75-5	0.05	mg/kg		<0.05	---	---	---	---
Fenthion	55-38-9	0.05	mg/kg		<0.05	---	---	---	---
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	---	---	---	---
Parathion	56-38-2	0.2	mg/kg		<0.2	---	---	---	---
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	---	---	---	---
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	---	---	---	---
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	---	---	---	---
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	---	---	---	---
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	---	---	---	---
Ethion	563-12-2	0.05	mg/kg		<0.05	---	---	---	---
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	---	---	---	---
Azinphos Methyl	---	0.05	mg/kg		<0.05	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
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

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA36 0.4-0.5	GA36 0.9-1.0	GA37 0.4-0.5	GA37 0.7-0.75	GA37 0.9-1.0
				Client sampling date / time	03-NOV-2009 11:00	03-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-055	EB0917655-056	EB0917655-058	EB0917655-059	EB0917655-060
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	—	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg		<50	<50	<50	<50	<50
EP080: 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	108-38-3 108-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		51.1	—	—	—	—
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		57.3	—	—	—	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		64.6	—	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		93.0	101	91.9	86.7	101
2-Chlorophenol-D4	93951-73-6	0.1	%		86.2	82.4	79.8	83.1	81.4
2,4,6-Tribromophenol	118-79-6	0.1	%		80.5	93.6	80.4	90.4	75.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		88.9	80.1	85.8	82.3	78.4
Anthracene-d10	1719-06-8	0.1	%		90.6	107	122	82.3	80.6
4-Terphenyl-d14	1718-51-0	0.1	%		97.6	116	118	95.3	93.3
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		102	106	95.0	101	100
Toluene-D8	2037-26-5	0.1	%		90.9	89.3	83.8	84.6	86.6
4-Bromofluorobenzene	460-00-4	0.1	%		84.6	85.2	81.0	75.0	81.1

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA38 0.4-0.5	GA38 0.9-1.0	GA39 0.4-0.5	GA39 0.6-0.7	GA40 0.9-1.0
				04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-064	EB0917655-065	EB0917655-068	EB0917655-069	EB0917655-074
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	13.3	13.3	12.4	11.4	17.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	<2	3	<2	2
Copper	7440-50-8	5	mg/kg	<5	<5	12	<5	<5
Lead	7439-92-1	5	mg/kg	6	<5	232	10	7
Nickel	7440-02-0	2	mg/kg	<2	<2	3	<2	<2
Zinc	7440-66-6	5	mg/kg	14	<5	193	34	6
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	—	<0.10	<0.10	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	—	—	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.05	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA38 0.4-0.5	GA38 0.9-1.0	GA39 0.4-0.5	GA39 0.6-0.7	GA40 0.9-1.0
				04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
				EB0917655-064	EB0917655-065	EB0917655-068	EB0917655-069	EB0917655-074
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.05	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	—	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	—	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	—	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.05	—	—
Azinphos Methyl	—	0.05	mg/kg	—	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA38 0.4-0.5	GA38 0.9-1.0	GA39 0.4-0.5	GA39 0.6-0.7	GA40 0.9-1.0
				04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-064	EB0917655-065	EB0917655-068	EB0917655-069	EB0917655-074
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	—	100	mg/kg	<100	<100	190	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	500	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	<50	700	<50	<50
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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	—	—	47.3	57.0	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	52.8	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	57.2	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	91.5	91.2	82.7	106	91.2
2-Chlorophenol-D4	93951-73-6	0.1	%	96.2	74.8	106	91.4	75.1
2,4,6-Tribromophenol	118-79-6	0.1	%	79.0	80.4	102	86.2	77.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	74.7	80.5	112	86.4	76.4
Anthracene-d10	1719-06-8	0.1	%	87.2	106	94.7	85.8	78.1
4-Terphenyl-d14	1718-51-0	0.1	%	99.6	112	147	99.8	68.6
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	99.5	86.2	91.6	93.6	93.2
Toluene-D8	2037-26-5	0.1	%	81.5	90.9	96.7	94.7	98.6
4-Bromofluorobenzene	460-00-4	0.1	%	78.0	95.3	86.9	86.5	91.3

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA40 1.5-1.6	GA41 0.4-0.5	GA41 0.8-0.95	GA42 0.2-0.3	GA42 0.4-0.5
				04-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-075	EB0917655-077	EB0917655-078	EB0917655-079	EB0917655-080
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	22.2	15.7	18.4	7.6	8.0
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	7	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	2	4	4	8
Copper	7440-50-8	5	mg/kg	<5	<5	<5	11	27
Lead	7439-92-1	5	mg/kg	<5	18	11	43	41
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	4	<2
Zinc	7440-66-6	5	mg/kg	<5	20	12	95	71
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	<0.10	—	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	—	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	—	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	—	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	—	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	—	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	—	—	—
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	—	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	—	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	—	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	—	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	—	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	—	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	—	—	—
Endrin	72-20-8	0.05	mg/kg	—	<0.05	—	—	—
beta-Endosulfan	33213-85-9	0.05	mg/kg	—	<0.05	—	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	—	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	—	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	—	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	—	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	—	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	—	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	—	—	—

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 Project : 097632038



Analytical Results

Sub-Matrix: SOIL				Client sample ID				
Client sampling date / time				GA40 1.5-1.6	GA41 0.4-0.5	GA41 0.8-0.95	GA42 0.2-0.3	GA42 0.4-0.5
				04-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-075	EB0917655-077	EB0917655-078	EB0917655-079	EB0917655-080
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	—	—
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	—	—
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	—	—
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	—	—
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	—	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	—	—	—
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	—	—
Azinphos Methyl	—	0.05	mg/kg	—	<0.05	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	0.9	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	1.0	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.7	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	1.1	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	1.0	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50	<50



Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA40 1.5-1.6	GA41 0.4-0.5	GA41 0.8-0.95	GA42 0.2-0.3	GA42 0.4-0.5
				Client sampling date / time	04-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-075	EB0917655-077	EB0917655-078	EB0917655-079	EB0917655-080
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	—	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg		<50	<50	<50	<50	<50
EP080: 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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		—	62.5	—	—	—
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		—	67.1	—	—	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		—	75.5	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		95.7	87.3	91.6	90.2	96.9
2-Chlorophenol-D4	93951-73-6	0.1	%		87.6	80.5	86.5	76.5	85.6
2,4,6-Tribromophenol	118-79-6	0.1	%		86.1	86.1	93.2	92.3	96.4
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		101	96.6	108	99.2	103
Anthracene-d10	1719-06-8	0.1	%		82.4	81.2	84.2	73.6	84.8
4-Terphenyl-d14	1718-51-0	0.1	%		101	95.4	105	90.4	103
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		84.4	99.5	107	87.3	88.9
Toluene-D8	2037-26-5	0.1	%		92.0	108	84.0	93.7	90.2
4-Bromofluorobenzene	460-00-4	0.1	%		84.9	96.0	90.0	89.0	84.4

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 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA43 0.17-0.3	GA43 0.4-0.5	GA43 0.9-1.0	GA44 0.14-0.3	GA44 0.4-0.5
				05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-081	EB0917655-082	EB0917655-083	EB0917655-085	EB0917655-086
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	20.1	16.5	13.2	19.6	11.6
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	—	<5	<5	9	10
Cadmium	7440-43-9	1	mg/kg	—	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	—	4	<2	9	15
Copper	7440-50-8	5	mg/kg	—	<5	<5	9	42
Lead	7439-92-1	5	mg/kg	—	6	5	19	812
Nickel	7440-02-0	2	mg/kg	—	<2	<2	3	14
Zinc	7440-66-6	5	mg/kg	—	<5	<5	210	1040
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	—	<0.1	<0.1	<0.1	5.7
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg	—	<0.05	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	—	<0.05	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA43 0.17-0.3	GA43 0.4-0.5	GA43 0.9-1.0	GA44 0.14-0.3	GA44 0.4-0.5
				05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-081	EB0917655-082	EB0917655-083	EB0917655-085	EB0917655-086
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Fenamiphos	22224-92-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Azinphos Methyl	—	0.05	mg/kg	—	<0.05	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	<0.5	<0.5	<0.5	2.8
Acenaphthylene	208-96-8	0.5	mg/kg	—	<0.5	<0.5	<0.5	14.9
Acenaphthene	83-32-9	0.5	mg/kg	—	<0.5	<0.5	<0.5	1.9
Fluorene	86-73-7	0.5	mg/kg	—	<0.5	<0.5	<0.5	3.7
Phenanthrene	85-01-8	0.5	mg/kg	—	<0.5	<0.5	<0.5	152
Anthracene	120-12-7	0.5	mg/kg	—	<0.5	<0.5	<0.5	19.6
Fluoranthene	206-44-0	0.5	mg/kg	—	<0.5	<0.5	1.2	198
Pyrene	129-00-0	0.5	mg/kg	—	<0.5	<0.5	1.3	187
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	<0.5	<0.5	0.8	78.6
Chrysene	218-01-9	0.5	mg/kg	—	<0.5	<0.5	0.7	59.1
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	<0.5	<0.5	0.8	43.8
Benzo(k)fluoranthene	207-06-9	0.5	mg/kg	—	<0.5	<0.5	0.7	60.2
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	<0.5	<0.5	1.0	71.9
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	<0.5	<0.5	<0.5	27.1
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	<0.5	<0.5	<0.5	10.6
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	<0.5	<0.5	<0.5	29.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	—	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	—	<50	<50	<50	<50

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 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA43 0.17-0.3	GA43 0.4-0.5	GA43 0.9-1.0	GA44 0.14-0.3	GA44 0.4-0.5
				05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-081	EB0917655-082	EB0917655-083	EB0917655-085	EB0917655-086
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	—	100	mg/kg	—	<100	<100	<100	2100
C29 - C36 Fraction	—	100	mg/kg	—	<100	<100	<100	1160
^ C10 - C36 Fraction (sum)	—	50	mg/kg	—	<50	<50	<50	3270
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	108-38-3 106-42-3	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
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	59.3	65.5	60.9	63.1	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	73.6	—	70.2	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	83.6	—	79.9	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	94.5	86.9	87.6	88.0
2-Chlorophenol-D4	93951-73-6	0.1	%	—	82.8	79.2	75.7	83.8
2,4,6-Tribromophenol	118-79-6	0.1	%	—	82.0	81.1	82.6	85.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	101	100	101	104
Anthracene-d10	1719-06-8	0.1	%	—	80.6	76.6	76.8	81.9
4-Terphenyl-d14	1718-51-0	0.1	%	—	99.2	97.8	93.0	89.8
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	96.4	85.2	84.3	88.6
Toluene-D8	2037-26-5	0.1	%	—	98.3	82.2	87.1	92.4
4-Bromofluorobenzene	460-00-4	0.1	%	—	92.2	78.7	81.5	84.6

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA44 1.3-1.4	GA45 0.4-0.5	GA45 0.9-1.0	GA46 0.07-0.3	GA47 0.4-0.5
				Client sampling date / time	05-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	04-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-088	EB0917655-090	EB0917655-091	EB0917655-094	EB0917655-096
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	—	1.0	%		11.7	21.4	22.5	9.5	15.8
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	<5	<5	24	9
Cadmium	7440-43-8	1	mg/kg		1	<1	<1	2	<1
Chromium	7440-47-3	2	mg/kg		10	5	3	6	8
Copper	7440-50-8	5	mg/kg		18	<5	<5	52	34
Lead	7439-92-1	5	mg/kg		348	9	8	194	124
Nickel	7440-02-0	2	mg/kg		6	<2	<2	4	5
Zinc	7440-66-6	5	mg/kg		2500	21	10	233	280
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.3	<0.1	<0.1	0.1	0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	—	0.10	mg/kg		—	—	—	<0.10	—
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		—	—	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		—	—	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg		—	—	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg		—	—	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg		—	—	—	<0.05	—
Heptachlor	76-44-3	0.05	mg/kg		—	—	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg		—	—	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg		—	—	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg		—	—	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg		—	—	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg		—	—	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg		—	—	—	0.21	—
Endrin	72-20-8	0.05	mg/kg		—	—	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg		—	—	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg		—	—	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg		—	—	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg		—	—	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg		—	—	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		—	—	—	<0.05	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA44 1.3-1.4	GA45 0.4-0.5	GA45 0.9-1.0	GA46 0.07-0.3	GA47 0.4-0.5
				05-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	04-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-088	EB0917655-090	EB0917655-091	EB0917655-094	EB0917655-096
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	—	<0.05	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	—	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	—	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	—	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	—	<0.05	—
Azinphos Methyl	—	0.05	mg/kg	—	—	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	1.1	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	7.4	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	2.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	16.6	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	16.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	8.0	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	6.2	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	5.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	6.7	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	8.2	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	3.6	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	0.8	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	4.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50	<50

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 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA44 1.3-1.4	GA45 0.4-0.5	GA45 0.9-1.0	GA46 0.07-0.3	GA47 0.4-0.5
				Client sampling date / time	05-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	04-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-088	EB0917655-090	EB0917655-091	EB0917655-094	EB0917655-096
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	—	100	mg/kg		400	<100	<100	<100	140
C29 - C36 Fraction	—	100	mg/kg		640	<100	<100	<100	310
^ C10 - C36 Fraction (sum)	—	50	mg/kg		1040	<50	<50	<50	450
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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		—	—	—	64.6	—
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		—	—	—	70.7	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		—	—	—	78.7	—
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		85.7	97.1	88.3	81.9	87.4
2-Chlorophenol-D4	93951-73-6	0.1	%		83.9	91.3	83.8	82.2	81.3
2,4,6-Tribromophenol	118-79-6	0.1	%		86.2	80.7	78.2	72.2	86.7
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		100	105	102	101	97.6
Anthracene-d10	1719-06-8	0.1	%		97.2	98.8	86.3	80.0	82.9
4-Terphenyl-d14	1718-51-0	0.1	%		106	107	103	94.1	88.3
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		90.4	90.8	82.9	87.1	85.9
Toluene-D8	2037-26-5	0.1	%		91.1	94.9	82.4	90.9	91.6
4-Bromofluorobenzene	460-00-4	0.1	%		86.4	90.8	78.8	84.3	83.1

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA48 0.4-0.5	GA48 0.9-1.0	GA49 0.4-0.5	GA49 0.9-1.0	GA50 0.4-0.5
				03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-100	EB0917655-101	EB0917655-105	EB0917655-106	EB0917655-108
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	8.1	21.4	14.4	10.1	13.2
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	11	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	7	4	<2	<2	5
Copper	7440-50-8	5	mg/kg	18	<5	<5	<5	11
Lead	7439-92-1	5	mg/kg	14	9	7	8	82
Nickel	7440-02-0	2	mg/kg	3	<2	<2	<2	3
Zinc	7440-66-6	5	mg/kg	31	12	62	22	116
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	<0.10	—	<0.10	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	<0.05	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL				Client sample ID	GA48 0.4-0.5	GA48 0.9-1.0	GA49 0.4-0.5	GA49 0.9-1.0	GA50 0.4-0.5
				Client sampling date / time	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-100	EB0917655-101	EB0917655-105	EB0917655-106	EB0917655-108	
EP068B: Organophosphorus Pesticides (OP) - Continued									
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	<0.05	—	—	
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	<0.2	—	—	
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	<0.05	—	—	
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	<0.05	—	—	
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	<0.05	—	—	
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	<0.2	—	—	
Malathion	121-75-5	0.05	mg/kg	<0.05	—	<0.05	—	—	
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	<0.05	—	—	
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	<0.05	—	—	
Parathion	56-38-2	0.2	mg/kg	<0.2	—	<0.2	—	—	
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	<0.05	—	—	
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	<0.05	—	—	
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	<0.05	—	—	
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	<0.05	—	—	
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	<0.05	—	—	
Ethion	563-12-2	0.05	mg/kg	<0.05	—	<0.05	—	—	
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	<0.05	—	—	
Azinphos Methyl	—	0.05	mg/kg	<0.05	—	<0.05	—	—	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.4	
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.4	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.2	
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0	
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.7	
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.9	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.1	
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	—	10	mg/kg	<10	<10	<10	<10	<10	
C10 - C14 Fraction	—	50	mg/kg	<50	140	<50	<50	<50	

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 Client : GOLDR ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL				Client sample ID	GA48 0.4-0.5	GA48 0.9-1.0	GA49 0.4-0.5	GA49 0.9-1.0	GA50 0.4-0.5
Client sampling date / time					03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00	03-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-100	EB0917655-101	EB0917655-105	EB0917655-106	EB0917655-108
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	---	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	---	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	---	50	mg/kg		<50	140	<50	<50	<50
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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		62.1	---	65.6	---	---
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		71.8	---	74.9	---	---
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		80.4	---	85.8	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		95.2	94.7	82.9	80.4	82.0
2-Chlorophenol-D4	93951-73-6	0.1	%		83.8	82.2	82.4	81.3	77.9
2,4,6-Tribromophenol	118-79-6	0.1	%		82.9	80.9	86.0	85.4	82.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		99.9	101	99.2	98.8	95.5
Anthracene-d10	1719-06-8	0.1	%		86.1	81.7	80.8	79.0	74.9
4-Terphenyl-d14	1718-51-0	0.1	%		102	102	101	100	92.2
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		89.6	92.6	87.5	93.5	86.4
Toluene-D8	2037-26-5	0.1	%		92.8	91.6	90.3	91.8	91.7
4-Bromofluorobenzene	460-00-4	0.1	%		88.7	89.8	85.4	88.1	86.0

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA50 0.9-1.0	GA51 0-0.3	GA51 0.4-0.5	GA51 0.9-1.0	GA52 0.17-0.3
				03-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-109	EB0917655-112	EB0917655-113	EB0917655-114	EB0917655-116
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	17.0	8.7	5.7	16.0	5.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	6	8
Cadmium	7440-43-8	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	2	7	5	5	8
Copper	7440-50-8	5	mg/kg	<5	5	23	<5	9
Lead	7439-92-1	5	mg/kg	14	19	93	9	13
Nickel	7440-02-0	2	mg/kg	<2	2	6	<2	4
Zinc	7440-66-6	5	mg/kg	258	45	81	7	44
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	<0.10	—	—	<0.10
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	—	—	<0.05
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	—	—	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	—	—	<0.05
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	—	—	<0.05
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	—	—	<0.05
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	—	—	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	—	—	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	—	—	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	—	—	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	—	—	<0.05
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	—	—	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	—	—	<0.05
Endrin	72-20-8	0.05	mg/kg	—	<0.05	—	—	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.05	—	—	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	—	—	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	—	—	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	—	—	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	—	—	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	—	—	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	—	—	<0.05

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA50 0.9-1.0	GA51 0-0.3	GA51 0.4-0.5	GA51 0.9-1.0	GA52 0.17-0.3
				03-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-109	EB0917655-112	EB0917655-113	EB0917655-114	EB0917655-116
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	—	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	—	<0.2
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	—	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	—	<0.2
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	—	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	—	<0.05
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	—	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	—	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	—	—	<0.05
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	—	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Azinphos Methyl	—	0.05	mg/kg	—	<0.05	—	—	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	1.4	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	1.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.9	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	7.3	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	9.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	7.0	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	5.4	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	7.3	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	6.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	9.2	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	3.3	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.9	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	3.6	<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

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA50 0.9-1.0	GA51 0-0.3	GA51 0.4-0.5	GA51 0.9-1.0	GA52 0.17-0.3
				Client sampling date / time	03-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-109	EB0917655-112	EB0917655-113	EB0917655-114	EB0917655-116
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	---	100	mg/kg		<100	<100	200	<100	<100
C29 - C36 Fraction	---	100	mg/kg		<100	<100	220	<100	<100
^ C10 - C36 Fraction (sum)	---	50	mg/kg		<50	<50	420	<50	<50
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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		---	70.2	---	---	57.4
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		---	78.7	---	---	64.9
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		---	89.9	---	---	70.6
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		80.9	94.8	79.7	102	96.7
2-Chlorophenol-D4	93951-73-6	0.1	%		80.5	90.6	84.0	93.3	90.1
2,4,6-Tribromophenol	118-79-6	0.1	%		86.4	92.9	75.1	92.0	81.1
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		97.1	109	84.5	110	108
Anthracene-d10	1719-06-8	0.1	%		79.5	89.6	76.3	92.3	90.1
4-Terphenyl-d14	1718-51-0	0.1	%		106	118	88.3	112	110
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		89.6	95.8	95.8	114	87.3
Toluene-D8	2037-26-5	0.1	%		93.7	92.6	97.8	90.4	89.7
4-Bromofluorobenzene	460-00-4	0.1	%		91.6	81.3	85.2	83.7	80.7

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA53 0.4-0.5	GA54 0.4-0.5	GA54 0.9-1.0	GA54 1.8-1.9	GA55 0.6-0.7
				Client sampling date / time	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-120	EB0917655-123	EB0917655-124	EB0917655-125	EB0917655-131
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	---	1.0	%		10.9	10.5	24.7	20.8	11.1
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	8	<5	18	13
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		4	3	5	10	7
Copper	7440-50-8	5	mg/kg		<5	9	6	<5	33
Lead	7439-92-1	5	mg/kg		8	28	12	10	36
Nickel	7440-02-0	2	mg/kg		<2	2	2	<2	21
Zinc	7440-66-6	5	mg/kg		<5	23	14	<5	191
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	---	0.10	mg/kg		<0.10	<0.10	<0.10	---	<0.10
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	---	---	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	---	---	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	---	---	<0.2
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	---	---	<0.05

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA53 0.4-0.5	GA54 0.4-0.5	GA54 0.9-1.0	GA54 1.8-1.9	GA55 0.6-0.7
				05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-120	EB0917655-123	EB0917655-124	EB0917655-125	EB0917655-131
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	---	---	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	---	---	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	---	---	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
Azinphos Methyl	---	0.05	mg/kg	<0.05	<0.05	---	---	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.4
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.2
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.6
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.2
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.7
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.6
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.6
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

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632036



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA53 0.4-0.5	GA54 0.4-0.5	GA54 0.9-1.0	GA54 1.8-1.9	GA55 0.6-0.7
				05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00	05-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-120	EB0917655-123	EB0917655-124	EB0917655-125	EB0917655-131
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	<50	<50	<50	<50
EP080: 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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	64.8	65.0	35.2	—	56.8
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	73.2	143	—	—	62.0
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	82.2	169	—	—	68.6
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	74.4	98.2	95.4	88.0	89.2
2-Chlorophenol-D4	93951-73-8	0.1	%	82.4	96.4	87.8	89.6	87.0
2,4,6-Tribromophenol	118-79-6	0.1	%	71.5	89.3	92.1	82.1	82.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	82.8	118	106	108	106
Anthracene-d10	1719-06-8	0.1	%	86.2	83.8	90.0	85.0	87.4
4-Terphenyl-d14	1718-51-0	0.1	%	85.7	108	115	113	110
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	92.5	84.0	102	103	89.8
Toluene-D8	2037-26-5	0.1	%	89.2	88.3	88.2	90.6	88.2
4-Bromofluorobenzene	460-00-4	0.1	%	81.2	81.7	82.2	84.1	79.1

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL				Client sample ID	GA55 1.9-2.0	GA55 3.9-4.0	GA56 0.07-0.3	GA56 0.4-0.5	GA56 0.9-1.0
Client sampling date / time					05-NOV-2009 11:00	05-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-134	EB0917655-136	EB0917655-138	EB0917655-139	EB0917655-140
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	—	1.0	%		7.8	10.7	15.7	20.3	22.7
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	<5	9	—	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	1	—	<1
Chromium	7440-47-3	2	mg/kg		3	2	16	—	5
Copper	7440-50-8	5	mg/kg		<5	<5	63	—	<5
Lead	7439-92-1	5	mg/kg		7	6	939	—	64
Nickel	7440-02-0	2	mg/kg		<2	<2	9	—	<2
Zinc	7440-66-6	5	mg/kg		7	<5	1670	—	88
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	0.2	—	0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	—	0.10	mg/kg		—	—	—	<0.10	—
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		—	—	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		—	—	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg		—	—	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg		—	—	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg		—	—	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg		—	—	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg		—	—	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg		—	—	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg		—	—	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg		—	—	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg		—	—	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg		—	—	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg		—	—	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg		—	—	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg		—	—	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg		—	—	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg		—	—	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg		—	—	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		—	—	—	<0.05	—



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA55 1.9-2.0	GA55 3.9-4.0	GA56 0.07-0.3	GA56 0.4-0.5	GA56 0.9-1.0
				05-NOV-2009 11:00	05-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-134	EB0917655-136	EB0917655-138	EB0917655-139	EB0917655-140
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	—	<0.05	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	—	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	—	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	—	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	—	<0.05	—
Azinphos Methyl	—	0.05	mg/kg	—	—	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	—	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	—	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	—	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	—	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	—	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	—	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	1.4	—	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	1.4	—	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.6	—	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.6	—	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.6	—	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.6	—	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.8	—	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<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
Benzo(g,h,i)perylene	191-24-2	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
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	—	<50

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 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL				Client sample ID	GA55 1.9-2.0	GA55 3.9-4.0	GA56 0.07-0.3	GA56 0.4-0.5	GA56 0.9-1.0
Client sampling date / time					05-NOV-2009 11:00	05-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-134	EB0917655-136	EB0917655-138	EB0917655-139	EB0917655-140
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	—	100	mg/kg		<100	<100	<100	—	<100
C29 - C36 Fraction	—	100	mg/kg		<100	<100	<100	—	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg		<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	108-38-3 106-42-3	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
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		—	—	—	49.9	—
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		—	—	—	58.7	—
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		—	—	—	64.0	—
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		77.6	86.0	68.2	—	93.5
2-Chlorophenol-D4	93951-73-6	0.1	%		84.7	87.6	82.6	—	83.1
2,4,6-Tribromophenol	118-79-6	0.1	%		77.4	88.4	75.3	—	85.2
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		93.9	112	105	—	106
Anthracene-d10	1719-06-8	0.1	%		75.3	91.0	80.6	—	72.2
4-Terphenyl-d14	1718-51-0	0.1	%		99.4	121	107	—	96.8
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		84.6	92.6	85.8	—	80.5
Toluene-D8	2037-26-5	0.1	%		66.8	93.1	82.8	—	88.7
4-Bromofluorobenzene	480-00-4	0.1	%		61.0	83.3	74.4	—	78.4

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA56 1.9-2.0	GA56 2.9-3.0	GA57 0.11-0.3	GA57 0.4-0.5	GA57 0.9-1.0
				04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-141	EB0917655-142	EB0917655-143	EB0917655-144	EB0917655-145
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	18.6	14.0	18.6	18.6	34.9
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	5	14
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	10	9	3	12	17
Copper	7440-50-8	5	mg/kg	<5	<5	258	53	75
Lead	7439-92-1	5	mg/kg	13	13	33	381	390
Nickel	7440-02-0	2	mg/kg	<2	<2	9	27	13
Zinc	7440-66-6	5	mg/kg	10	8	58	214	778
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	1.3	0.6
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	0.7	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	2.8	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	0.9	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	6.0	0.6
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	6.3	0.7
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	4.2	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	3.2	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	4.8	0.8
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	4.7	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	6.8	0.6
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	2.9	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	3.7	<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
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	150	100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	<50	<50	150	100
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

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 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA56 1.9-2.0	GA56 2.9-3.0	GA57 0.11-0.3	GA57 0.4-0.5	GA57 0.9-1.0
				Client sampling date / time	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-141	EB0917655-142	EB0917655-143	EB0917655-144	EB0917655-145
EP080: BTEX - Continued									
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		93.2	98.5	85.1	92.0	92.8
2-Chlorophenol-D4	93951-73-6	0.1	%		97.6	93.8	86.5	78.1	82.5
2,4,6-Tribromophenol	118-79-8	0.1	%		80.0	88.8	65.6	96.8	92.7
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		130	120	105	103	107
Anthracene-d10	1719-06-8	0.1	%		93.8	93.6	77.3	84.6	85.1
4-Terphenyl-d14	1718-51-0	0.1	%		135	127	107	102	105
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		93.4	85.0	95.9	110	107
Toluene-D8	2037-26-5	0.1	%		83.5	87.6	94.9	84.0	88.9
4-Bromofluorobenzene	460-00-4	0.1	%		78.8	79.8	77.9	79.9	78.3

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Analytical Results

Sub-Matrix: SOIL

				Client sample ID	GA57 1.4-1.6	GA57 2.3-2.4	GA58 0.1-0.3	GA59 0.4-0.5	GA59 0.9-1.0
				Client sampling date / time	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit		EB0917655-146	EB0917655-148	EB0917655-150	EB0917655-152	EB0917655-153
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	—	1.0	%		29.0	17.2	4.9	19.4	14.4
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	6	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		13	10	10	<2	3
Copper	7440-50-8	5	mg/kg		15	<5	6	33	<5
Lead	7439-92-1	5	mg/kg		217	16	16	52	6
Nickel	7440-02-0	2	mg/kg		6	<2	8	7	<2
Zinc	7440-66-6	5	mg/kg		109	10	51	122	8
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.2	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	—	0.10	mg/kg		—	—	—	<0.10	—
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		—	—	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		—	—	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg		—	—	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg		—	—	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg		—	—	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg		—	—	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg		—	—	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg		—	—	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg		—	—	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg		—	—	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg		—	—	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg		—	—	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg		—	—	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg		—	—	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg		—	—	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg		—	—	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg		—	—	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg		—	—	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg		—	—	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		—	—	—	<0.05	—

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Analytical Results

Sub-Matrix: SOIL				Client sample ID				
Client sampling date / time				GA57 1.4-1.6	GA57 2.3-2.4	GA58 0.1-0.3	GA59 0.4-0.5	GA59 0.9-1.0
				04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-146	EB0917655-148	EB0917655-150	EB0917655-152	EB0917655-153
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	—	<0.05	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	—	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	—	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	—	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	—	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	—	<0.05	—
Azinphos Methyl	—	0.05	mg/kg	—	—	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	3.0	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	0.9	<0.5	<0.5	2.3	<0.5
Pyrene	129-00-0	0.5	mg/kg	1.0	<0.5	<0.5	2.4	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	0.6	<0.5	<0.5	1.7	<0.5
Chrysene	218-01-9	0.5	mg/kg	0.6	<0.5	<0.5	1.2	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	0.8	<0.5	<0.5	1.1	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.8	<0.5	<0.5	1.9	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.0	<0.5	<0.5	1.8	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	1.1	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	1.4	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	—	10	mg/kg	33	<10	<10	<10	<10
C10 - C14 Fraction	—	50	mg/kg	510	<50	<50	<50	<50

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA57 1.4-1.6	GA57 2.3-2.4	GA58 0.1-0.3	GA59 0.4-0.5	GA59 0.9-1.0
				04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00	04-NOV-2009 11:00
Compound	CAS Number	LOR	Unit	EB0917655-146	EB0917655-148	EB0917655-150	EB0917655-152	EB0917655-153
EP080/071: Total Petroleum Hydrocarbons - Continued								
C15 - C28 Fraction	—	100	mg/kg	140	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	660	<50	—	—	—
C10 - C36 Fraction (sum)	—	50	mg/kg	—	—	<50	<50	<50
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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	—	—	—	56.8	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	—	63.9	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	—	71.2	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	88.8	88.9	92.6	59.7	84.0
2-Chlorophenol-D4	93951-73-6	0.1	%	83.0	75.2	93.9	72.0	84.5
2,4,6-Tribromophenol	118-79-6	0.1	%	85.2	67.9	65.4	73.1	76.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-80-8	0.1	%	96.6	77.9	86.6	71.2	95.6
Anthracene-d10	1719-06-8	0.1	%	88.6	81.4	114	74.6	112
4-Terphenyl-d14	1718-51-0	0.1	%	101	74.8	117	86.1	145
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	103	109	81.8	82.7	84.3
Toluene-D8	2037-26-5	0.1	%	81.2	93.7	86.6	81.2	83.7
4-Bromofluorobenzene	460-00-4	0.1	%	94.5	85.7	85.8	75.0	84.3

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Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

				RIN1				
				06-NOV-2009 11:00				
Compound	CAS Number	LOR	Unit	EB0917655-111				
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	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				
Copper	7440-50-8	0.001	mg/L	<0.001				
Lead	7439-92-1	0.001	mg/L	<0.001				
Nickel	7440-02-0	0.001	mg/L	<0.001				
Zinc	7440-66-6	0.005	mg/L	0.018				
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001				
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	1	µg/L	<1				
EP063A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5				
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5				
beta-BHC	319-85-7	0.5	µg/L	<0.5				
gamma-BHC	58-89-9	0.5	µg/L	<0.5				
delta-BHC	319-86-8	0.5	µg/L	<0.5				
Heptachlor	76-44-8	0.5	µg/L	<0.5				
Aldrin	309-00-2	0.5	µg/L	<0.5				
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5				
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5				
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5				
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5				
Dieldrin	60-57-1	0.5	µg/L	<0.5				
4,4'-DDE	72-55-9	0.5	µg/L	<0.5				
Endrin	72-20-8	0.5	µg/L	<0.5				
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5				
4,4'-DDD	72-54-8	0.5	µg/L	<0.5				
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5				
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5				
4,4'-DDT	50-29-3	2	µg/L	<2				
Endrin ketone	53494-70-5	0.5	µg/L	<0.5				
Methoxychlor	72-43-5	2	µg/L	<2				
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5				
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5				
Monocrotophos	6923-22-4	2	µg/L	<2				
Dimethoate	60-51-5	0.5	µg/L	<0.5				

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Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

				RIN1				
				06-NOV-2009 11:00				
				EB0917655-111				
Compound	CAS Number	LOR	Unit					
EP068B: Organophosphorus Pesticides (OP) - Continued								
Diazinon	333-41-5	0.5	µg/L	<0.5				
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5				
Parathion-methyl	298-00-0	2	µg/L	<2				
Malathion	121-75-5	0.5	µg/L	<0.5				
Fenthion	55-38-9	0.5	µg/L	<0.5				
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5				
Parathion	56-38-2	2	µg/L	<2				
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5				
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5				
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5				
Fenamiphos	22224-92-6	0.5	µg/L	<0.5				
Prothiofos	34643-46-4	0.5	µg/L	<0.5				
Ethion	563-12-2	0.5	µg/L	<0.5				
Carbophenothion	786-19-6	0.5	µg/L	<0.5				
Azinphos Methyl	—	0.5	µg/L	<0.5				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0				
Acenaphthylene	208-96-8	1.0	µg/L	<1.0				
Acenaphthene	83-32-9	1.0	µg/L	<1.0				
Fluorene	86-73-7	1.0	µg/L	<1.0				
Phenanthrene	85-01-8	1.0	µg/L	<1.0				
Anthracene	120-12-7	1.0	µg/L	<1.0				
Fluoranthene	206-44-0	1.0	µg/L	<1.0				
Pyrene	129-00-0	1.0	µg/L	<1.0				
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0				
Chrysene	218-01-9	1.0	µg/L	<1.0				
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0				
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0				
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5				
Indeno(1,2,3-cd)pyrene	193-39-5	1.0	µg/L	<1.0				
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0				
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0				
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				

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Analytical Results

Sub-Matrix: WATER

Client sample ID

RIN1

Client sampling date / time

06-NOV-2009 11:00

Compound	CAS Number	LOR	Unit	EB0917655-111				
EP080: BTEX								
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	108-38-3 106-42-3	2	µg/L	<2	---	---	---	---
ortho-Xylene	95-47-6	2	µg/L	<2	---	---	---	---
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	74.4	---	---	---	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	103	---	---	---	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	108	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	34.2	---	---	---	---
2-Chlorophenol-D4	93951-73-6	0.1	%	78.0	---	---	---	---
2,4,6-Tribromophenol	118-79-6	0.1	%	90.1	---	---	---	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-80-8	0.1	%	75.6	---	---	---	---
Anthracene-d10	1719-06-8	0.1	%	79.4	---	---	---	---
4-Terphenyl-d14	1718-51-0	0.1	%	102	---	---	---	---
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	105	---	---	---	---
Toluene-D8	2037-26-5	0.1	%	95.1	---	---	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	93.2	---	---	---	---

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 Work Order : EB0917655
 Client : GOLDER ASSOCIATES
 Project : 097632038



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	164
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	136
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	10	110
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	24	113
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	19	115
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	30	115
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	18	137
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	121
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	164
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	136
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	10	110
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	94
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	10	123
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110

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Work Order : EB0917655
Client : GOLDER ASSOCIATES
Project : 097632038



Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates - Continued			
4-Bromofluorobenzene	460-00-4	86	115

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REPORT OF BOREHOLE: GA17e

CLIENT: s.73 Irrelevant infor
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 603281 m E 6963440 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 5.80 m

SHEET: 1 OF 2
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 16/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L-M	Groundwater not encountered	0.0						PAVEMENT			
			0.03		GA17 (Bag) 0.08-0.25m		SC	FILL - Sandy CLAY Medium plasticity, dark brown, fine sand with fine to coarse gravel, with ash, trace cobble	D-M	S-F	Fill	
					GA17 (Jar) 0.20-0.30m PID = 1.0 ppm							
			0.40		GA17 (Jar) 0.25-0.50m							
			0.50		GA17 (Bag) 0.40-0.50m PID = 0.3 ppm		CL	Gravelly CLAY Low to medium plasticity, pale brown, trace silt, fine gravel	M-W	St		
			0.50		GA17 (Bag) 0.50-0.75m		CI-CH	Clayey SAND Fine, orange brown, medium to high plasticity clay, trace fine gravel, trace metal (nail)				
					GA17 (Bag) 0.75-1.00m					MD		
					GA17 (Jar) 0.90-1.00m PID = 0.2 ppm							
			1.10		GA17 (Bag) 1.00-1.25m		CI	CLAY Medium to high plasticity, dark brown to orange brown, some fine sand, trace fine gravel		S-F		
					GA17 (Bag) 1.25-1.50m							
			1.50		GA17 (Bag) 1.50-1.75m		GC	Clayey GRAVEL Fine, orange brown, medium plasticity clay, with fine sand	M		Alluvial	
					GA17 (Bag) 1.75-2.00m					L		
		GA17 (Jar) 1.90-2.00m PID = 0.4 ppm										
		GA17 (Bag) 2.00-2.25m										
		2.30		GA17 (Bag) 2.25-2.50m		CI	Gravelly CLAY Medium to high plasticity, orange brown and grey, fine gravel, with some fine sand		F			
				GA17 (Bag) 2.50-2.75m								
		2.70		GA17 (Bag) 2.75-3.00m		CI	Sandy CLAY Medium plasticity, orange brown and grey, fine sand with some fine to medium gravel		S-F			
				GA17 (Jar) 2.90-3.00m								
		3.0	3.00									

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA17e

CLIENT: s.73 Irrelevant infor
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503281 m E 6963440 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 5.80 m

SHEET: 2 OF 2
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 16/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
SFA	L	Groundwater not encountered	3.0		PID = 0.4 ppm GA17 (Bag) 3.00-3.25m		CI	Sandy CLAY Medium plasticity, orange brown and grey, fine sand with some fine to medium gravel fine to coarse sand	M	SF	Alluvial
					GA17 (Bag) 3.25-3.50m						
			3.5	3.50	GA17 (Bag) 3.50-3.75m		CI	Sandy CLAY Medium to high plasticity, dark grey, fine to medium sand, with some fine quartz gravel			
					GA17 (Bag) 3.75-4.00m				F	Residual soil	
			4.0	4.00	GA17 (Jar) 3.90-4.00m GA17 (Bag) 4.00-4.25m		CI	Gravelly CLAY Medium to high plasticity, pale grey and yellow brown, with fine to coarse sand, fine gravel			
					GA17 (Bag) 4.25-4.50m						
			4.5	4.50			CI	Gravelly CLAY Medium plasticity, pale brown and yellow brown, with fine sand, fine to medium gravel	M-W	Vst	
			5.0	5.00	GA17 (Bag) 5.00-5.25m		CI	Sandy CLAY Medium plasticity, pale brown, fine sand, with some coarse gravel	D-M	Vst-H	
				5.10				TUFF Distinctly weathered, recovered as silty clay, medium plasticity, pale brown, fine to coarse sand, some fine gravel			
			5.80								
								END OF BOREHOLE @ 5.80 m TC bit refusal at 5.80m. Loosely backfilled on completion.			

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA18e

CLIENT: s.73 Irrelevant inform
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503261 m E 6963483 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 4.10 m

SHEET: 1 OF 2
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 15/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
H			0.0		GA18 (Bag) 0.00-0.25m			CONCRETE PAVEMENT		
			0.19		GA18 (Jar) 0.20-0.30m PID = 0.2 ppm		GC	FILL - Clayey GRAVEL Fine to coarse, brown, with fine sand	M-W	VD
			0.30		GA18 (Bag) 0.25-0.50m PID = 0.2 ppm		SC	Clayey SAND Fine, orange brown, medium plasticity clay, with silt	D-M	MD
			0.40		GA18 (Jar) 0.40-0.50m PID = 0.2 ppm		CI	CLAY Medium plasticity, dark grey, with some silt and ash		VS
			0.50		GA18 (Bag) 0.50-0.75m		CI	Silty CLAY Medium plasticity, dark grey, with some fine sand and trace fine gravel		
					GA18 (Bag) 0.75-1.00m					
					GA18 (Jar) 0.90-1.00m PID = 0.3 ppm					
			1.10		GA18 (Bag) 1.00-1.25m		CI-CH	Sandy CLAY Medium to high plasticity, pale grey and yellow brown, with fine gravel, with some fine to coarse sand		
					GA18 (Bag) 1.25-1.50m					
					GA18 (Jar) 1.40-1.50m PID = 0.2 ppm					
L					GA18 (Bag) 1.50-1.75m			becoming hard		
					GA18 (Bag) 1.75-2.00m			trace fine to medium angular gravel		
					GA18 (Jar) 1.90-2.00m PID = 0.1 ppm			more sandy, (50% sand, 50% clay approximately)		
					GA18 (Bag) 2.00-2.25m		CI	CLAY Medium plasticity, pale grey and yellow brown, with trace fine sand and fine gravel		
					GA18 (Bag) 2.25-2.50m					
					GA18 (Jar) 2.50-2.75m					
					GA18 (Bag) 2.75-3.00m					
					GA18 (Jar) 2.90-3.00m					
M										
M-H										

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA18e

CLIENT: s.73 Irrelevant info
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503261 m E 6963483 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 4.10 m

SHEET: 2 OF 2
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 15/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling	Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	M-H	Groundwater not encountered	3.0		PID = 0.1 ppm GA18 (Bag) 3.00-3.25m		GC/CL	Gravelly CLAY / Clayey GRAVEL Medium to high plasticity clay, fine to medium EW tuff gravel, grey pale brown and yellow brown	M	VS/D
			3.30		GA18 (Bag) 3.25-3.50m			pale green and pale grey		
H			3.5		GA18 (Bag) 3.50-3.75m					
			4.0		GA18 (Bag) 3.75-4.00m GA18 (Jar) 3.90-4.00m PID = 0.8 ppm					
R			4.10					END OF BOREHOLE @ 4.10 m TC bit refusal at 4.10m. Loosely backfilled on completion.		
			4.5							
			5.0							
			5.5							

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA19e

CLIENT: s.73 Irrelevant informati
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503190 m E 6963478 m N 56 GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 1.13 m

SHEET: 1 OF 1
DRILL RIG: Edson CPI
DRILLER: Contract Drilling
LOGGED: VA DATE: 14/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L	Groundwater not encountered	0.0	0.05	GA19 (Bag) 0.05-0.25m GA19 (Jar) 0.10-0.20m PID = 1.7 ppm GA19 0.25-0.50m		SM	BITUMEN FILL - Silty SAND Fine to coarse, brown, with some fine to medium gravel	L	Fill
			0.40	SM	FILL - Silty SAND Fine to coarse, dark brown and orange brown, with fine to medium gravel, with occasional orange brown clayey lenses					
			0.60	CI	CLAY Medium plasticity, pale brown and dark brown, with some fine to coarse sand pale grey and pale green		SLVST	Alluvial		
			0.80							
			1.0	1.10	GA19 (Bag) 1.00-1.10m					
H-R								TUFF Distinctly weathered, orange brown to pale brown END OF BOREHOLE @ 1.13 m TC bit refusal at 1.13m. Loosely backfilled on completion.	D	YH
			1.5							
			2.0							
			2.5							
			3.0							

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GAP gINT FN. F01a
RL2

Released



REPORT OF BOREHOLE: GA20e

CLIENT: s.73 Irrelevant inf
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503153 m E 6963564 m N 56 GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 0.75 m

SHEET: 1 OF 1
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 16/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L	Groundwater not encountered	0.0					CONCRETE PAVEMENT		
			0.15		GA20 (Bag) 0.15-0.25m GA20 (Jar) 0.20-0.30m PID = 0.3 ppm		CI	FILL: Gravelly CLAY Medium plasticity, dark brown, fine to medium gravel, some fine sand, trace roots and brick fragments	M	Fill
			0.40		GA20 (Bag) 0.25-0.50m GA20 (Jar) 0.40-0.50m PID = 0.4 ppm			TUFF Recovered as gravelly clay/clayey gravel, low to medium plasticity, fine gravel, pale yellow brown, trace fine sand	D-M	Residual Soil
			0.75		GA20 (Bag) 0.50-0.75m GA20 (Jar) 0.65-0.75m PID = 0.3 ppm			END OF BOREHOLE @ 0.75 m TC bit refusal at 0.75m on rock. Loosely backfilled on completion.		
M-H										
R										
			1.0							
			1.5							
			2.0							
			2.5							
			3.0							

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GAP gINT FN. F01a
RL2

GAP 0-BETA BRIS GLB FULL PAGE X0602009097632038-RNA-REDEVELOPMENTTECHNICAL LOGS PRELIMINARY INVESTIGATION LOGS BH01-04 PRELIMINARY INVESTIGATION LOGS GAP 5 1 GDT 19/11/2009 9:46:50 AM



REPORT OF BOREHOLE: GA21e

CLIENT: s.73 Irrelevant inform
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503384 m E 6963673 m N 56 GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 3.04 m

SHEET: 1 OF 1
DRILL RIG: Edson CPI
DRILLER: Contract Drilling
LOGGED: VA DATE: 14/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L		Groundwater not encountered	0.0	GA21 (Jar) 0.00-0.20m PID = 1.2 ppm GA21 (Bag) 0.00-0.25m GA21 (Bag) 0.25-0.50m			SM	FILL - Sandy SILT Low plasticity, pale brown orange, fine to coarse sand, with some fine gravel	D	Fill
				0.40	GA21 (Jar) 0.40-0.50m PID = 0.5 ppm GA21 (Bag) 0.50-0.75m				St		Vst
				0.80	GA21 (Bag) 0.75-1.00m GA21 (Jar) 0.90-1.00m PID = 0.6 ppm				St		
				1.50	GA21 (Bag) 1.25-1.50m						
				1.60	GA21 (Bag) 1.50-1.75m			SM	FILL - Silty SAND Fine to coarse, brown, with some fine to medium gravel ("slag") FILL - ASH Black, with some fine to medium angular gravel, trace sand		MD
				2.00	GA21 (Bag) 1.75-2.00m GA21 (Jar) 1.80-2.00m PID = 0.5 ppm GA21 (Bag) 2.00-2.25m			SM	FILL - Silty SAND Fine to medium sand, dark brown, with some ash		L
				2.50	GA21 (Bag) 2.25-2.50m						
				2.50	GA21 (Bag) 2.50-2.75m						
				3.00	GA21 (Bag) 2.75-3.00m GA21 (Jar) 2.80-3.00m PID = 0.6 ppm						
				3.04					TUFF Distinctly weathered, dark brown orange staining END OF BOREHOLE @ 3.04 m TC bit refusal at 3.0m. Loosely backfilled on completion.		
										Poor sample recovery	
											</

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA22e

CLIENT: s.73 Irrelevant info
 PROJECT: RNA Redevelopment
 LOCATION: RNA Showgrounds, Bowen Hills
 JOB NO: 097632038

COORDS: 503413 m E 6963605 m N 56 GDA94
 SURFACE RL: m DATUM: AHD
 INCLINATION: -90°
 HOLE DIA: 100 mm HOLE DEPTH: 1.55 m

SHEET: 1 OF 1
 DRILL RIG: Edson CPI
 DRILLER: Contract Drilling
 LOGGED: VA DATE: 14/10/09
 CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L	Groundwater not encountered	0.0	0.04	GA22 (Jar) 0.10-0.30m PID = 1.1 ppm GA22 (Bag) 0.10-0.25m GA22 (Bag) 0.25-0.50m			SM	BITUMEN FILL - Sandy SILT Brown, fine grained sand, with fine to medium gravel	D	St	Fill
			0.5	0.50	GA22 (Jar) 0.40-0.50m PID = 1.7 ppm				with ash, dark brown to black, with some coarse gravel sized brick fragments			
R			0.80	0.80	GA22 (Bag) 0.75-1.00m GA22 (Jar) 0.80-1.00m PID = 1.8 ppm				FILL - ASH Black, with some silty clay, trace fine sand and fine to angular gravel	M	L	
			1.0	1.00	GA22 (Bag) 1.00-1.25m				angular rock cobble (up to 70mm)			
			1.5	1.50	GA22 (Bag) 1.25-1.50m			SP	FILL - Gravelly SAND Fine to coarse, dark brown, with medium plasticity clay, fine to medium sand, trace brick fragments and ash END OF BOREHOLE @ 1.55 m TC bit refusal at 1.55 on boulder (FILL?) Loosely backfilled on completion.			
			1.55	1.55								
			2.0									
			2.5									
			3.0									

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GAP gINT FN. F01a
 RL2



REPORT OF BOREHOLE: GA23e

CLIENT: s.73 Irrelevant info
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503436 m E 6963754 m N 56 GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 1.05 m

SHEET: 1 OF 1
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 15/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA		Groundwater not encountered	0.0					CEMENT - CONCRETE PAVEMENT		Pavement
			0.22		GA23 (Jar) 0.22-0.30m PID = 1.2 ppm		CI	FILL - Gravelly CLAY Medium plasticity, dark brown and orange brown, fine to medium gravel, trace sand and brick fragments		Fill
			0.40		GA23 (Jar) 0.40-0.50m PID = 0.4 ppm			fine gravel		
			0.5		GA23 (Jar) 0.40-0.50m PID = 0.3 ppm					
			0.80				GC	Gravelly CLAY Medium plasticity, yellow brown, fine to coarse sand, fine gravel		Residual soil
M			0.90					stiff to very stiff		
H			1.0		GA23 (Jar) 0.90-1.00m PID = 2.3 ppm			TUFF Distinctly weathered, pale brown "chips" of rock (small fragments) and powdery rock recovered at the bottom of the auger END OF BOREHOLE @ 1.05 m TC bit refusal at 1.05m. Loosely backfilled on completion.		
R			1.05							
			1.5							
			2.0							
			2.5							
			3.0							

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA24e

CLIENT: s.73 Irrelevant inf
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503417 m E 6963818 m N 56 GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 1.17 m

SHEET: 1 OF 1
DRILL RIG: Edson CPI
DRILLER: Contract Drilling
LOGGED: VA DATE: 14/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L	Groundwater not encountered	0.0				ML	TOPSOIL - Sandy SILT Medium plasticity, brown, fine sand, with some rootlets	D	Fill
			0.30		GA24 (Jar) 0.10-0.30m PID = 2.4 ppm		ML	FILL - Clayey/Sandy SILT Medium plasticity, brown, fine sand	D-M	
			0.60		GA24 (Jar) 0.40-0.50m PID = 0.8 ppm		SC	FILL - Clayey SAND Fine to coarse, yellow brown	L-MD	
			0.80		GA24 (Jar) 0.60-0.70m PID = 2.3 ppm		CI-CH	Sandy CLAY Medium to high plasticity, pale orange brown, fine to medium sand, with some fine to medium gravel	M	Residual
			1.0		GA24 (Jar) 0.90-1.00m PID = 2.5 ppm					
R			1.10		GA24 (Jar) 1.10-1.17m PID = 1.0 ppm		TUFF Distinctly weathered, very hard, yellow brown, dry END OF BOREHOLE @ 1.17 m TC Bit refusal at 1.17m. Loosely backfilled on completion.	D		
			1.17							
			1.5							
			2.0							
			2.5							
			3.0							

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA25e

CLIENT: s.73 Irrelevant info
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503407 m E 6963861 m N 56 GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 0.90 m

SHEET: 1 OF 1
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 15/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L	Groundwater not encountered	0.0					CONCRETE PAVEMENT		
			0.17							
			0.30	GA25 (Jar) 0.20-0.30m PID = 0.8 ppm	SC	Silty SAND Fine to coarse, dark brown and orange brown, with low to medium plasticity clay, trace brick fragments and fine gravel, dry to moist, loose	L	Fill		
			0.50	GA25 (Jar) 0.40-0.50m PID = 2.6 ppm	GC	Clayey GRAVEL Fine, angular, pale brown, with fine to medium sand, dry to moist, medium dense to dense	MD-D			
M			0.5				. dense	D-M	D	
			0.80							
H			0.90	GA25 (Jar) 0.80-0.90m PID = 2.0 ppm			. some brick fragments, orange brown, very dense	VD		
			1.0					END OF BOREHOLE @ 0.90 m Refusal on Tuff Loosely backfilled on completion.		Tuff (DW)
			1.5							
			2.0							
			2.5							
			3.0							

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA26e

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503338 m E 6963829 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 0.90 m

SHEET: 1 OF 1
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 15/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L	Groundwater not encountered	0.0					CONCRETE PAVEMENT		
			0.15		GA26 (Jar) 0.20-0.30m PID = 1.3 ppm		GM	FILL - Gravelly SILT Medium plasticity, dark brown, fine gravel, with some fine sand, rootlets and brick fragments, dry to moist, loose		Fill
			0.40		GA26 (Jar) 0.50-0.60m PID = 1.1 ppm		GM	FILL - Gravelly SILT Medium plasticity clay, brown, fine gravel, with some fine sand, dry to moist, loose	D-M	L
			0.70		GA26 (Jar) 0.80-0.90m PID = 0.2 ppm		GC	Clayey Sandy GRAVEL Fine, brown, fine sand, medium plasticity clay, angular gravel, dry, dense	D	D
M			0.90					END OF BOREHOLE @ 0.90 m TC Bit refusal at 0.90m. Backfilled on completion.		Residual soil
H-R			1.0							
			1.5							
			2.0							
			2.5							
			3.0							

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA27e

CLIENT: **s.73 Irrelevant info**
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503307 m E 6963609 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 1.15 m

SHEET: 1 OF 1
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 16/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
SFA	L-M	Groundwater not encountered	0.0						CONCRETE PAVEMENT			
			0.16		GA27 0.20-0.30m PID = 0.4 ppm		CI	FILL - Sandy CLAY Medium plasticity, orange brown, fine sand, trace fine gravel		St	Fill	
			0.40		GA27 0.40-0.50m PID = 0.2 ppm			very stiff to hard	M	VS-H		
			0.80		GA27 0.90-1.00m PID = 0.3 ppm		CI	Sandy CLAY Medium plasticity, pale brown, fine sand, with some silt	D-M	H	Residual soil / EW Tuff	
H			1.0									
R			1.15						END OF BOREHOLE @ 1.15 m TC Bit refusal at 1.15m. Loosely backfilled on completion.			
			1.5									
			2.0									
			2.5									
			3.0									

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GAP gINT FN. F01a
RL2

[Release]



REPORT OF BOREHOLE: GA28e

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503280 m E 6963851 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 100 mm HOLE DEPTH: 0.26 m

SHEET: 1 OF 1
DRILL RIG: Edson CP1
DRILLER: Contract Drilling
LOGGED: VA DATE: 16/10/09
CHECKED: CJW DATE: 19/11/09

Drilling				Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
SFA		Groundwater not encountered	0.0					CONCRETE PAVEMENT			
			0.18								
			0.26	GA28 (Jar) 0.18-0.26m PID = 1.5 ppm		GC	FILL - Sandy GRAVEL Fine to coarse gravels, angular, orange brown, with medium plasticity clay, fine to coarse sand, trace brick fragments and cobbles, moist, dense END OF BOREHOLE @ 0.26 m TC Bit refusal at 0.26m on DW Tuff/Boulder Loosely backfilled on completion.	M	D	Fill	
			0.5								
			1.0								
			1.5								
			2.0								
			2.5								
			3.0								

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA38

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503216 m E 6963796 m N GDA94
SURFACE RL: 13.50 m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.50 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 4/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0	13.50				CONCRETE		
			0.20							
			13.30		GA38 (Jar) 0.20-0.30m GA38 (Bag) 0.20-0.25m		CI/CH	Silty CLAY Medium to high plasticity, dark grey, fine grained sand		ALLUVIUM
			0.5		GA38 (Jar) 0.40-0.50m PID = 2.2 ppm		CI	Gravelly CLAY Medium plasticity, brown		
			0.60		GA38 (Bag) 0.50-0.75m		GW CI	Silty CLAY Medium plasticity, pale grey and orange, trace gravels		RESIDUAL
			12.90		GA38 (Jar) 0.75-1.00m					
			0.75		GA38 (Bag) 0.90-1.00m PID = 2.2 ppm					
			12.75		GA38 (Jar) 1.00-1.25m					
			1.0		GA38 (Bag) 1.25-1.50m PID = 1.5 ppm					
			1.5	12.00				END OF BOREHOLE @ 1.50 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							

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GAP gINT FN. F01a
RL2

Release



REPORT OF BOREHOLE: GA39

CLIENT: s.73 Irrelevant information

PROJECT: RNA Redevelopment

LOCATION: RNA Showgrounds, Bowen Hills

JOB NO: 097632038

COORDS: 503274 m E 6963856 m N GDA94

SURFACE RL: m DATUM: AHD

INCLINATION: -90°

HOLE DIA: 125 mm HOLE DEPTH: 1.20 m

SHEET: 1 OF 1

DRILL RIG: Gemco HC10

DRILLER: MGS

LOGGED: AS DATE: 4/11/09

CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE		
			0.24		GA39 (Jar) 0.20-0.30m PID = 1.7 ppm		GP	GRAVEL Dark grey, medium to coarse gravel, trace silt and ash	D	L
			0.50		GA39 (Jar) 0.40-0.50m PID = 3.1 ppm		CL/CI	Silty CLAY Low to medium plasticity, trace ash	D-M	St
			0.75		GA39 (Jar) 0.60-0.70m PID = 2.3 ppm		EW	Extremely Weathered TUFF	D	L
			1.0		GA39 (Jar) 0.90-1.00m PID = 2.7 ppm					
			1.20		GA39 (Jar) 1.10-1.20m PID = 2.9 ppm			END OF BOREHOLE @ 1.20 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
			1.5							
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							

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GAP gINT FN. F01a
RL2

Released



REPORT OF BOREHOLE: GA40

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503168 m E 6963619 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.60 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 4/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE			
			0.17								
			0.25		GA40 (Jar)		GM	Gravelly SILT	D	L	FILL
					0.17-0.30m		CL	Low plasticity, brown			Residual
					PID = 0.6 ppm			Silty CLAY			
			0.5		GA40 (Jar)			Low plasticity, with trace fine grained sand, pale brown	M	H	
					0.40-0.50m						
					PID = 0.4 ppm						
			1.0		GA40 (Jar)						
					0.90-1.00m						
				1.25							
					PID = 1.1 ppm						
			1.5				DW	Distinctly Weathered TUFF			
				1.60	GA40 (Jar)			END OF BOREHOLE @ 1.60 m			
					1.50-1.60m			Groundwater not encountered.			
					PID = 1.1 ppm			Refusal on rock.			
								Backfilled on completion.			
			2.0								
			2.5								
			3.0								
			3.5								
			4.0								
			4.5								
			5.0								
			5.5								
			6.0								

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GAP gINT FN. F01a
RL2

Release



REPORT OF BOREHOLE: GA41

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503303 m E 6963794 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 0.95 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE		
			0.15							
			0.2		GA41 (Jar) 0.15-0.30m PID = 1.1 ppm		GM	Gravelly SILT Low plasticity, grey, trace clay, trace ash plus 0.5cm-layer of ash at 0.4m		FILL
			0.4		GA41 (Jar) 0.40-0.50m PID = 0.6 ppm				D L	
			0.50							
			0.6				CL/CI	Gravelly CLAY Low to medium plasticity, yellow brown, with fine grained sand		RESIDUAL
			0.8		GA41 (Jar) 0.80-0.95m PID = 0.9 ppm				M H	
			0.90							
			0.95				DW	Distinctly Weathered TUFF		
			1.0					END OF BOREHOLE @ 0.95 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
		1.2								
		1.4								
		1.6								
		1.8								
		2.0								

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GAP gINT FN. F01a
RL2

Released



REPORT OF BOREHOLE: GA42

CLIENT: S.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503328 m E 6963767 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 0.75 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

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Drilling			Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE		
			0.2	0.20	GA42 (Jar) 0.20-0.30m		CL	Gravelly CLAY Low plasticity, yellow brown, trace silt		RESIDUAL
			0.4		GA42 (Jar) 0.40-0.50m					
			0.50				DW	Distinctly Weathered TUFF		
			0.75					END OF BOREHOLE @ 0.75 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
			0.8							
			1.0							
			1.2							
			1.4							
			1.6							
			1.8							
			2.0							

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GAP gINT FN. F01a
RL2

Release



REPORT OF BOREHOLE: GA43

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503354 m E 6963718 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.85 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling	Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE		
			0.17							
			0.25		GA43 (Jar) 0.17-0.30m PID = 1.7 ppm		GM	Gravelly SILT	D	S
					GA43 (Jar) 0.40-0.50m PID = 2.0 ppm		CI/CH	Low plasticity, brown, trace ash		
			0.5					Sandy CLAY		St
								Yellow brown, medium to high plasticity, traces of ash at 0.25/0.45m		
			0.70				CL/CI	Sandy CLAY		
					GA43 (Jar) 0.90-1.00m PID = 3.1 ppm			Low to medium plasticity, yellow brown, fine to medium grained sand	M	S
			1.0							
			1.5							
		1.60								
		1.85		GA43 (Jar) 1.70-1.85m PID = 3.6 ppm						
		2.0						END OF BOREHOLE @ 1.85 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
		2.5								
		3.0								
		3.5								
		4.0								
		4.5								
		5.0								
		5.5								

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA44

CLIENT: s.73 Irrelevant informati
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503328 m E 6963678 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.40 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

GA44_01-BETA, BRIS.GLB FULL PAGE J:\GEO\2005\097632038-RNA-REDEVELOPMENT\TECHNICAL LOGS\GINT\GINT LOGS BH01-04 PRELIMINARY INVESTIGATION\GINT LOGS BH01-04 PRELIMINARY INVESTIGATION.GPJ CAPS 1.GDT 23/11/2009 11:12:28 AM Hollow Flight Auger

Drilling				Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE		
			0.14		GA44 (Jar)						
			0.20		0.14-0.30m						
					PID = 3.9 ppm						
					GA44 (Bag)						
			0.5		0.14-0.25m						
					GA44 (Bag)						
					0.25-0.50m						
					GA44 (Jar)						
					0.40-0.50m						
				PID = 4.1 ppm							
				GA44 (Bag)							
			1.0		0.50-0.75m						
					GA44 (Jar)						
					0.90-1.00m						
					PID = 1.0 ppm						
					GA44 (Bag)						
			1.40		1.00-1.25m						
					GA44 (Jar)						
					1.30-1.40m						
					PID = 1.4 ppm						
			1.5						END OF BOREHOLE @ 1.40 m		
									Refusal @ 1.4m on a piece of steel.		
									Groundwater not encountered.		
									Backfilled on completion.		
			2.0								
			2.5								
			3.0								
			3.5								
			4.0								
			4.5								
			5.0								
			5.5								
			6.0								

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA45

CLIENT: s.73 Irrelevant informati

PROJECT: RNA Redevelopment

LOCATION: RNA Showgrounds, Bowen Hills

JOB NO: 097632038

COORDS: 503123 m E 6963695 m N GDA94

SURFACE RL: m DATUM: AHD

INCLINATION: -90°

HOLE DIA: 125 mm HOLE DEPTH: 2.20 m

SHEET: 1 OF 1

DRILL RIG: Gemco HC10

DRILLER: MGS

LOGGED: AS DATE: 3/11/09

CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
Hollow Flight Auger			0.0		GA45 (Jar) 0.05-0.30m PID = 0.5 ppm			CL	Gravelly CLAY Low plasticity, pale brown		F	FILL	
			0.25		GA45 (Bag) 0.05-0.25m GA45 (Bag) 0.25-0.50m			CI	Gravelly CLAY Low to medium plasticity, trace fine grained sand, dark grey		St		
			0.5		GA45 (Jar) 0.40-0.50m PID = 0.4 ppm			CI	Sandy CLAY Medium plasticity, dark grey, trace gravel		St		
			0.75		GA45 (Bag) 0.50-0.75m GA45 (Jar) 0.90-1.00m PID = 2.0 ppm			CI	Gravelly CLAY Medium plasticity, medium gravel, yellow brown	W	St	RESIDUAL	
			1.0	1.10	GA45 (Bag) 1.00-1.25m GA45 (Bag) 1.25-1.50m GA45 (Bag) 1.50-1.75m GA45 (Bag) 1.75-2.00m GA45 (Jar) 1.90-2.00m PID = 1.5 ppm			EW	Extremely Weathered TUFF		VL		
			1.5		GA45 (Bag) 2.00-2.20m GA45 (Jar) 2.10-2.20m PID = 3.0 ppm								
			2.0	2.20									
			2.5										
			3.0										
			3.5										
		4.0											
		4.5											
		5.0											
		5.5											
		6.0											

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GAP gINT FN. F01a
RL2

Release



REPORT OF BOREHOLE: GA47

CLIENT: s.73 Irrelevant informatio
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503085 m E 6963669 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.30 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 3/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE		
			0.12		GA47 (Jar) 0.12-0.30m PID = 3.0 ppm		CL	Gravelly CLAY Low plasticity, dark brown, trace fine grained sand		FILL
			0.5		GA47 0.12-0.25m 0.25-0.50m					
			0.75		GA47 (Jar) 0.40-0.50m PID = 3.9 ppm			grey, presence of organics		
			1.0		GA47 0.75-1.00m GA47 (Jar) 0.90-1.00m PID = 3.7 ppm					
			1.30					END OF BOREHOLE @ 1.30 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
			1.5							
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							

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GAP gINT FN. F01a
RL2

[Release]



REPORT OF BOREHOLE: GA48

CLIENT: s.73 Irrelevant informatio
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503110 m E 6963638 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 3.00 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 3/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE				
			0.16		GA48 (Jar) 0.16-0.30m PID = 1.8 ppm			GM	Gravelly SILT Medium to coarse, grey, low plasticity	D	J		Presence of ash FILL
			0.50		GA48 (Jar) 0.40-0.50m PID = 1.9 ppm			CL	Silty CLAY Low plasticity, pale brown				Red stain throughout core Natural?
			1.0		GA48 (Jar) 0.90-1.00m PID = 3.7 ppm								
			1.40					CI	Sandy CLAY Low to medium plasticity, brown and orange, fine grained sand, trace organics	D-M			ALLUVIUM Traces of organic - red stain
			2.0		GA48 (Jar) QC 5a QC 6a 1.90-2.00m PID = 3.8 ppm			EW	Extremely Weathered TUFF				RESIDUAL
			3.00		GA48 (Jar) 2.90-3.03m PID = 3.2 ppm				END OF BOREHOLE @ 3.00 m Groundwater not encountered. Refusal on rock. Backfilled on completion.				
			3.5										
			4.0										
			4.5										
		5.0											
		5.5											
		6.0											

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GAP gINT FN. F01a
RL2

Release



REPORT OF BOREHOLE: GA49

CLIENT: s.73 Irrelevant informatio
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503122 m E 6963589 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.50 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 3/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0					CONCRETE		
			0.14		GA49 (Jar)		CI/	Sandy CLAY	D-M	L
			0.30		0.14-0.30m PID = 2.7 ppm		CH	Medium to high plasticity, dark grey, trace fine to medium grained sand		
			0.50		GA49 (Jar)			yellow brown	W	S
			0.5		0.40-0.50m PID = 3.5 ppm		DW	Distinctly Weathered TUFF		RESIDUAL
			1.0		GA49 (Jar)					
			1.40		0.90-1.00m PID = 3.1 ppm					
			1.5				EW	pale grey		
			1.50					END OF BOREHOLE @ 1.50 m Groundwater not encountered. Refusal on rock. Backfilled on completion.		
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							

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GAP gINT FN. F01a
RL2

Release

REPORT OF BOREHOLE: GA50

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503164 m E 6963628 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 2.55 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 3/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE			
			0.14		GA50 (Jar)			SP	Gravelly SAND			FILL
			0.25		0.14-0.30m PID = 2.7 ppm			CL	Fine to medium sand, trace silt, pale brown			Traces of ash
					GA50 (Bag)				Gravelly SILT/CLAY			
			0.5		0.14-0.25m				Low plasticity, brown			
					GA50 (Bag)			CL	Gravelly CLAY			
					0.25-0.50m				Low plasticity, brown			Organic and orange white layer @ 0.65m
					GA50 (Jar)				Cobble layer			
					0.40-0.50m			CL	Gravelly CLAY			
					PID = 3.1 ppm				Low plasticity, dark brown and dark grey			
			1.0		GA50 (Bag)				moisture increases			Orange staining @ 1.2m
					0.50-0.75m							
					GA50 (Bag)							
					0.75-1.00m							
					GA50 (Jar)							
					0.90-1.00m							
			1.5		PID = 3.4 ppm			CH	Sandy CLAY			ALLUVIUM
					GA50 (Bag)				High plasticity, fine grained sand, brown			
					1.00-1.25m							
					GA50 (Bag)							
					1.25-1.50m							
					GA50 (Bag)							
					1.50-1.75m			CI	Gravelly CLAY			
					GA50 (Bag)				Medium plasticity, brown and orange			
					1.75-2.00m							
				GA50 (Jar)								
				1.90-2.00m								
				PID = 1.7 ppm								
				GA50 (Bag)								
				2.00-2.25m								
				GA50 (Bag)								
				2.25-2.50m								
									END OF BOREHOLE @ 2.55 m Backfilled on completion. Refusal on rock. Groundwater encountered @ 2.0m.			RESIDUAL
			3.0									
			3.5									
			4.0									
			4.5									
			5.0									
			5.5									

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GAP gINT FN. F01a
R12

Release



REPORT OF BOREHOLE: GA51

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503231 m E 6963597 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 2.15 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0		GA51 (Jar) 0.00-0.30m PID = 1.4 ppm	X	X	CL	GRASS Silty CLAY Low plasticity, dark brown, fine grained sand	D	L		FILL
			0.25		GA51 (Bag) 0.00-0.25m	X	X	CL	Gravelly CLAY Low plasticity, dark brown	D			ALLUVIUM
			0.45		GA51 (Bag) 0.25-0.50m	X	X	CL	ASH / FILL Gravelly CLAY Low plasticity, dark brown	D			
			0.5		GA51 (Jar) 0.40-0.50m PID = 3.4 ppm	X	X	CL	Silty CLAY Low plasticity, orange brown	D			
			0.70		GA51 (Bag) 0.50-0.75m	X	X	CL/CI	Silty CLAY Low to medium plasticity, light grey with red	D-M	Vst		
			1.0		GA51 (Bag) 0.75-1.00m	X	X						
					GA51 (Jar) 0.90-1.00m PID = 3.1 ppm	X	X						
			1.5	1.50	GA51 (Bag) 1.00-1.25m	X	X	CI	Silty CLAY Medium plasticity, pale brown, orange mottle, with fine grained sand	D-M			
					GA51 (Bag) 1.50-1.75m	X	X						
			2.0	2.00	GA51 (Jar) 1.90-2.15m	X	X	CH	Silty CLAY High plasticity, pale grey	D	H	RESIDUAL	
			2.15		PID = 1.9 ppm	X	X						
					GA51 (Bag) 2.00-2.15m	X	X						
									END OF BOREHOLE @ 2.15 m Groundwater not encountered. Refusal on rock. Backfilled on completion.				
				2.5									
			3.0										
			3.5										
			4.0										
			4.5										
			5.0										
			5.5										

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GAP gINT FN. F01a
RL2

Released



REPORT OF BOREHOLE: GA52

CLIENT: s.73 Irrelevant informatio

PROJECT: RNA Redevelopment

LOCATION: RNA Showgrounds, Bowen Hills

JOB NO: 097632038

COORDS: 503212 m E 6963493 m N GDA94

SURFACE RL: m DATUM: AHD

INCLINATION: -90°

HOLE DIA: 125 mm HOLE DEPTH: 0.75 m

SHEET: 1 OF 1

DRILL RIG: Gemco HC10

DRILLER: MGS

LOGGED: AS DATE: 5/11/09

CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE				
			0.17		GA52 (Jar) 0.17-0.30m PID = 3.0 ppm			GM	Gravelly SILT Low plasticity, trace clay, grey brown, trace organics				RESIDUAL
			0.35					CL	Silty CLAY Low plasticity, pale grey, with fine grained sand				
			0.40		GA52 (Jar) 0.40-0.50m PID = 4.7 ppm								
			0.60		GA52 (Jar) 0.60-0.75m PID = 3.2 ppm								
			0.70					DW					
			0.75										
			0.8						END OF BOREHOLE @ 0.75 m Groundwater not encountered. Refusal on rock. Backfilled on completion.				
			1.0										
			1.2										
		1.4											
		1.6											
		1.8											
		2.0											

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GAP gINT FN. F01a
RL2

Release



REPORT OF BOREHOLE: GA53

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503270 m E 6963537 m N - GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.25 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE			
			0.16		GA53 (Jar) 0.16-0.30m PID = 3.2 ppm			CL	Sandy CLAY Low plasticity, dark grey, fine grained sand	M	VS-S	FILL / ALLUVIUM
			0.5		GA53 (Jar) 0.40-0.60m PID = 3.3 ppm			CL/CL	Gravelly CLAY Low to medium plasticity, yellow brown	D-M	S	RESIDUAL
			1.0		GA53 (Jar) 1.00-1.25m PID = 1.8 ppm							
			1.15					DW	Distinctly Weathered TUFF	D	L	
			1.25						END OF BOREHOLE @ 1.25 m Groundwater not encountered. Refusal on rock. Backfilled on completion.			
			1.5									
			2.0									
			2.5									
			3.0									
			3.5									
			4.0									
			4.5									
			5.0									
			5.5									
			6.0									

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GAP gINT FN. F01a
RL2

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REPORT OF BOREHOLE: GA55/MW05

CLIENT: s.73 Irrelevant informatio
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503259 m E 6963428 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 5.70 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

Drilling			Sampling		Field Material Description									
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	MONITORING WELL DETAILS	
Hollow Flight Auger	9/11/09	K	0.0	0.09					CONCRETE					
			0.29		GA55 (Bag) 0.25-0.50m				ROCK					
			0.5		GA55 (Jar) 0.40-0.50m				Gravelly CLAY					
			0.75		PID = 3.2 ppm				Low to medium plasticity, yellow brown, with fine grained sand, trace ash @ 0.6m					
			1.0		GA55 (Bag) 0.50-0.75m				Sandy CLAY					
			1.5		GA55 (Jar) 0.60-0.70m				Grey, trace of orange mottled, with fine grained sand and gravel <10%, trace ash @ 1.4m					
			2.0		PID = 2.3 ppm									
			2.5		GA55 (Bag) 0.75-1.00m									
			3.0		GA55 (Jar) 0.90-1.00m									
			3.5		PID = 2.8 ppm									
	19/11/09	K	4.0	1.50	GA55 (Bag) 1.00-1.25m				Clayey GRAVEL					
			4.5		GA55 (Bag) 1.25-1.50m				Coarse gravel, brown orange, low plasticity, trace ash					
			5.0		GA55 (Jar) 1.40-1.50m									
			5.5		PID = 3.2 ppm									
			6.0		GA55 (Bag) 1.50-1.75m									
			6.5		GA55 (Bag) 1.75-2.00m									
			7.0		GA55 (Jar) 1.90-2.00m									
			7.5		GA55 (Bag) 2.00-2.25m									
			8.0		GA55 (Bag) 2.25-2.50m									
			8.5		PID = 4.3 ppm									
			9.0	2.75	GA55 (Bag) 3.00-3.25m				Sandy CLAY					
			9.5		GA55 (Jar) 3.25-3.50m				Medium plasticity, grey, fine to medium grained sand, some coarse gravel					
			10.0		GA55 (Bag) 3.50-3.75m									
			10.5		GA55 (Bag) 3.75-4.00m									
			11.0		PID = 1.0 ppm									
			11.5		GA55 (Bag) 4.00-4.25m									
			12.0		GA55 (Jar) 4.25-4.50m									
			12.5		PID = 2.2 ppm									
			13.0		GA55 (Bag) 4.50-4.75m									
			13.5		GA55 (Jar) 4.75-5.00m									
			14.0	4.85					Distinctly Weathered TUFF					
			14.5											
			15.0											
			15.5											
			16.0											
			16.5											
			17.0											
			17.5											
			18.0											
			18.5											
			19.0	5.70					END OF BOREHOLE @ 5.70 m					
			19.5						Monitoring well installed.					
			20.0						Refusal on rock.					
			20.5											
			21.0											
			21.5											
			22.0											
			22.5											
			23.0											
			23.5											

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GAP gINT FN. F01d
RL2

Release



REPORT OF BOREHOLE: GA56

CLIENT: s.73 Irrelevant information

PROJECT: RNA Redevelopment

LOCATION: RNA Showgrounds, Bowen Hills

JOB NO: 097632038

COORDS: 503339 m E 6963527 m N GDA94

SURFACE RL: m DATUM: AHD

INCLINATION: -90°

HOLE DIA: 125 mm HOLE DEPTH: 3.00 m

SHEET: 1 OF 1

DRILL RIG: Hand Auger

DRILLER: MGS

LOGGED: AS

CHECKED: MP

DATE: 4/11/09

DATE: 19/11/09

Drilling				Sampling				Field Material Description			
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	STRUCTURE AND ADDITIONAL OBSERVATIONS
HAND AUGER			0.0	0.07	GA56 (Jar) 0.07-0.30m PID = 3.2 ppm			CI/CH	CONCRETE		FILL
			0.30					CI/CI	Gravelly CLAY Medium to high plasticity, brown, fine to medium grained sand, presence of ash		
			0.5		GA56 (Jar) 0.40-0.50m PID = 3.2 ppm			CI/CI	Gravelly CLAY Low to medium plasticity, pale brown, fine to medium grained sand		
			1.0		GA56 (Jar) 0.90-1.00m PID = 3.3 ppm						
			1.20								ALLUVIUM
			1.30					CH	red and brown CLAY High plasticity, pale grey		
			1.5		GA56 (Bag) 1.50-1.75m						RESIDUAL
			1.80								
			2.0		GA56 (Jar) 1.90-2.00m PID = 4.2 ppm			CI/CL	CLAY Low to medium plasticity, light grey with orange		
			2.5								
			3.0	3.00	GA56 (Jar) 2.90-3.00m PID = 4.3 ppm				END OF BOREHOLE @ 3.00 m Seepage encountered @ 1.5m Backfilled on completion. Refusal on rock.		
			3.5								
			4.0								
			4.5								
			5.0								
			5.5								
			6.0								

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GAP gINT FN. F01a
RL2

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REPORT OF BOREHOLE: GA57

CLIENT: s.73 Irrelevant informati
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503346 m E 6963531 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 2.85 m

SHEET: 1 OF 1
DRILL RIG: Hand Auger
DRILLER: MGS
LOGGED: AS DATE: 4/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HAND AUGER			0.0					CONCRETE		
			0.11		GA57 (Jar)			ASH / FILL		FILL
			0.20		0.11-0.30m PID = 1.1 ppm		CL	Gravelly CLAY Low plasticity, pale brown		
			0.5		GA57 (Jar)					
			0.90		0.40-0.50m PID = 0.4 ppm					
			1.0		GA57 (Jar)		CL- CI	Silty CLAY Low to medium plasticity, dark grey, with gravel	M S	
			1.40		0.90-1.00m PID = 1.4 ppm					
			1.5		GA57 (Jar)		CL- CI	CLAY Low to medium plasticity, grey, trace organics		ALLUVIUM Wet from 1.6-1.8m Hydrocarbon odour @ 1.6m
			2.0		1.40-1.50m PID = 1.9 ppm					
			2.5		GA57 (Jar)					
		2.85		1.50-1.60m						
		3.0		GA57 (Jar)			END OF BOREHOLE @ 2.85 m			
		3.5		2.00-2.10m PID = 4.4 ppm			Backfilled on completion.			
		4.0		GA57 (Jar)			Seepage @ 1.6m			
		4.5		2.30-2.40m PID = 3.5 ppm						
		5.0		GA57 (Jar)						
		5.5		2.70-2.85m PID = 3.3 ppm						
		6.0								

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA58

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503331 m E 6963550 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 0.30 m

SHEET: 1 OF 1
DRILL RIG: Hand Auger
DRILLER: MGS
LOGGED: AS DATE: 4/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HAND AUGER			0.0					CONCRETE		
			0.11		GA58 (Jar) 0.10-0.31m PID = 1.9 ppm		SP	Gravelly SAND Medium to coarse sand, brown		FILL
			0.2							
			0.30					END OF BOREHOLE @ 0.30 m Groundwater not encountered. Refusal on obstruction. Backfilled on completion.		
			0.4							
			0.6							
			0.8							
			1.0							
			1.2							
			1.4							
			1.6							
			1.8							
			2.0							

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GAP gINT FN. F01a
RL2

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REPORT OF BOREHOLE: GA59

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503315 m E 6963504 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 1.90 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 5/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE				FILL
			0.20										
			0.30		GA59 (Jar) 0.20-0.30m PID = 4.0 ppm			GM	Gravelly CLAY Low plasticity, yellow brown, medium gravel				
			0.50		GA59 (Jar) 0.40-0.50m PID = 3.3 ppm			CL	Gravelly CLAY Low plasticity, orange dark brown				
			0.75					CI	Gravelly CLAY Medium plasticity, brown and orange, trace ash				
			1.00		GA59 (Jar) 0.90-1.00m PID = 3.5 ppm			CH	CLAY High plasticity, grey, trace organics				ALLUVIUM Wet from 1.25-1.40m
			1.50										
			1.90		GA59 (Jar) 1.80-1.90m PID = 1.7 ppm								
			2.00						END OF BOREHOLE @ 1.90 m Groundwater not encountered. Refusal on rock. Backfilled on completion.				
			2.50										

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA60

CLIENT: s.73 Irrelevant informatio
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503327 m E 6963485 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 4.50 m

SHEET: 1 OF 1
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 6/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Hollow Flight Auger			0.0						CONCRETE			
			0.17									
			0.40		GA60 (Jar) 0.21-0.30m PID = 2.0 ppm			GM	PAVEMENT Gravelly SILT Low plasticity, dark grey, coarse gravel brown and orange	D	L	FILL
			0.5		GA60 (Jar) 0.40-0.50m PID = 3.1 ppm			CL/	Gravelly CLAY	M	S	
			0.60					CL	Low to medium plasticity, dark brown, trace ash			
			0.70					CL	Clayey SILT Low plasticity, pale brown, with fine grained sand	D	L	
			1.0		GA60 (Jar) 0.90-1.00m PID = 2.8 ppm							
			1.20									
			1.40					CI	Gravelly CLAY Medium plasticity, dark grey with orange	M	S	
			1.5						dark grey, medium gravel	M-W		
			1.60					CI	Gravelly CLAY Medium plasticity, dark grey, trace fine grained sand, organics	M	S	
			2.0		GA60 (Jar) 1.90-2.00m PID = 1.4 ppm							
			2.25					GC	Clayey GRAVEL Grey, low plasticity			
			2.5									
			3.0		GA60 (Jar) 2.90-3.00m PID = 0.8 ppm					W	S	
			3.5									
			3.60					CL	Gravelly CLAY Low plasticity, grey, fine gravel	M	H	ALLUVIAL
			3.75					CH	CLAY High plasticity, grey, with fine to medium gravel	W	S	
			4.0		GA60 (Jar) 3.90-4.00m PID = 1.2 ppm			CL	CLAY Low plasticity, pale grey	M-W	H	RESIDUAL
			4.5		GA60 (Jar) 4.40-4.50m PID = 0.6 ppm				END OF BOREHOLE @ 4.50 m Backfilled on completion. Seepage @ 3.6m			
			5.0									
			5.5									
			6.0									

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GAP gINT FN. F01a
RL2



REPORT OF BOREHOLE: GA61/MW06

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503385 m E 6963499 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 8.50 m

SHEET: 1 OF 2
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 6/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description																																																																																												
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	MONITORING WELL DETAILS																																																																																						
Hollow Flight Auger	19/11/09	K	0.0		GA61 (Jar) 0.05-0.30m PID = 1.5 ppm GA61 (Bag) 0.05-0.25m GA61 (Bag) 0.25-0.50m	X		GM	GRASS Silty GRAVEL - FILL Brown, trace clay, low plasticity	D	L		Flush Mounted Cement/Gatic																																																																																					
			0.5	0.60	GA61 (Jar) 0.40-0.50m PID = 3.1 ppm GA61 (Bag) 0.50-0.75m GA61 (Bag) 0.75-1.00m GA61 (Jar) 0.90-1.00m PID = 3.5 ppm			CL	Gravelly CLAY Low plasticity, dark brown, trace silt, ash at 1.3-1.4m					St	Bentonite Grout																																																																																			
			1.0		GA61 (Bag) 1.00-1.25m GA61 (Bag) 1.25-1.50m GA61 (Jar) 1.30-1.40m PID = 2.8 ppm			CL	Gravelly CLAY Low plasticity, yellow brown to dark brown, ash at 1.6-1.7m, trace slit brown and orange, no ash							L	Bentonite																																																																																	
			1.5	1.40	GA61 (Bag) 1.50-1.75m GA61 (Bag) 1.75-2.00m GA61 (Jar) 1.90-2.00m PID = 2.7 ppm													CH	CLAY - ALLUVIUM High plasticity, dark grey, orange mottles inside, trace ash	VS																																																																														
			2.0	2.00	GA61 (Bag) 2.00-2.25m GA61 (Bag) 2.25-2.50m GA61 (Bag) 2.50-2.75m GA61 (Bag) 2.75-3.00m GA61 (Jar) 2.90-3.00m PID = 2.8 ppm																	CI/CL	Silty CLAY Low to medium plasticity, brown orange, organics	M																																																																										
			2.5	2.25	GA61 (Bag) 3.00-3.25m GA61 (Bag) 3.25-3.50m GA61 (Bag) 3.50-3.75m GA61 (Bag) 3.75-4.00m GA61 (Jar) 3.90-4.00m PID = 2.6 ppm																					CL	Clayey SAND Medium to coarse sand, yellow brown	L																																																																						
			3.0	2.50	GA61 (Bag) 4.00-4.25m GA61 (Bag) 4.25-4.50m GA61 (Bag) 4.50-4.75m GA61 (Bag) 4.75-5.00m GA61 (Jar) 4.90-5.00m PID = 1.8 ppm																									CI	Sandy CLAY Medium plasticity, yellow brown, fine grained sand	S																																																																		
			3.5	3.25	GA61 (Bag) 5.00-5.25m GA61 (Bag) 5.25-5.50m GA61 (Bag) 5.50-5.75m																													CI	Sandy CLAY Medium plasticity, dark grey, fine to medium grained sand	VS																																																														
			4.0	3.80	GA61 (Bag) 5.75-6.00m GA61 (Jar)																																	CI	Silty CLAY Low to medium plasticity, dark grey, decomposed wood and organics	M-W	VS	Gravel Pack																																																								
			4.5	4.00	GA61 (Bag) 6.00-6.25m GA61 (Jar)																																						CI																																																							
			5.0	4.15	GA61 (Bag) 6.25-6.50m GA61 (Jar)																																										CI																																																			
			5.5	4.25	GA61 (Bag) 6.50-6.75m GA61 (Jar)																																														CI																																															
			6.0	4.40	GA61 (Bag) 6.75-7.00m GA61 (Jar)																																																		CI																																											
			6.5		GA61 (Bag) 7.00-7.25m GA61 (Jar)																																																						CI																																							
			7.0		GA61 (Bag) 7.25-7.50m GA61 (Jar)																																																										CI																																			
			7.5		GA61 (Bag) 7.50-7.75m GA61 (Jar)																																																														CI																															
			8.0		GA61 (Bag) 7.75-8.00m GA61 (Jar)																																																																		CI																											
			8.5		GA61 (Bag) 8.00-8.25m GA61 (Jar)																																																																						CI																							
			9.0		GA61 (Bag) 8.25-8.50m GA61 (Jar)																																																																										CI																			
			9.5		GA61 (Bag) 8.50-8.75m GA61 (Jar)																																																																														CI															
			10.0		GA61 (Bag) 8.75-9.00m GA61 (Jar)																																																																																		CI											
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14.5		GA61 (Bag) 11.00-11.25m GA61 (Jar)																					CI																																																																											
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36.0		GA61 (Bag) 21.75-22.00m GA61 (Jar)	CI																																																																																															
36.5		GA61 (Bag) 22.00-22.25m GA61 (Jar)					CI																																																																																											
37.0		GA61 (Bag) 22.25-22.50m GA61 (Jar)						CI																																																																																										
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40.0		GA61 (Bag) 23.75-24.00m GA61 (Jar)																																	CI																																																															
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68.0		GA61 (Bag) 37.75-38.00m GA61 (Jar)																																																																	CI																															
68.5		GA61 (Bag) 38																																																																																																



REPORT OF BOREHOLE: GA61/MW06

CLIENT: s.73 Irrelevant information
PROJECT: RNA Redevelopment
LOCATION: RNA Showgrounds, Bowen Hills
JOB NO: 097632038

COORDS: 503385 m E 6963499 m N GDA94
SURFACE RL: m DATUM: AHD
INCLINATION: -90°
HOLE DIA: 125 mm HOLE DEPTH: 8.50 m

SHEET: 2 OF 2
DRILL RIG: Gemco HC10
DRILLER: MGS
LOGGED: AS DATE: 6/11/09
CHECKED: MP DATE: 19/11/09

Drilling				Sampling		Field Material Description									
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION		MOISTURE	CONSISTENCY	DENSITY	MONITORING WELL DETAILS	
Hollow Flight Auger			6.0		5.90-6.00m PID = 0.3 ppm			SM	Silty SAND Medium to coarse grained sand, grey						
					GA61 (Bag) 6.25-6.50m										
			6.5	6.60	GA61 (Bag) 6.50-6.75m			CL/CL	Sandy CLAY Low to medium plasticity, pale grey, medium to coarse grained sand						
				6.75	GA61 (Bag) 6.75-7.50m			SM	Sandy SILT Coarse sand, pale grey						
			7.0												
			7.5		GA61 (Bag) 7.50-8.00m										
			8.0		GA61 8.00-8.25m										
			8.5	8.50					END OF BOREHOLE @ 8.50 m Monitoring well installed. Some core loss from samples between 6.0m and 8.25m.						
			9.0												
			9.5												
			10.0												
			10.5												
			11.0												
			11.5												
			12.0												

This report of borehole must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

GAP gINT FN. F01d
RL2

GAP5 04BETA BRIS.GLB FULL PAGE J:\GEO\2009\097632038-RNA-REDEVELOPMENT\TECHNICAL LOGS\GINT\GINT LOGS\PRELIMINARY INVESTIGATION\GINT LOGS GA61-MW06 PRELIMINARY INVESTIGATION.GPJ GAP5 1.GDT 23/11/2009 11:13:45 AM



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0916566	Page	: 1 of 18
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Brisbane
Contact	: sch4p4(6) Personal inform	Contact	: sch4p4(6) Pe
Address	: P O BOX 1734 MILTON QLD, AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: sch4p4(6) golder.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: 3721 5400	Telephone	: +61-7-3243 7222
Facsimile	: 3721 5401	Facsimile	: +61-7-3243 7218
Project	: 097632038	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: —	Date Samples Received	: 20-OCT-2009
C-O-C number	: SOIL	Issue Date	: 29-OCT-2009
Sampler	: sch4p4(6) Pe	No. of samples received	: 48
Site	: RNA	No. of samples analysed	: 27
Quote number	: EN/002/09		

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



WORLD RECOGNISED
ACCREDITATION

NATA Accredited Laboratory 825

This document is issued in
accordance with NATA
accreditation requirements.

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
sch4p4(6) Personal	Organic Instrument Chemist	Organics
	Organic Chemist	Organics
	Senior Inorganic Chemist	Inorganics

Environmental Division Brisbane
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A Campbell Brothers Limited Company

Page : 2 of 18
Work Order : EB0916566
Client : GOLDER ASSOCIATES
Project : 097632038



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 date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

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

- EG005T (Total Metals): Sample EB0916566-002 (GA19/0.4-0.5 m) shows poor duplicate results for Iron and Zinc due to sample heterogeneity. Confirmed by visual inspection.
- EG005T (Total Metals): Sample EB0916571-001 shows poor duplicate results for Zinc due to sample heterogeneity. Confirmed by visual inspection.
- PAH/Phenols: Sample GA17 shows poor duplicate results due to sample heterogeneity. Confirmed by re-extraction and re-analysis.
- Pesticides/PCB: Sample GA17 required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly. Surrogates are not determined.
- Pesticides: Sample GA24 shows poor matrix spike recovery due to matrix interference. Confirmed by re-extraction and re-analysis.

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RTI Act 2009

Page : 3 of 18
 Work Order : EB0916566
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL				Client sample ID		GA19 0.4-0.5 m		GA19 0.8-1.0 m		GA21 0.4-0.5 m		GA21 0.9-1.0 m		GA21 1.8-2.0 m					
Client sampling date / time						14-OCT-2009 15:00		14-OCT-2009 15:00		14-OCT-2009 15:00		14-OCT-2009 15:00		14-OCT-2009 15:00					
Compound				CAS Number		LOR		Unit		EB0916566-002		EB0916566-003		EB0916566-005		EB0916566-006		EB0916566-007	
EA055: Moisture Content																			
^ Moisture Content (dried @ 103°C)				—		1.0		%		9.0		17.0		4.2		4.9		7.7	
EG005T: Total Metals by ICP-AES																			
Arsenic				7440-38-2		5		mg/kg		<5		<5		—		66		37	
Cadmium				7440-43-9		1		mg/kg		<1		<1		—		2		<1	
Chromium				7440-47-3		2		mg/kg		8		<2		—		10		20	
Copper				7440-50-8		5		mg/kg		32		14		—		74		1350	
Lead				7439-92-1		5		mg/kg		26		9		—		273		749	
Nickel				7440-02-0		2		mg/kg		<2		<2		—		44		30	
Zinc				7440-66-6		5		mg/kg		58		14		—		1000		470	
EG035T: Total Recoverable Mercury by FIMS																			
Mercury				7439-97-6		0.1		mg/kg		<0.1		<0.1		—		0.1		0.2	
EP066: Polychlorinated Biphenyls (PCB)																			
Total Polychlorinated biphenyls				—		0.10		mg/kg		—		—		<0.10		—		—	
EP068A: Organochlorine Pesticides (OC)																			
alpha-BHC				319-84-6		0.05		mg/kg		—		—		<0.05		—		—	
Hexachlorobenzene (HCB)				118-74-1		0.05		mg/kg		—		—		<0.05		—		—	
beta-BHC				319-85-7		0.05		mg/kg		—		—		<0.05		—		—	
gamma-BHC				58-89-9		0.05		mg/kg		—		—		<0.05		—		—	
delta-BHC				319-86-8		0.05		mg/kg		—		—		<0.05		—		—	
Heptachlor				76-44-8		0.05		mg/kg		—		—		<0.05		—		—	
Aldrin				309-00-2		0.05		mg/kg		—		—		<0.05		—		—	
Heptachlor epoxide				1024-57-3		0.05		mg/kg		—		—		<0.05		—		—	
trans-Chlordane				5103-74-2		0.05		mg/kg		—		—		<0.05		—		—	
alpha-Endosulfan				959-98-8		0.05		mg/kg		—		—		<0.05		—		—	
cis-Chlordane				5103-71-9		0.05		mg/kg		—		—		<0.05		—		—	
Dieldrin				60-57-1		0.05		mg/kg		—		—		<0.05		—		—	
4,4'-DDE				72-55-9		0.05		mg/kg		—		—		<0.05		—		—	
Endrin				72-20-8		0.05		mg/kg		—		—		<0.05		—		—	
beta-Endosulfan				33213-65-9		0.05		mg/kg		—		—		<0.05		—		—	
4,4'-DDD				72-54-8		0.05		mg/kg		—		—		<0.05		—		—	
Endrin aldehyde				7421-93-4		0.05		mg/kg		—		—		<0.05		—		—	
Endosulfan sulfate				1031-07-8		0.05		mg/kg		—		—		<0.05		—		—	
4,4'-DDT				50-29-3		0.2		mg/kg		—		—		<0.2		—		—	
Endrin ketone				53494-70-5		0.05		mg/kg		—		—		<0.05		—		—	
Methoxychlor				72-43-5		0.2		mg/kg		—		—		<0.2		—		—	
EP068B: Organophosphorus Pesticides (OP)																			

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 Work Order : EB0916566
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA19 0.4-0.5 m	GA19 0.8-1.0 m	GA21 0.4-0.5 m	GA21 0.9-1.0 m	GA21 1.8-2.0 m
				14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00
				EB0916566-002	EB0916566-003	EB0916566-005	EB0916566-006	EB0916566-007
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.05	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.05	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	—	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	—	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	—	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.05	—	—
Azinphos Methyl	—	0.05	mg/kg	—	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	—	1.5	0.9
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	—	4.6	1.9
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	—	11.8	11.0
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	—	6.2	3.6
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	—	46.9	27.7
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	—	46.1	25.8
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	—	30.0	14.4
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	—	23.4	13.1
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	—	38.2	11.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	—	32.4	17.7
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	—	39.4	19.4
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	—	28.5	10.2
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	—	6.6	2.4
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	—	36.4	12.4
EP080/071: Total Petroleum Hydrocarbons								

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 Work Order : EB0916566
 Client : GOLDER ASSOCIATES
 Project : 097632038



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA19 0.4-0.5 m	GA19 0.8-1.0 m	GA21 0.4-0.5 m	GA21 0.9-1.0 m	GA21 1.8-2.0 m
				14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00
Compound	CAS Number	LOR	Unit	EB0916566-002	EB0916566-003	EB0916566-005	EB0916566-006	EB0916566-007
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	—	10	mg/kg	—	—	—	<10	—
C10 - C14 Fraction	—	50	mg/kg	—	—	—	<50	—
C15 - C28 Fraction	—	100	mg/kg	—	—	—	730	—
C29 - C36 Fraction	—	100	mg/kg	—	—	—	950	—
^ C10 - C36 Fraction (sum)	—	50	mg/kg	—	—	—	1680	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	—	—	<0.2	—
Toluene	108-88-3	0.5	mg/kg	—	—	—	<0.5	—
Ethylbenzene	100-41-4	0.5	mg/kg	—	—	—	<0.5	—
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	—	—	—	<0.5	—
ortho-Xylene	95-47-6	0.5	mg/kg	—	—	—	<0.5	—
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	—	—	67.8	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	68.4	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	83.0	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	90.3	93.0	—	106	89.4
2-Chlorophenol-D4	93951-73-6	0.1	%	101	99.6	—	110	95.6
2,4,6-Tribromophenol	118-79-6	0.1	%	108	114	—	100	87.2
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	108	114	—	90.5	95.0
Anthracene-d10	1719-06-8	0.1	%	105	104	—	106	102
4-Terphenyl-d14	1718-51-0	0.1	%	109	116	—	106	98.8
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	—	—	110	—
Toluene-D8	2037-26-5	0.1	%	—	—	—	89.4	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	—	—	94.7	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA22 0.1-0.3 m	GA22 0.8-1.0 m	GA24 0.1-0.3 m	GA24 0.4-0.5 m	GA24 0.6-0.7 m
				14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00
				EB0916566-009	EB0916566-011	EB0916566-012	EB0916566-013	EB0916566-014
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	—	1.0	%	7.4	16.9	3.2	10.9	10.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	25	19	—	<5	<5
Cadmium	7440-43-8	1	mg/kg	<1	4	—	<1	<1
Chromium	7440-47-3	2	mg/kg	10	12	—	5	6
Copper	7440-50-8	5	mg/kg	25	85	—	9	<5
Lead	7439-92-1	5	mg/kg	61	306	—	42	12
Nickel	7440-02-0	2	mg/kg	8	61	—	5	<2
Zinc	7440-66-6	5	mg/kg	134	955	—	107	14
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.5	—	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	—	<0.10	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	—	—	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				GA22 0.1-0.3 m	GA22 0.8-1.0 m	GA24 0.1-0.3 m	GA24 0.4-0.5 m	GA24 0.6-0.7 m
				14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00
Compound	CAS Number	LOR	Unit	EB0916566-009	EB0916566-011	EB0916566-012	EB0916566-013	EB0916566-014
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.05	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.05	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	—	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	—	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	—	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.05	—	—
Azinphos Methyl	—	0.05	mg/kg	—	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.6	—	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.2	—	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.7	—	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	1.2	5.5	—	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	1.2	5.6	—	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	0.8	4.0	—	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	0.7	3.8	—	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	0.5	3.2	—	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.9	3.4	—	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	0.8	3.8	—	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.5	2.9	—	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.6	—	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	0.6	4.0	—	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

				GA22 0.1-0.3 m	GA22 0.8-1.0 m	GA24 0.1-0.3 m	GA24 0.4-0.5 m	GA24 0.6-0.7 m
Client sampling date / time				14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00	14-OCT-2009 15:00
Compound	CAS Number	LOR	Unit	EB0916566-009	EB0916566-011	EB0916566-012	EB0916566-013	EB0916566-014
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	—	10	mg/kg	<10	—	—	—	—
C10 - C14 Fraction	—	50	mg/kg	<50	—	—	—	—
C15 - C28 Fraction	—	100	mg/kg	<100	—	—	—	—
C29 - C36 Fraction	—	100	mg/kg	<100	—	—	—	—
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	—	—	—	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	—	—	—	—
Toluene	108-88-3	0.5	mg/kg	<0.5	—	—	—	—
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	—	—	—	—
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	—	—	—	—
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	—	—	—	—
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	—	—	68.6	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	70.1	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	83.8	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	90.2	89.2	—	87.1	88.9
2-Chlorophenol-D4	93951-73-6	0.1	%	96.2	96.3	—	91.2	94.5
2,4,6-Tribromophenol	118-79-6	0.1	%	85.6	108	—	84.0	109
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	90.7	67.6	—	97.6	97.8
Anthracene-d10	1719-06-8	0.1	%	108	99.2	—	87.1	96.6
4-Terphenyl-d14	1718-51-0	0.1	%	113	135	—	113	112
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	114	—	—	—	—
Toluene-D8	2037-26-5	0.1	%	89.1	—	—	—	—
4-Bromofluorobenzene	460-00-4	0.1	%	91.9	—	—	—	—

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				QC3	QC5	GA26 0.2-0.3 m	GA26 0.5-0.6 m	GA25 0.4-0.5 m
				15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00
Compound	CAS Number	LOR	Unit	EB0916566-018	EB0916566-019	EB0916566-020	EB0916566-021	EB0916566-024
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	14.8	15.6	10.1	9.4	14.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	—	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	—	<1	<1
Chromium	7440-47-3	2	mg/kg	8	3	—	4	<2
Copper	7440-50-8	5	mg/kg	<5	<5	—	<5	<5
Lead	7439-92-1	5	mg/kg	14	11	—	34	6
Nickel	7440-02-0	2	mg/kg	<2	<2	—	<2	<2
Zinc	7440-66-6	5	mg/kg	22	7	—	41	11
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-8	0.1	mg/kg	0.1	<0.1	—	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	—	<0.10	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	—	—	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.05	—	—
Endosulfan sulfate	1031-07-3	0.05	mg/kg	—	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	QC3	QC5	GA26 0.2-0.3 m	GA26 0.5-0.6 m	GA25 0.4-0.5 m
				15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00
				EB0916566-018	EB0916566-019	EB0916566-020	EB0916566-021	EB0916566-024
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.05	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.05	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	—	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	—	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	—	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.05	—	—
Azinphos Methyl	—	0.05	mg/kg	—	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<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
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	—	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<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
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<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
EP080/071: Total Petroleum Hydrocarbons								

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	QC3	QC5	GA26 0.2-0.3 m	GA26 0.5-0.6 m	GA25 0.4-0.5 m
				15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00
				EB0916566-018	EB0916566-019	EB0916566-020	EB0916566-021	EB0916566-024
EP080/071: Total Petroleum Hydrocarbons - Continued								
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
C29 - C36 Fraction	—	100	mg/kg	<100	—	—	<100	<100
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	—	—	<50	<50
EP080: BTEX								
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	108-38-3 106-42-3	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
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	—	—	68.9	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	69.6	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	84.9	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	84.4	83.5	—	90.8	90.8
2-Chlorophenol-D4	93951-73-6	0.1	%	92.2	93.8	—	102	96.8
2,4,6-Tribromophenol	118-79-6	0.1	%	108	114	—	115	111
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-3	0.1	%	94.4	95.1	—	112	100
Anthracene-d10	1719-06-8	0.1	%	92.9	82.9	—	117	97.7
4-Terphenyl-d14	1718-51-0	0.1	%	113	107	—	131	116
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	111	—	—	112	107
Toluene-D8	2037-26-5	0.1	%	89.8	—	—	91.2	89.7
4-Bromofluorobenzene	460-00-4	0.1	%	91.5	—	—	92.4	89.5



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Sub-Matrix: SOIL				Client sample ID	GA25 0.8-0.9 m	GA23 0.22-0.3 m	GA18 0.4-0.5 m	GA18 0.9-1.0 m	GA18 1.9-2.0 m
Client sampling date / time				15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00
Compound	CAS Number	LOR	Unit	EB0916566-025	EB0916566-026	EB0916566-030	EB0916566-031	EB0916566-033	
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	—	1.0	%	12.8	14.2	15.1	14.4	19.6	
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	9	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	9	6	3	3	7	
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5	
Lead	7439-92-1	5	mg/kg	18	25	13	9	19	
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	<2	<2	
Zinc	7440-66-6	5	mg/kg	26	18	13	5	6	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2.4	<0.5	<0.5	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	7.0	<0.5	<0.5	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	6.5	<0.5	<0.5	<0.5	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.9	<0.5	<0.5	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	4.5	<0.5	<0.5	<0.5	
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	3.0	<0.5	<0.5	<0.5	
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3.9	<0.5	<0.5	<0.5	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3.6	<0.5	<0.5	<0.5	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2.2	<0.5	<0.5	<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.5	<0.5	<0.5	<0.5	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2.5	<0.5	<0.5	<0.5	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	—	10	mg/kg	<10	—	—	—	—	
C10 - C14 Fraction	—	50	mg/kg	<50	—	—	—	—	
C15 - C28 Fraction	—	100	mg/kg	<100	—	—	—	—	
C29 - C36 Fraction	—	100	mg/kg	<100	—	—	—	—	
^ C10 - C36 Fraction (sum)	—	50	mg/kg	<50	—	—	—	—	
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg	<0.2	—	—	—	—	

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA25 0.8-0.9 m	GA23 0.22-0.3 m	GA18 0.4-0.5 m	GA18 0.9-1.0 m	GA18 1.9-2.0 m
				15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00
				EB0916566-025	EB0916566-026	EB0916566-030	EB0916566-031	EB0916566-033
EP080: BTEX - Continued								
Toluene	108-88-3	0.5	mg/kg	<0.5	---	---	---	---
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	---	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	---	---	---	---
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	82.9	107	93.4	97.2	101
2-Chlorophenol-D4	93951-73-6	0.1	%	95.4	117	106	105	107
2,4,6-Tribromophenol	118-79-6	0.1	%	104	91.2	88.4	87.6	87.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	102	100	98.4	110	111
Anthracene-d10	1719-06-8	0.1	%	79.2	121	111	84.2	85.0
4-Terphenyl-d14	1718-51-0	0.1	%	115	136	129	117	122
EP080S: TPH(M)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	112	---	---	---	---
Toluene-D8	2037-26-5	0.1	%	90.5	---	---	---	---
4-Bromofluorobenzene	460-00-4	0.1	%	93.0	---	---	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA20 0.2-0.3 m	GA28 0.125-0.26 m	GA17 0.2-0.3 m	GA17 0.4-0.5 m	GA17 0.9-1.0 m
				16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00
				EB0916566-036	EB0916566-039	EB0916566-040	EB0916566-041	EB0916566-042
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	14.5	8.7	9.5	11.7	13.9
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	50	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	4	7	5	4	4
Copper	7440-50-8	5	mg/kg	6	9	23	22	6
Lead	7439-92-1	5	mg/kg	72	17	103	33	32
Nickel	7440-02-0	2	mg/kg	<2	4	18	8	<2
Zinc	7440-66-6	5	mg/kg	79	38	82	35	31
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	0.3	0.2
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	—	0.10	mg/kg	—	—	<0.53	—	—
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.26	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.26	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.26	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.26	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.26	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.26	—	—
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.26	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.26	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.26	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	<0.26	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.26	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.26	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.13	—	—
Endrin	72-20-8	0.05	mg/kg	—	—	<0.26	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	<0.26	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.26	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.26	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	<0.26	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.3	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.26	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.3	—	—
EP068B: Organophosphorus Pesticides (OP)								

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA20	GA28	GA17	GA17	GA17
				0.2-0.3 m	0.125-0.26 m	0.2-0.3 m	0.4-0.5 m	0.9-1.0 m
				16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00
				EB0916566-036	EB0916566-039	EB0916566-040	EB0916566-041	EB0916566-042
EP063B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.26	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.26	—	—
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.3	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.26	—	—
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.26	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.26	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.3	—	—
Malathion	121-75-5	0.05	mg/kg	—	—	<0.26	—	—
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.26	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.26	—	—
Parathion	56-38-2	0.2	mg/kg	—	—	<0.3	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.26	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.26	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.26	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.26	—	—
Prothiofos	34843-46-4	0.05	mg/kg	—	—	<0.26	—	—
Ethion	563-12-2	0.05	mg/kg	—	—	<0.26	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.26	—	—
Azinphos Methyl	—	0.05	mg/kg	—	—	<0.26	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	2.6	0.6	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	10.7	3.4	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	1.4	0.6	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	5.6	2.9	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	39.6	14.6	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	15.5	7.0	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	1.3	<0.5	92.4	28.6	<0.5
Pyrene	129-00-0	0.5	mg/kg	1.5	<0.5	89.4	26.1	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	1.2	<0.5	57.6	16.9	<0.5
Chrysene	218-01-9	0.5	mg/kg	1.2	<0.5	41.5	13.8	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	1.1	<0.5	41.9	19.7	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	1.4	<0.5	35.9	7.3	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.4	<0.5	47.1	19.4	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	0.9	<0.5	31.1	9.0	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	8.4	2.1	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.1	<0.5	35.6	10.0	<0.5
EP080/071: Total Petroleum Hydrocarbons								

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Compound	CAS Number	LOR	Unit	GA20 0.2-0.3 m	GA28 0.125-0.26 m	GA17 0.2-0.3 m	GA17 0.4-0.5 m	GA17 0.9-1.0 m
				16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00
Client sampling date / time				EB0916566-036	EB0916566-039	EB0916566-040	EB0916566-041	EB0916566-042
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	---	10	mg/kg	---	---	<10	---	---
C10 - C14 Fraction	---	50	mg/kg	---	---	<50	---	---
C15 - C28 Fraction	---	100	mg/kg	---	---	1550	---	---
C29 - C36 Fraction	---	100	mg/kg	---	---	1580	---	---
^ C10 - C36 Fraction (sum)	---	50	mg/kg	---	---	3120	---	---
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	---	---	<0.2	---	---
Toluene	108-88-3	0.5	mg/kg	---	---	<0.5	---	---
Ethylbenzene	100-41-4	0.5	mg/kg	---	---	<0.5	---	---
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	---	---	<0.5	---	---
ortho-Xylene	95-47-6	0.5	mg/kg	---	---	<0.5	---	---
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	---	---	Not Determined	---	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	---	---	Not Determined	---	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	---	---	Not Determined	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	79.9	93.3	102	97.6	99.4
2-Chlorophenol-D4	93951-73-6	0.1	%	90.7	101	106	110	110
2,4,6-Tribromophenol	118-79-6	0.1	%	102	90.4	94.0	108	112
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	95.9	102	110	110	112
Anthracene-d10	1719-06-8	0.1	%	90.4	102	111	105	109
4-Terphenyl-d14	1718-51-0	0.1	%	105	113	93.6	109	119
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	---	112	---	---
Toluene-D8	2037-26-5	0.1	%	---	---	88.2	---	---
4-Bromofluorobenzene	480-00-4	0.1	%	---	---	88.4	---	---

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Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	GA27	GA27			
				0.2-0.3 m	0.4-0.5 m			
				16-OCT-2009 15:00	16-OCT-2009 15:00			
				EB0916566-046	EB0916566-047			
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	—	1.0	%	15.6	17.3	—	—	—
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	—	—	—
Cadmium	7440-43-9	1	mg/kg	<1	<1	—	—	—
Chromium	7440-47-3	2	mg/kg	5	6	—	—	—
Copper	7440-50-8	5	mg/kg	<5	<5	—	—	—
Lead	7439-92-1	5	mg/kg	11	14	—	—	—
Nickel	7440-02-0	2	mg/kg	<2	<2	—	—	—
Zinc	7440-66-6	5	mg/kg	14	18	—	—	—
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	—	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	—	—	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	—	—	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	—	—	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	—	—	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	—	—	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	—	—	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	—	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	—	—	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	—	—	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	—	—	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	—	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	—	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	—	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	98.0	96.4	—	—	—
2-Chlorophenol-D4	93951-73-6	0.1	%	108	104	—	—	—
2,4,6-Tribromophenol	118-79-6	0.1	%	109	107	—	—	—
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	111	113	—	—	—
Anthracene-d10	1719-06-8	0.1	%	108	105	—	—	—
4-Terphenyl-d14	1718-51-0	0.1	%	114	116	—	—	—

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Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	164
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	136
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	10	110
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	24	113
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	19	115
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	30	115
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	18	137
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	121
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

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04 March 2010

Site ID: 68384
File Number:
Enquiries to: Contaminated Land Unit
Telephone: (07) 3330 5685

ROYAL NATIONAL AGRICULTURAL & INDUSTRIAL ASSOCIATION OF QUEENSLAND
EXHIBITION GROUNDS
GREGORY TERRACE
FORTITUDE VALLEY QLD 4006

NOTICE OF LAND LISTED ON THE ENVIRONMENTAL MANAGEMENT REGISTER

In accordance with section 374 of the *Environmental Protection Act 1994 (EP Act)* notice is given that the parcel of land described below has been listed on the Environmental Management Register (EMR).

Lot: 487 Plan: SP196776
Brisbane City Council

631 GREGORY TERRACE
BOWEN HILLS 4006

The parcel of land has been recorded on the EMR as, after careful consideration of submissions, it is decided that the land has been affected by a hazardous contaminant.

HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant. Refer to the summary given below.

Lead up to 939 mg/kg, Benzo (a) Pyrene up to 9.2 mg/kg, PAH up to 217.9 mg/kg

The owner may apply for a review of the decision to record the land in the EMR within 14 days after receipt of this notice, in accordance with section 521 of the *EP Act*. If you decide to apply for a review you must, in accordance with section 521(3) also give notice to the local government that you are seeking a review. You must forward to the local government the following documents:

- a notice of the application (the "review notice");
- a copy of the application and supporting documents.

The review notice must inform the local government that submissions on the application may be made within 7 days after the application is made to the DERM, as required by section 521(4) of the *EP Act*. A land owner dissatisfied with a review decision may appeal against the decision in accordance with section 531 of the *EP Act*. A copy of sections 521 and 531 is attached to this notice.

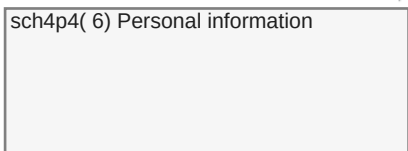
In accordance with the land being recorded on the EMR the following requirements apply under section 421 of the *EP Act*.

If the owner proposes to dispose of the land to someone else, the owner must, before agreeing to dispose of the land, give written notice to the buyer that the particulars of the land have been recorded in the register.

Further information regarding this notice may be obtained by contacting the Contaminated Land Unit, DERM on telephone (07) 3330 5687. Further information about contaminated land matters may be obtained by visiting our web-site at:

http://www.derm.qld.gov.au/environmental_management/land/contaminated_land/.

sch4p4(6) Personal information

A rectangular grey box used to redact personal information.

Delegate of Administering Authority
Environmental Protection Act 1994

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