



Environmental
Protection
Agency

ENVIRONMENTAL CONTROLS
CONTAMINATED SITES MANAGEMENT
CSI NOOSA
54 MARY STREET NOOSAVILLE
LI RP131598 SERVICE STATIONS

sch4p4(6) Personal information
sch4p4(6) Personal information

BNE27284 Vol 1

CSI 54 MARY STREET



QUEENSLAND
PARKS AND
WILDLIFE
SERVICE

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ENVIRONMENTAL CONTROLS
CONTAMINATED SITES MANAGEMENT
CSI NOOSA
54 MARY STREET NOOSAVILLE
LI RP131598 SERVICE STATIONS



Environmental
Protection
Agency

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CSI 54

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25 MAY 1990
9:54 AM

050 LEASE TRIP

LEASE (insert type of dealing)	I/CODE
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ED IN THE REGISTER BOOK

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AT 9-35 AM/PM J

29 MAY 1990 (6) Personal info

REGISTRAR OF TITLES

W THIS LINE TO BE COMPLETED BY LODGER	LODGER CODE
Sabtorch Pty. Ltd. T/A A. C. FOX & ASSOCIATES 157 Ann Street BRISBANE, 4000 Ph: 221 1266	

ES OF TITLE, DEEDS OF GRANT, DECLARATIONS ETC. LODGED
DOCUMENT (TO BE COMPLETED BY LODGING PARTIES.)

LODGED BY

LINE FOR DELIVERY NOTATIONS	
RECEIPT NOTATIONS	OFFICE USE
RECEIVED:	
File A	

CORRESPONDENCE NUMBER

REQUISITIONS

Enquiries Paul Butcher
Telephone (07) 3225 8416, email
Your reference
Our reference BNE27284

6 March 2007

BP Noosaville
PO Box 699
Gympie Qld 4570

Attention: sch4p4(6) Personal information

Dea sch4p4(6) Personal information

Re: Site Contamination Investigation for BP Service Station located on Lot 1 on RP131598, at 54 Mary St, Noosaville.

The Environmental Protection Agency (EPA) requested, in a letter dated 28 March 2006 (copy attached), that a Contaminated Site Investigation (CSI) be conducted on the above site. This CSI was required to:

- Delineate hydrocarbon contamination in soil and groundwater;
- Describe measures proposed to control any contamination source;
- Provide a remediation strategy to address offsite impacts.

Whilst the EPA acknowledges receipt of a report titled *Ground Contamination Assessment, BP Service Station, 54 Mary Street, Noosaville, Queensland. (Lot 1 RP131598)*, this report failed to adequately address the above points. As a preliminary report only, it recommended further action to delineate and address potential offsite impacts.

Please advise the EPA by 30 April 2007 what action is proposed or has been taken to address the above points. If further investigations or remediation works have been undertaken, please provide the EPA with details of the outcome of such.

In exercising its discretion not to take further enforcement action at this time, the EPA looks forward to your prompt attention to ensuring this issue is resolved.

If you require further clarification on this matter, please contact Paul Butcher on (07) 3225 8416.

sch4p4(6) Personal information

288 Edward Street Brisbane
Queensland 4000 Australia
GPO Box 2771 Brisbane Queensland
Queensland 4001 Australia
Telephone
Facsimile
Website www.epa.qld.gov.au
ABN 87 221 158 786

Yours sincerely

sch4p4(6) Personal information

Scott Robinson

**Operations Manager (Waste and Contaminated Land Unit)
Environmental Protection Agency**

Cc: sch4p4(6) Personal information
Caltex Australia Pty Ltd
GPO Box 3916,
SYDNEY NSW 2001

FILE NOTE

23 February 2007

To: File

From: Paul Butcher, Environmental Officer

Subject: BP Service Station, 54 Mary Street, Noosaville – Lot 1 on RP131598

Ground Contamination Assessment, BP Service Station, 54 Mary Street, Noosaville, Queensland. (Lot 1 RP131598), prepared by Le Vert, dated May 2006 (Doc. No. 06194-001).

Jacinta Griffin of the EPA CLU in a letter dated 28 March 2006 requested a site investigation be conducted which should:

- Delineate hydrocarbon contamination in soil and groundwater;
- Describe measures proposed to control any contamination source
- Provide a remediation strategy to address offsite impacts.

The above report, received 30 October 2006, states (p.5) that Le Vert's investigation commenced before the EPA investigation and subsequent request for the above and is only the first step in providing a solution to potential issue of off site migration of hydrocarbons.

The report goes some way toward delineating the contamination on site, both in soil and groundwater, and while it recommends further off site investigation, this was not a requirement of the EPA request, according to the wording of the letter.

Whilst recommending further measures to delineate contamination offsite, there were no measures proposed to control any contamination source. In fact, the possible source was not investigated, beyond a mention that 5 of 6 fuel tanks passed integrity testing in October 2005.

There was no remediation strategy provided to address offsite impact.

As this report does not provide an adequate response to the EPA request, it is recommended that a letter be sent to the site owner and report commissioner requesting details of further action taken to address the issues raised in this report and that of the EPA investigation.

sch4p4(6) Personal information

Paul Butcher
Environmental Officer

File note of discussion

☐ Meeting ☒ Telephone
Date: 17/10/06 Time: 11.45am
Between [redacted] of BP Noosaville
And Paul Butcher of EPA
Subject: requested CSI report

At 11.45am on 17 October 2006, [redacted] lessee of the BP Noosaville site phoned me to inform the EPA that the expected report for BP Noosaville had been passed from [redacted] Le Vert to Caltex, the former owners of the site and those responsible for remediation. He informed me that he had spoken to [redacted] of Caltex in Sydney who said that the report was available for release to the EPA but had not been sent. He would not send a copy to [redacted] but said he would put a copy for the EPA in the mail today. I agreed to call [redacted] on Friday the 20th if I had not received a copy of the report by then.

[redacted] sch4p4(6) Personal information

17/10/06

Called [redacted] 11.27 on 23/10/06 to inform him that no report has been received. He said he would email Caltex.

[redacted] Personal information



**Queensland
Government**

Enquiries Paul Butcher
Telephone (07) 3225 8416
Your reference
Our reference BNE27284

Environmental Protection Agency

Incorporating the
Queensland Parks and Wildlife Service

6 October 2006

BP Noosaville
PO Box 699
Gympie Qld 4570

Attention: sch4p4(6) Personal information

Dear sch4p4(6) Personal information

Re: Request for Site Contamination Investigation for BP Service Station located on Lot 1 on RP131598, at 54 Mary St, Noosaville.

The Environmental Protection Agency (EPA) requested, in a letter dated 28 March 2006 (copy attached), that a Contaminated Site Investigation (CSI) be conducted on the above site. To date, the EPA has not received a report of that CSI despite extensions in timeframe being granted.

The EPA requests that a comprehensive report of the CSI be provided by 31 October 2006. The EPA looks forward to your prompt attention to this matter. Should the required documentation not be provided by this date, the EPA reserves its right to take further enforcement action under the provisions of the *Environmental Protection Act 1994*.

If you have any questions regarding this matter, please do not hesitate to contact Paul Butcher on (07) 3225 8416.

Yours sincerely

sch4p4(6) Personal information

Miguel Zavaleta
Operations Manager (Contaminated Land Unit)

Jacinta Griffin

From: Jacinta Griffin [jacinta.griffin@epa.qld.gov.au]
Sent: Wednesday, 24 May 2006 3:34 PM
To: 'Noosa Servo'
Subject: RE: SI Noosaville Servo Corner Weyba Rd and Mary St

Personal

I have discussed the extension with Mark Paton, Chief Scientific Advisor and he has indicated that EPA will grant a one additional extension of time from 19/5/06.

Regards
Jacinta Griffin

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

From: Noosa Servo [mailto:noosaservo@madill.com.au]
Sent: Wednesday, 24 May 2006 7:52 AM
To: jacinta.griffin@epa.qld.gov.au
Subject: Fw: SI Noosaville Servo Corner Weyba Rd and Mary St

Jacinta

As per our telephone conversation yesterday, we request a six week extension from the 19th. May to the 30th. June 2006 to finalise testing and reports of our site.

(6) Personal info
Manager

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

From: LeVert
To: jacinta.griffin@epa.qld.gov.au
Cc: (6) Personal info scaples@caltex.com.au ; noosaservo@madill.com.au
Sent: Tuesday, May 23, 2006 10:33 AM
Subject: SI Noosaville Servo Corner Weyba Rd and Mary St

Jacinta,

Jacinta Griffin

From: [redacted]@bigpond.net.au
Sent: Tuesday, 23 May 2006 10:34 AM
To: jacinta.griffin@epa.qld.gov.au
Cc: [redacted]scaples@caltex.com.au;
Subject: SI Noosaville Servo Corner Weyba Rd and Mary St
Jacinta,

LeVert Environmental conducted a site investigation on behalf of Caltex Australia at the above site on 26th April 2006. The report is in draft and with Caltex at the moment. I understand from Caltex that they have no objection to the EPA reviewing the report when it goes final.

Many Thanks

[redacted]
ch4p4(6) Personal informatio

Jacinta Griffin

From: Noosa Servo
Sent: Tuesday, 23 May 2006 10:19 AM
To: jacinta.griffin@epa.qld.gov.au
Subject: Fw: BP Noosaville
Jacinta

I have spoken to (6) Personal info today and he is hoping to send me a copy of the report.
He has also spoken to (6) Personal info suggesting further tests be done off site.
I will require an extension of time as I am waiting on the reports and also further testing that must be done.

I have tried to phone you this morning on 3225 1086 but the phone was answered by somebody on a different floor to you.
I am available on my mobile (6) Personal info up to 1.30pm today if you need to speak to me.
I have a meeting to attend this afternoon.

(6) Personal info

Jacinta Griffin

From: Jacinta Griffin [jacinta.griffin@epa.qld.gov.au]
Sent: Monday, 22 May 2006 10:53 AM
To: (6) Personal info
Cc: (6) Personal info
Subject: Filenote for BNE27284 BP servo Noosaville

Kim

I rang (6) Personal info of BP Noosaville to request where the report for the site was up to since no response was received by EPA by the due date of 19 May. He explained that p4(6) Personal info had spoken with (6) Personal info and she advised that an she would discuss an extension with the Manager. Since I am the Project Manager for this file BNE27284, I request a filenote of discussions by made and put onto the file for completeness and consistency.

If you have any questions please discuss with myself.

Regards

Jacinta Griffin
Senior Environmental Officer
Contaminated Land Unit

Southern Region
Queensland Environmental Protection Agency
GPO Box 2771
BRISBANE QLD 4001

Ph: (07) 3225 1086
Fax: (07) 3247 3278
e-mail: jacinta.griffin@epa.qld.gov.au
www.epa.qld.gov.au

Jacinta Griffin

From: Noosa Servo
 Sent: Tuesday, 11 April 2006 1:15 PM
 To: jacinta.griffin@epa.qld.gov.au
 Subject: BP Noosaville
 Jacinta

Reference BNE 27284

We have passed all correspondence onto Rivers-Moore, Environmental Consultants, for their perusal and action.

They will report back following testing.

Tom Allsop

sch4p4(6) Personal information

- Caltex.

sch4p4(6) Personal information

(02) 9250 5496.

6) Personal inf

ersona

erson

rsor

19-393

37 of 211

File A

11/04/2006

Ph: 5449 1039

22/5/06 I contacted
 requesting where the results were
 up to & she said that
 they had not an expense
 of time from
 Thurs. 18/5/06.
 Jacinta

mob.
 15/5/06
 left message for
 to call me
 Personal Personal

Memorandum

To File File Reference _____
From Jaime Griffin
Subject Discussion with Leaser (b) (6) Personal information Date 3/4/06
from Cradex Pty Ltd. Notes _____

(b) (6) Personal information

called to discuss the letter which had been passed to him from

(b) (6) Personal information

(b) (6) Personal information

is the Leaser of the site and Site Manager of the BP at Noosaville. He indicated that the site had 'fill points/holes' which had been installed when the tank integrity tests had been done. I asked if these were capped soil & groundwater monitoring points & he said that soil could be monitored but not groundwater here. I also indicated that the suitably qualified env^a consultant would need to use their judgement in choosing sample locations and that if needed EPA could discuss our expectations directly with the consultant.

Jaime Griffin



Enquiries Jacinta Griffin
Telephone 3225 1086
Your reference
Our reference BNE27284

Environmental Protection Agency

Incorporating the
Queensland Parks and Wildlife Service

28 March 2006

BP Service Station Noosaville
PO Box 699
Gympie Qld 4570

Attention: sch4p4(6) Personal information

Dear sch4p4(6) Personal information

Re: Preliminary Site Investigation at BP service station located on Lot 1 on RP131598, at 54 Mary St, Noosaville.

The Environmental Protection Agency (EPA) conducted a preliminary site investigation (PSI) on 20/2/06, in response to a complaint regarding hydrocarbon odours from an open pit on the footpath adjacent to the BP service station. The PSI consisted of an assessment of potential sources of contamination and the sampling of two locations. The two sample locations were on the footpath, adjacent to the BP service station (refer attached soil samples TP001, TP002 and TP003 and water sample WS001 – WS006) and on the BP site, in the garden bed next to the vent pipes (refer attached TP004, TP005 and TP006). The levels of hydrocarbon contaminants identified have been tabled in Tables 1 and 2 attached. It should be noted that the concentration of hydrocarbon identified in the soil and groundwater are of concern to the EPA.

On the basis of this assessment the BP service station, namely Lot 1 on RP131598, has been identified as the most probable source of the hydrocarbon contamination identified. Laboratory analysis of the samples described the hydrocarbon as a mixed product or a light fuel mixed with diesel and/or oil.

The EPA requests that a contaminated site investigation (CSI) be conducted in accordance with the "Draft Guidelines for the Assessment and Management of Contaminated Soils in Queensland" and be undertaken by a suitably qualified person in accordance with section 385 of the *Environmental Protection Act 1994*. The CSI should include, but not be limited to the following:

- Delineation of the extent of hydrocarbon contamination in soil and groundwater;
- Provide a description of the measures proposed to be undertaken, to control any contamination source;
- A remediation strategy to address the offsite impacts from the activity.

Whilst the EPA cannot ignore or pardon contraventions of the legislation, the EPA is focussed on achieving environmental outcomes. In exercising its discretion not to take further enforcement action at this time, the EPA looks forward to your prompt attention to ensuring this issue is resolved. Please advise the EPA by 19 May 2006 the proposed measures you intend to take. Should the EPA obtain evidence indicating the issue is more serious than first thought, the EPA reserves its right to take further enforcement action under the provisions of the Act.

If you require further clarification on this matter please contact Jacinta Griffin on 3225 1086.

Yours sincerely

p4(6) Personal inform

sch4p4(6) Personal information

Mark Paton
Chief Scientific Advisor
Contaminated Land Unit

Table 1 : Soil laboratory results from Preliminary Site Investigation taken by Environmental Protection Agency (EPA) on 20/2/06

Sample location	Sample depth (m)	¹ TPH C ₆₋₉ (mg/kg)	TPH C ₁₀₋₁₄ (mg/kg)	TPH C ₁₅₋₂₈ (mg/kg)	TPH C ₂₉₋₃₆ (mg/kg)	Total BTEX (mg/kg)	Lead (mg/kg)
TP001 Pit on footpath (Base)	1.6	78	250	170	< 100	17.3	15
TP002 Pit on footpath (Mary St. side wall)	1.5	<2	<50	100	<100	0.3	<5
TP003 Pit on footpath (Northern side wall)	1.2	1800	3440	840	<100	594.7	<5
TP004 BP garden bed near vent pipe	0.5	393	320	<100	<100	115.4	13
TP005 BP garden bed near vent pipe	1	3160	2300	120	<100	677.9	11
TP006 BP garden bed near vent pipe	1.3	6710	3910	350	<100	1469.9	13
Environmental Protection Agency (EPA) Level of concern ^a (mg/kg)		100	100	1000	1000	7	300

^a This is the level EPA uses as a trigger level for further investigation (Chem Unit, 1991).

Exceeds EPA's trigger level for further investigation.

¹ TPH is Total Petroleum Hydrocarbon comprising C₆₋₃₆. The C₆₋₃₆ comprises four fractions, that of C₆₋₉, C₁₀₋₁₄, C₁₅₋₂₈, C₂₉₋₃₆. The fractions typically represent petrol, kerosene, diesel and heavy lubricating oil.

mg/kg means milligrams per kilogram

Table 2: Water sample laboratory results from Preliminary Site Investigation taken by EPA on 20/2/06

Sample location	Sample depth (m)	TPH C ₆₋₉ (µg/l)	TPH C ₁₀₋₁₄ (µg/l)	TPH C ₁₅₋₂₈ (µg/l)	TPH C ₂₉₋₃₆ (µg/l)	Total BTEX (µg/l)	Lead (mg/l)
WS001 – WS006	1.5	4380	6360	3300	210	3300	³ 0.007
EPA Level of concern ² (µg/l)		500	500	500	500	500	0.005

² This is the level EPA uses as a trigger level for further investigation.

Exceeds EPA's trigger level for further investigation.

³ This is the Australian Water Quality Guidelines for Fresh and Marine Waters (AWQG)(ANZECC 1992).

µg/l means micrograms per litre.

mg/l means milligrams per litre

ALS Environmental



CERTIFICATE OF ANALYSIS

Client	: ENVIRONMENT PROTECTION AUTH	Laboratory	: ALS Environmental Brisbane	Page	: 1 of 6
Contact	: MS JACINTA GRIFFIN	Contact	: Michael Heery	Work Order	: EB0601657
Address	: GPO BOX 2771 BRISBANE QLD AUSTRALIA 4000	Address	: 32 Shand Street Stafford QLD Australia 4053		
E-mail	: jacinta.griffin@epa.qld.gov.au	E-mail	: Michael.Heery@alsenviro.com		
Telephone	: (07)3225-8402	Telephone	: 61-7-32437222		
Facsimile	: (07)3225-8723	Facsimile	: 61-7-32437259		
Project	: Mary St BP Noosa	Quote number	: ----		
Order number	: - Not provided -			Date received	: 20 Feb 2006
C-O-C number	: - Not provided -			Date issued	: 13 Mar 2006
Site	: - Not provided -			No. of samples	- Received : 7
					Analysed : 7

ALSE - Excellence in Analytical Testing



NATA Accredited Laboratory
825

This document is issued in
accordance with NATA's
accreditation requirements.

Accredited for compliance with
ISO/IEC 17025.

This document has been digitally signed by those names that appear on this report and are the authorised signatories. Digital signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory	Position	Department
Carsten Emrich	Senior Organic Chemist	Organics - NATA 818 (Brisbane)
Stephen Hislop	Laboratory Diagnostician	Inorganics - NATA 818 (Brisbane)

Page Number : 3 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657



ALS Environmental

Analytical Results

Analytical Results				Client Sample ID :		ALS Environment		
Sample Matrix Type / Description : Sample Date / Time : Laboratory Sample ID :				Mary St BP Noosa TP001 @ 1.6m base	Mary St BP Noosa TP002 @ 1.5m road wall	Mary St BP Noosa TP003 @ 1.2m wall	Mary St BP Noosa TP004 @ 0.5m	Mary St BP Noosa TP005 @ 1m
				SOIL 20 Feb 2006 15:00	SOIL 20 Feb 2006 15:00	SOIL 20 Feb 2006 15:00	SOIL 20 Feb 2006 15:00	SOIL 20 Feb 2006 15:00
				EB0601657-001	EB0601657-002	EB0601657-003	EB0601657-004	EB0601657-005
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	24.0	22.0	7.8	13.4	28.7
EG005T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	15	<5	<5	13	11
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	78	<2	1800	393	3160
C10 - C14 Fraction		50	mg/kg	250	<50	3440	320	2300
C15 - C28 Fraction		100	mg/kg	170	100	840	<100	120
C29 - C36 Fraction		100	mg/kg	<100	<100	<100	<100	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	0.4	<0.2	1.5	0.5	2.7
Toluene	108-88-3	0.2	mg/kg	2.2	<0.2	65.8	6.9	36.6
Ethylbenzene	100-41-4	0.2	mg/kg	0.3	<0.2	27.4	9.1	49.6
meta- & para-Xylene	108-38-3	0.2	mg/kg	6.9	<0.2	350	81.0	451
ortho-Xylene	106-42-3							
	95-47-6	0.2	mg/kg	7.5	0.3	150	17.9	138
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	109	114	114	107	87.3
Toluene-D8	2037-26-5	0.1	%	99.9	101	99.8	108	94.9
4-Bromofluorobenzene	460-00-4	0.1	%	92.3	93.0	100	100	89.7

Page Number : 5 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657

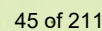


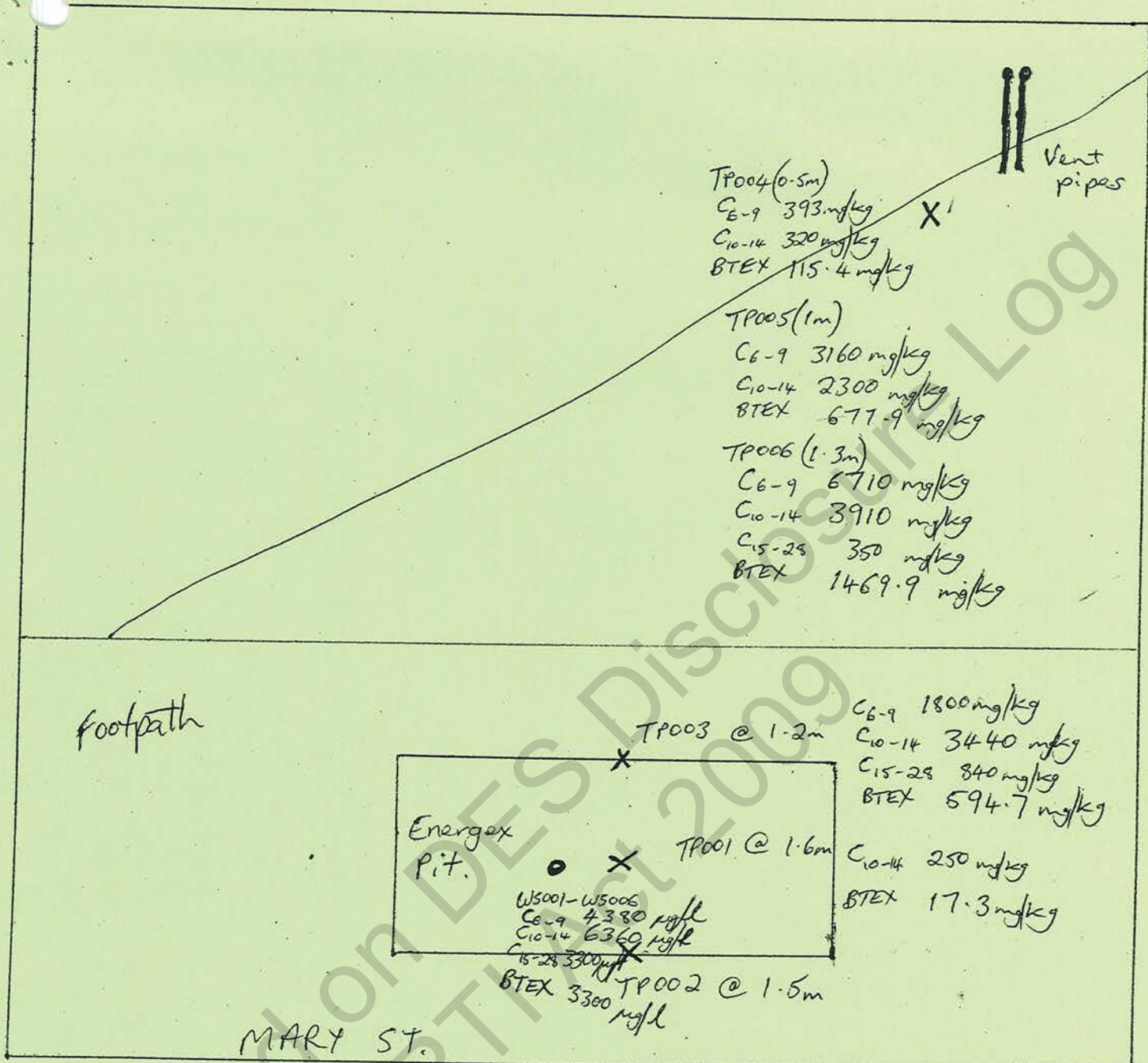
ALS Environmental

Analytical Results

Client Sample ID : Mary St BP Noosa
 Sample Matrix Type / Description : WS001-06 Pit Water
 Sample Date / Time : WATER
 20 Feb 2006
 15:00
 Laboratory Sample ID :
 EB0601657-007

Analyte	CAS number	LOR	Units				
EG020F: Dissolved Metals by ICP-MS							
Lead	7439-92-1	0.001	mg/L	0.007			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		20	µg/L	4380			
C10 - C14 Fraction		50	µg/L	6360			
C15 - C28 Fraction		100	µg/L	3300			
C29 - C36 Fraction		50	µg/L	210			
EP080: BTEX							
Benzene	71-43-2	1	µg/L	142			
Toluene	108-88-3	2	µg/L	683			
Ethylbenzene	100-41-4	2	µg/L	45			
meta- & para-Xylene	108-38-3	2	µg/L	1410			
ortho-Xylene	106-42-3						
	95-47-6	2	µg/L	1020			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%	103			
Toluene-D8	2037-26-5	0.1	%	112			
4-Bromofluorobenzene	460-00-4	0.1	%	110			





INSET 1 - Not to scale

Memorandum

To File File Reference Bne 27284
From Janita Griffin
Subject Letter to BP owners Nashville Date 28/3/06

Notes

A number of attempts were made to contact [redacted]

[redacted] sch4p4(6) Personal information

regarding the letter EPA is to send. On 27/3/06 a teleconference with EPA officer Helen Barnes was attempted but failed as the ph: no. of [redacted]

[redacted] sch4p4(6) Personal information

, which had been provided by [redacted]

[redacted] sch4p4(6) Personal information

the BP Nashville Manager, only had a message of "Please wait." repeated a number of times until a fax signal occurred.

This no. was called again by myself on 23/3/06 with no answer.

BP Nashville
5449 7039

[redacted] sch4p4(6) Personal information



RAINER'S
camerahouse

FUJICOLOR ★ INDEX PRINT

ROBIN - Microsoft Internet Explorer powered by Environmental Protection Agency

Address: <http://wwwhost.env.qld.gov.au/topics/index/>

Properties: 5750/315227 ISS A

Summary | Property | LG | Use | Owner | Search | Review | Show |

LG/Div: 5750 NDOSA SMA: 3

Walk The Road: 5034 Previous Ref: NA

Property Address: 54 MARY ST, NINDS AVILLE QLD 4566

Owner (VOL): 4p4 (6) Personal informa

Service Address: PO BOX 699, GYMPIE QLD 4570

RPD: L1 RP131598 PAR WEYBA

Property Type: ISSUING Area: 1.679 M2 Volume: 0 M3

Prim L/Use: 30 SERVICE STATION

Sec L/Use: 0 NONE

Sale Date: Sale Price: Sale Type:

D/Elect	D/Valn	Value	S/C	D/Assess
30/6/2005	1/10/2004	\$1,050,000	21	23/3/2005

Frog Ponds Queensland Frog Society <http://www.qldfrogs.asn.au/> (07) 3366 1868

Internet Access Service

117 object(s) (Disk free space: 42.1 GB)

Start CISP Oracle... Inbox... ROBIN... Cont... ROBIN... QVAS... QVAS... QVAS... Local intranet 3:42 PM

5324.EE

EMR

Lot 1 Plan RP131598 Category NOTIFIABLE ACTIVITY Record Type BP ID 10224
Hist ID 92-4028

LGA NOOSA SHIRE COUNCIL Region S AMA
Site Name BP NOOSAVILLE Notified By DATACONV Notif Rec'd
Street 54 MARY ST Entry Date 27/06/1998 Last Altered Date 01/03/2006
Suburb NOOSAVILLE Post code 4566
Owner 54(6) Personal Inform
Owner Address 52 MARY ST
NOOSAVILLE
Post code 4566
Parcel Status C Area 1679 m² File BNE27284 Officer NIL

Notifiable Activities

SERVICE STATIONS

Offsite Disposal Date

Comments

Date	User ID	Corr N	Officer Name	Finalised	How Finalised	Registered Site ID
01/03/2006	MCKENZL					10224
FILE NO. UPDATED FROM 900551 TO BNE27284.						

Jacinta Griffin

From: ALSE Brisbane Aus [alse.brisbane.aus@alsenviro.com]
Sent: Tuesday, 14 March 2006 2:05 PM
To: jacinta.griffin@epa.qld.gov.au
Subject: Your Reference : Mary St BP Noosa. Deliverables for ALSE Workorder : EB0601657



eb0601657_chr.pdf eb0601657_coc.pdf eb0601657_coc_1.pdf

This e-mail has been automatically generated.

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ALS Environmental

CHROMATOGRAM COVERSHEET for ALS WORKORDER EB0601657

Client Details

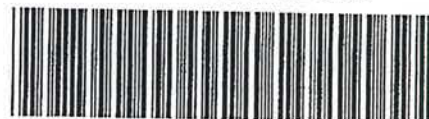
Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa
Order number : - Not provided -
C-O-C Number : - Not provided -
Site : - Not provided -
Sampler : - Not provided -

Comments

- The attached report contains the chromatogram(s) associated to ALS Environmental work order EB0601657.

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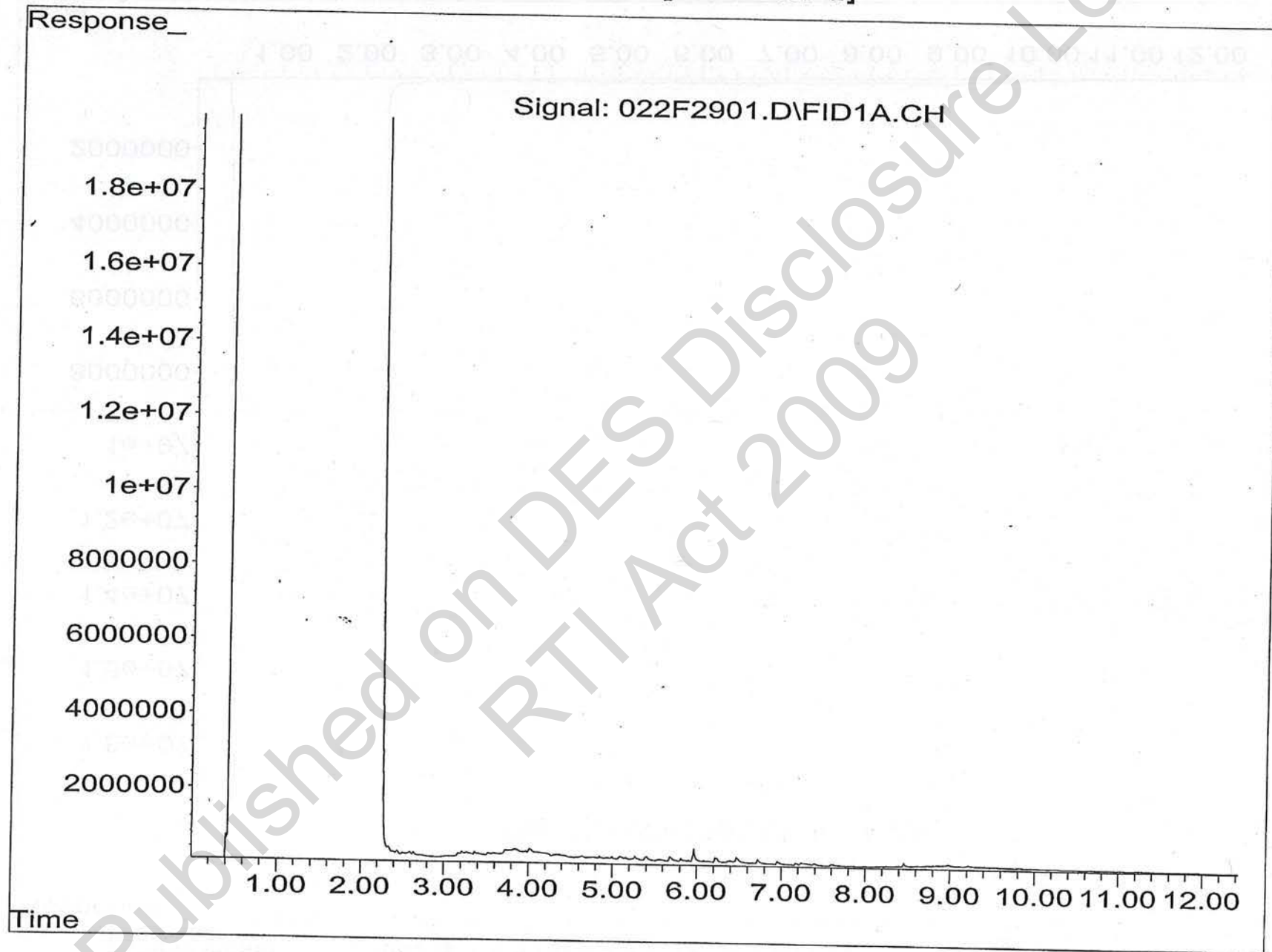


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A Campbell Brothers Limited Company

Sample Name

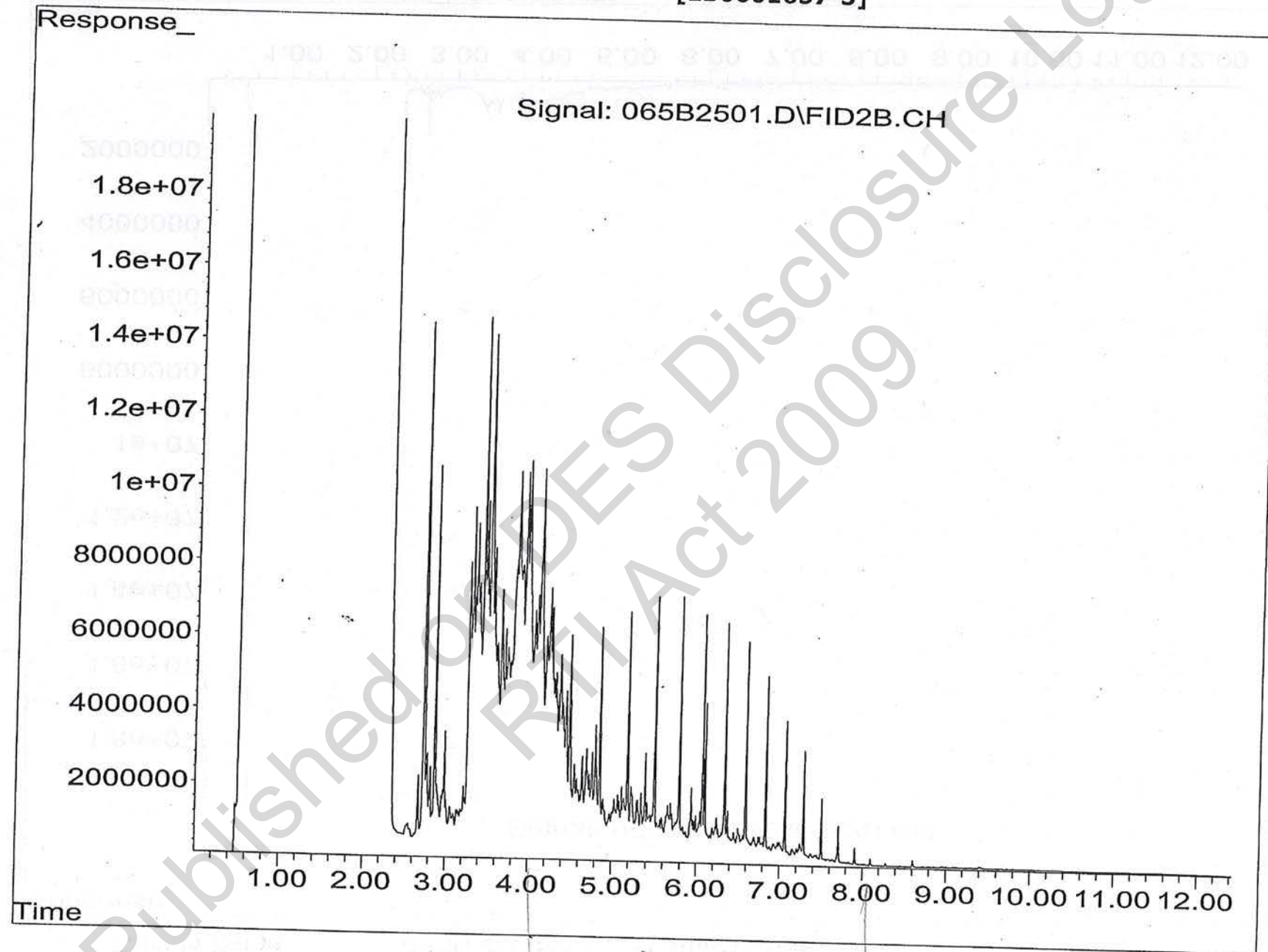
TP001 @ 1.6m base [EB0601657-1]



Sample Name

TP003 @ 1.2m wall

[EB0601657-3]

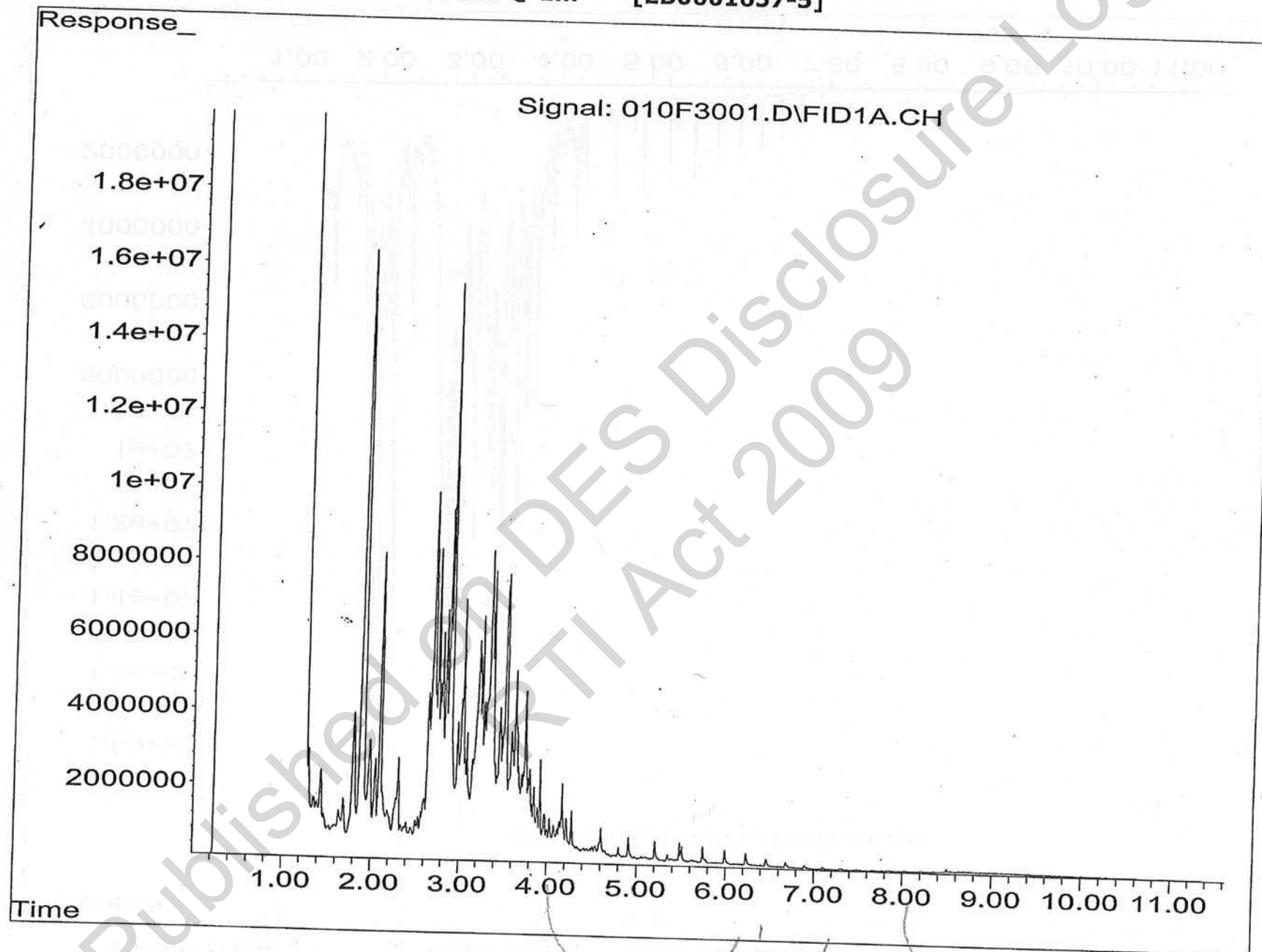


Diurnal

Sample Name

TP005 @ 1m

[EB0601657-5]



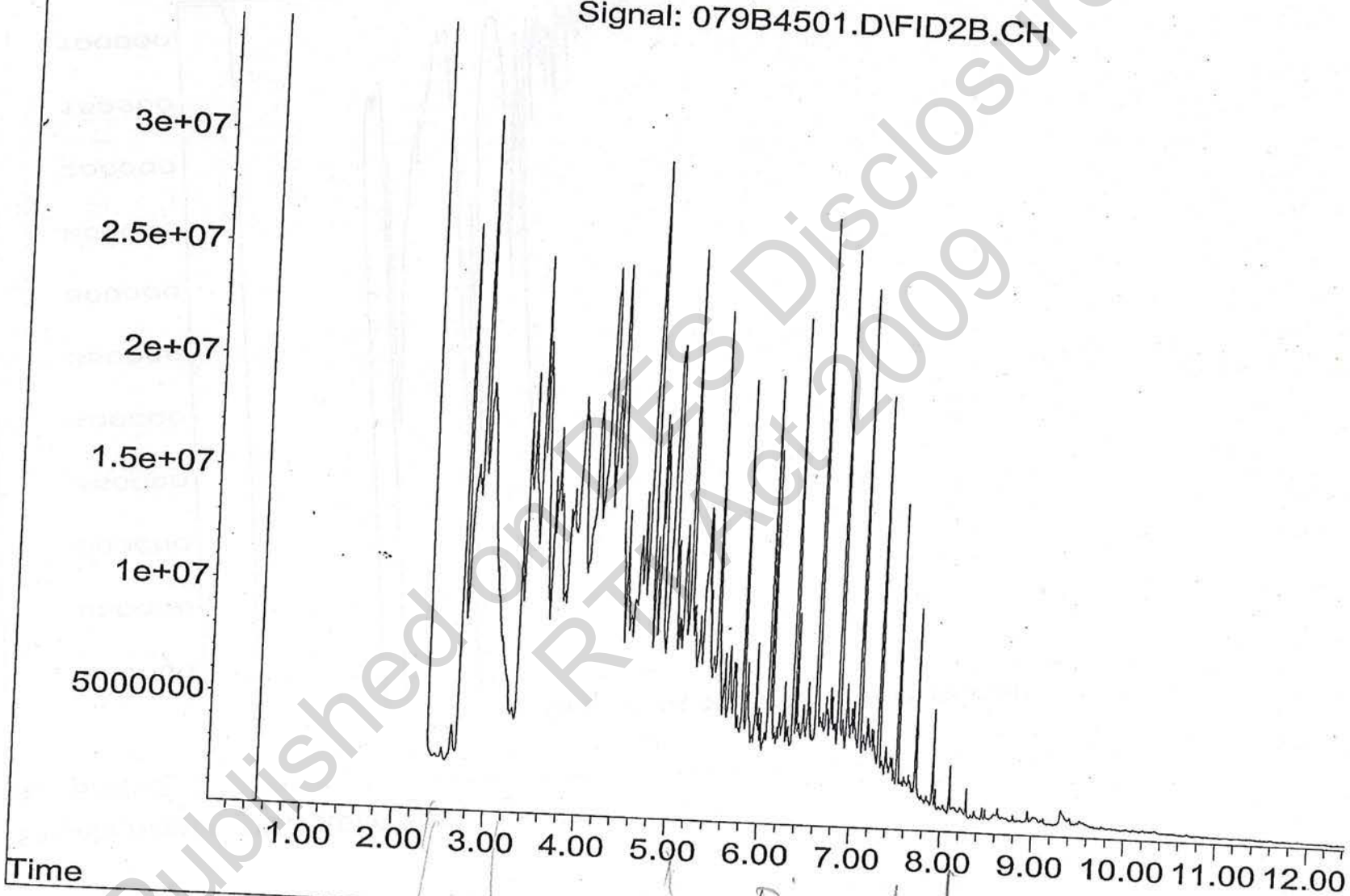
Sample Name

WS001-06 Pit Water

[EB0601657-7]

Response_

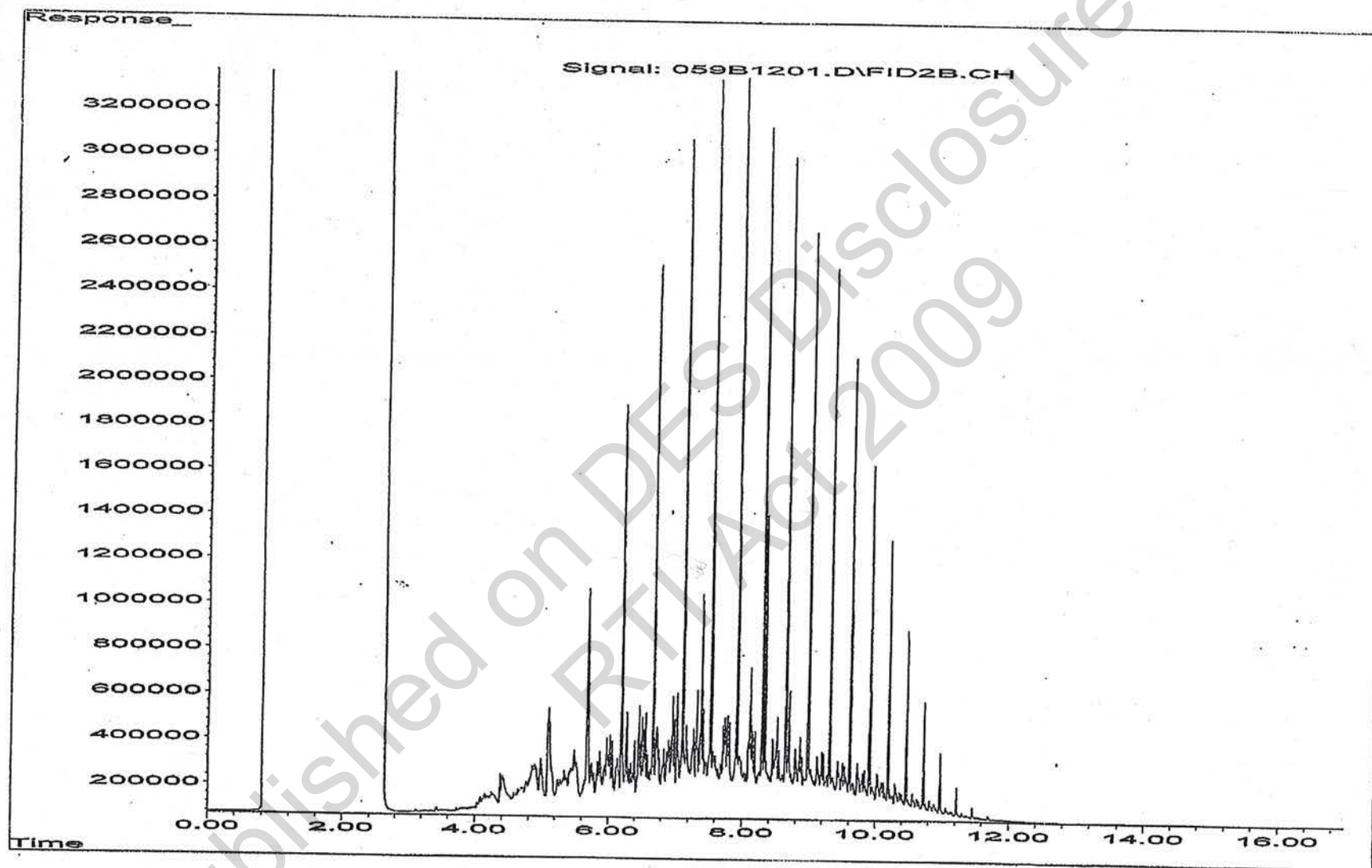
Signal: 079B4501.D\FID2B.CH



Petrol

Diesel

Sample Name: DIESEL



Jacinta Griffin

From: ALSE Brisbane Aus [alse.brisbane.aus@alsenviro.com]
Sent: Monday, 13 March 2006 7:04 PM
To: jacinta.griffin@epa.qld.gov.au
Subject: Your Reference : Mary St BP Noosa. Deliverables(Including Invoice) for ALSE
 Workorder : EB0601657



EB0601657_COANAE0601657_ENMRGE0601657_ENMRGE0601657_QC_NAEB0601657_PINV_Ieb0601657_coc.pdf eb0601657_coc_1.
 .PDF _SOIL-1.csv _WATER-1.csv .PDF NVOICE_E52928.... pdf

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CERTIFICATE OF ANALYSIS

<i>Client</i>	: ENVIRONMENT PROTECTION AUTH	<i>Laboratory</i>	: ALS Environmental Brisbane	<i>Page</i>	: 1 of 6
<i>Contact</i>	: MS JACINTA GRIFFIN	<i>Contact</i>	: Michael Heery	<i>Work Order</i>	: EB0601657
<i>Address</i>	: GPO BOX 2771 BRISBANE QLD AUSTRALIA 4000	<i>Address</i>	: 32 Shand Street Stafford QLD Australia 4053		
<i>E-mail</i>	: jacinta.griffin@epa.qld.gov.au	<i>E-mail</i>	: Michael.Heery@alsenviro.com		
<i>Telephone</i>	: (07)3225-8402	<i>Telephone</i>	: 61-7-32437222	<i>Date received</i>	: 20 Feb 2006
<i>Facsimile</i>	: (07)3225-8723	<i>Facsimile</i>	: 61-7-32437259	<i>Date issued</i>	: 13 Mar 2006
<i>Project</i>	: Mary St BP Noosa	<i>Quote number</i>	: ----	<i>No. of samples</i>	- Received : 7
<i>Order number</i>	: - Not provided -				Analysed : 7
<i>C-O-C number</i>	: - Not provided -				
<i>Site</i>	: - Not provided -				

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<i>Signatory</i>	<i>Position</i>	<i>Department</i>
Carsten Emrich	Senior Organic Chemist	Organics - NATA 818 (Brisbane)
Stephen Hislop	Laboratory Diagnostician	Inorganics - NATA 818 (Brisbane)

Page Number : 2 of 6
Client : ENVIRONMENT PROTECTION AUTH
Work Order : EB0601657



Comments

This report for the ALSE reference EB0601657 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- **Analytical results for samples submitted**

When moisture determination has been performed, results are reported on a dry weight basis. When a reported 'less than' result is higher than the LOR, this may be due to primary sample extracts/digestion dilution and/or insufficient sample amount for analysis. Surrogate Recovery Limits are static and based on USEPA SW846 or ALS-QWI/EN38 (in the absence of specified USEPA limits). Where LOR of reported result differ from standard LOR, this may be due to high moisture, reduced sample amount or matrix interference. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number, LOR = Limit of Reporting. * Indicates failed Surrogate Recoveries.

- **Surrogate control limits**

The analytical procedures used by ALS Environmental are based on established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house procedure 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 herein. Reference methods from which ALSE methods are based are provided in parenthesis.

Specific comments for Work Order **EB0601657**

EP071: Poor matrix spike recovery due to matrix interference. Confirmed by re-extraction and re-analysis.

Page Number : 3 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657



ALS Environmental

Analytical Results

				Client Sample ID :	Mary St BP Noosa TP001 @ 1.6m base	Mary St BP Noosa TP002 @ 1.5m road wall	Mary St BP Noosa TP003 @ 1.2m wall	Mary St BP Noosa TP004 @ 0.5m	Mary St BP Noosa TP005 @ 1m
Sample Matrix Type / Description :					SOIL	SOIL	SOIL	SOIL	SOIL
Sample Date / Time :					20 Feb 2006 15:00	20 Feb 2006 15:00	20 Feb 2006 15:00	20 Feb 2006 15:00	20 Feb 2006 15:00
Laboratory Sample ID :					EB0601657-001	EB0601657-002	EB0601657-003	EB0601657-004	EB0601657-005
Analyte	CAS number	LOR	Units						
EA055: Moisture Content									
Moisture Content (dried @ 103°C)		1.0	%		24.0	22.0	7.8	13.4	28.7
EG005T: Total Metals by ICP-AES									
Lead	7439-92-1	5	mg/kg		15	<5	<5	13	11
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction		2	mg/kg		78	<2	1800	393	3160
C10 - C14 Fraction		50	mg/kg		250	<50	3440	320	2300
C15 - C28 Fraction		100	mg/kg		170	100	840	<100	120
C29 - C36 Fraction		100	mg/kg		<100	<100	<100	<100	<100
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		0.4	<0.2	1.5	0.5	2.7
Toluene	108-88-3	0.2	mg/kg		2.2	<0.2	65.8	6.9	36.6
Ethylbenzene	100-41-4	0.2	mg/kg		0.3	<0.2	27.4	9.1	49.6
meta- & para-Xylene	108-38-3	0.2	mg/kg		6.9	<0.2	350	81.0	451
ortho-Xylene	106-42-3								
	95-47-6	0.2	mg/kg		7.5	0.3	150	17.9	138
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		109	114	114	107	87.3
Toluene-D8	2037-26-5	0.1	%		99.9	101	99.8	108	94.9
4-Bromofluorobenzene	460-00-4	0.1	%		92.3	93.0	100	100	89.7



ALS Environmental

Page Number : 4 of 6

Client : ENVIRONMENT PROTECTION AUTH

Work Order : EB0601657

Analytical Results

Client Sample ID : Mary St BP Noosa

TP006 @ 1.3m

Sample Matrix Type / Description : SOIL

Sample Date / Time : 20 Feb 2006

15:00

Laboratory Sample ID :

EB0601657-006

Analyte	CAS number	LOR	Units				
EA055: Moisture Content							
Moisture Content (dried @ 103°C)		1.0	%	22.2			
EG005T: Total Metals by ICP-AES							
Lead	7439-92-1	5	mg/kg	13			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		2	mg/kg	6710			
C10 - C14 Fraction		50	mg/kg	3910			
C15 - C28 Fraction		100	mg/kg	350			
C29 - C36 Fraction		100	mg/kg	<100			
EP080: BTEX							
Benzene	71-43-2	0.2	mg/kg	5.9			
Toluene	108-88-3	0.2	mg/kg	120			
Ethylbenzene	100-41-4	0.2	mg/kg	185			
meta- & para-Xylene	108-38-3	0.2	mg/kg	922			
	106-42-3						
ortho-Xylene	95-47-6	0.2	mg/kg	237			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%	80.8			
Toluene-D8	2037-26-5	0.1	%	93.4			
4-Bromofluorobenzene	460-00-4	0.1	%	85.6			

Page Number : 5 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID : Mary St BP Noosa
 WS001-06 Pit Water
 Sample Matrix Type / Description : WATER
 Sample Date / Time : 20 Feb 2006
 15:00
 Laboratory Sample ID :
 EB0601657-007

Analyte	CAS number	LOR	Units				
EG020F: Dissolved Metals by ICP-MS							
Lead	7439-92-1	0.001	mg/L	0.007			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		20	µg/L	4380			
C10 - C14 Fraction		50	µg/L	6360			
C15 - C28 Fraction		100	µg/L	3300			
C29 - C36 Fraction		50	µg/L	210			
EP080: BTEX							
Benzene	71-43-2	1	µg/L	142			
Toluene	108-88-3	2	µg/L	683			
Ethylbenzene	100-41-4	2	µg/L	45			
meta- & para-Xylene	108-38-3	2	µg/L	1410			
	106-42-3						
ortho-Xylene	95-47-6	2	µg/L	1020			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%	103			
Toluene-D8	2037-26-5	0.1	%	112			
4-Bromofluorobenzene	460-00-4	0.1	%	110			

Page Number : 6 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657



Surrogate Control Limits

Matrix Type: WATER - Surrogate Control Limits

Surrogate Control Limits

Method name	Analyte name	Lower Limit	Upper Limit
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	88	110
	4-Bromofluorobenzene	86	115

Matrix Type: SOIL - Surrogate Control Limits

Surrogate Control Limits

Method name	Analyte name	Lower Limit	Upper Limit
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	81	117
	4-Bromofluorobenzene	74	121



QUALITY CONTROL REPORT

Client	: ENVIRONMENT PROTECTION AUTH	Laboratory	: ALS Environmental Brisbane	Page	: 1 of 9
Contact	: MS JACINTA GRIFFIN	Contact	: Michael Heery		
Address	: GPO BOX 2771 BRISBANE QLD AUSTRALIA 4000	Address	: 32 Shand Street Stafford QLD Australia 4053	Work order	: EB0601657
Project	: Mary St BP Noosa	Quote number	: ----	Amendment No.	:
Order number	: - Not provided -			Date received	: 20 Feb 2006
C-O-C number	: - Not provided -			Date issued	: 13 Mar 2006
Site	: - Not provided -				
E-mail	: jacinta.griffin@epa.qld.gov.au	E-mail	: Michael.Heery@alsenviro.com	No. of samples	
Telephone	: (07)3225-8402	Telephone	: 61-7-32437222	Received	: 7
Facsimile	: (07)3225-8723	Facsimile	: 61-7-32437259	Analysed	: 7

This final report for the ALSE work order reference EB0601657 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- Laboratory Duplicates (DUP); Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Samples (LCS); Recovery and Acceptance Limits
- Matrix Spikes (MS); Recovery and Acceptance Limits

Work order specific comments

EP071: Poor matrix spike recovery due to matrix interference. Confirmed by re-extraction and re-analysis.

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Signatory

Carsten Emrich
Stephen Hislop

Department

Organics - NATA 818 (Brisbane)
Inorganics - NATA 818 (Brisbane)



Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 2 of 9
Issue Date : 13 Mar 2006

ALS Environmental

Quality Control Report - Laboratory Duplicates (DUP)

The quality control term **Laboratory Duplicate** refers to an intralaboratory split sample randomly selected from the sample batch. Laboratory duplicates provide information on method precision and sample heterogeneity.
- Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot. **Abbreviations:** LOR = Limit of Reporting, RPD = Relative Percent Difference.
* Indicates failed QC. The permitted ranges for the RPD of Laboratory Duplicates (relative percent deviation) 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%

Laboratory Duplicates (DUP) Report

Matrix Type: SOIL

Matrix Type: SOIL						
Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EA055: Moisture Content						
EA055: Moisture Content - (QC Lot: 176567)				%	%	%
EB0601647-005	Anonymous	Moisture Content (dried @ 103°C)	1.0 %	6.8	6.8	0.0
EB0601657-006	Mary St BP Noosa - TP006 @ 1.3m	Moisture Content (dried @ 103°C)	1.0 %	22.2	20.4	8.8
EG005T: Total Metals by ICP-AES						
EG005T: Total Metals by ICP-AES - (QC Lot: 176115)				mg/kg	mg/kg	%
EB0601592-019	Anonymous	Lead	5 mg/kg	<5	<5	0.0
EB0601618-002	Anonymous	Lead	5 mg/kg	<5	<5	0.0
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176201)				mg/kg	mg/kg	%
EB0601644-028	Anonymous	C10 - C14 Fraction	50 mg/kg	<50	<50	0.0
		C15 - C28 Fraction	100 mg/kg	580	450	25.3
		C29 - C36 Fraction	100 mg/kg	900	750	18.1
EB0601657-004	Mary St BP Noosa - TP004 @ 0.5m	C10 - C14 Fraction	50 mg/kg	320	310	0.0
		C15 - C28 Fraction	100 mg/kg	<100	<100	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176262)				mg/kg	mg/kg	%
EB0601657-001	Mary St BP Noosa - TP001 @ 1.6m base	C6 - C9 Fraction	2 mg/kg	78	70	11.6
EB0601688-005	Anonymous	C6 - C9 Fraction	2 mg/kg	17	17	0.0
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 177269)				mg/kg	mg/kg	%
EB0601657-005	Mary St BP Noosa - TP005 @ 1m	C10 - C14 Fraction	50 mg/kg	2300	2390	3.9
		C15 - C28 Fraction	100 mg/kg	120	180	39.2
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
EB0601703-010	Anonymous	C10 - C14 Fraction	50 mg/kg	<50	<50	0.0
		C15 - C28 Fraction	100 mg/kg	<100	<100	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
EP080: BTEX						

Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 3 of 9
Issue Date : 13 Mar 2006



Matrix Type: SOIL

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP080: BTEX - continued						
EP080: BTEX - (QC Lot: 176262)						
EB0601657-001	Mary St BP Noosa - TP001 @ 1.6m base	Benzene	0.2 mg/kg	0.4	0.4	0.0
		Toluene	0.2 mg/kg	2.2	2.3	5.2
		Ethylbenzene	0.2 mg/kg	0.3	0.3	0.0
		meta- & para-Xylene	0.2 mg/kg	6.9	6.7	2.3
		ortho-Xylene	0.2 mg/kg	7.5	6.8	10.0
EB0601688-005	Anonymous	Benzene	0.2 mg/kg	<0.2	<0.2	0.0
		Toluene	0.2 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.2 mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	0.2 mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	0.2 mg/kg	<0.2	<0.2	0.0

Matrix Type: WATER

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EG020F: Dissolved Metals by ICP-MS						
EG020F: Dissolved Metals by ICP-MS - (QC Lot: 176664)						
EB0601646-001	Anonymous	Lead	0.001 mg/L	<0.001	<0.001	0.0
EB0601646-010	Anonymous	Lead	0.001 mg/L	0.001	0.001	0.0
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 180007)						
EB0601657-007	Mary St BP Noosa - WS001-06 Pit Water	C6 - C9 Fraction	20 µg/L	4380	4700	7.0
EB0601871-002	Anonymous	C6 - C9 Fraction	20 µg/L	130	140	0.0
EP080: BTEX						
EP080: BTEX - (QC Lot: 180007)						
EB0601657-007	Mary St BP Noosa - WS001-06 Pit Water	Benzene	1 µg/L	142	136	4.0
		Toluene	2 µg/L	683	648	5.2
		Ethylbenzene	2 µg/L	45	45	0.0
		meta- & para-Xylene	2 µg/L	1410	1360	3.5
		ortho-Xylene	2 µg/L	1020	975	4.2
EB0601871-002	Anonymous	Benzene	1 µg/L	<1	<1	0.0
		Toluene	2 µg/L	<2	<2	0.0

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 4 of 9
Issue Date : 13 Mar 2006

ALS Environmental

Matrix Type: WATER

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP080: BTEX - continued						
EP080: BTEX - (QC Lot: 180007) - continued				µg/L	µg/L	%
EB0601871-002	Anonymous	Ethylbenzene	2 µg/L	<2	<2	0.0
		meta- & para-Xylene	2 µg/L	<2	<2	0.0
		ortho-Xylene	2 µg/L	<2	<2	0.0

Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 5 of 9
Issue Date : 13 Mar 2006



Quality Control Report - Method Blank (MB) and Laboratory Control Samples (LCS)

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 type is to monitor potential laboratory contamination. The quality control term **Laboratory Control Sample (LCS)** refers to a known, interference free matrix spiked with target analytes or certified reference material. The purpose of this QC type is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of actual laboratory data. Abbreviations: LOR = Limit of reporting.

Matrix Type: SOIL

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

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EG005T: Total Metals by ICP-AES						
EG005T: Total Metals by ICP-AES - (QC Lot: 176115)		mg/kg	mg/kg	%	%	%
Lead	5 mg/kg	----	55.5	96.6	70	130
	5 mg/kg	<5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176201)		mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	50 mg/kg	----	314	67.9	52	130
	50 mg/kg	<50	----	----	----	----
C15 - C28 Fraction	100 mg/kg	----	496	70.6	66	126
	100 mg/kg	<100	----	----	----	----
C29 - C36 Fraction	100 mg/kg	<100	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176262)		mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	2 mg/kg	----	26	112	80	119
	2 mg/kg	<2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 177269)		mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	50 mg/kg	----	314	88.2	52	130
	50 mg/kg	<50	----	----	----	----
C15 - C28 Fraction	100 mg/kg	----	496	85.3	66	126
	100 mg/kg	<100	----	----	----	----
C29 - C36 Fraction	100 mg/kg	<100	----	----	----	----
EP080: BTEX						
EP080: BTEX - (QC Lot: 176262)		mg/kg	mg/kg	%	%	%
Benzene	0.2 mg/kg	----	1	106	84	119
	0.2 mg/kg	<0.2	----	----	----	----
Ethylbenzene	0.2 mg/kg	----	1	114	78	119
	0.2 mg/kg	<0.2	----	----	----	----



Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 6 of 9
Issue Date : 13 Mar 2006

ALS Environmental

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

Matrix Type: SOIL

Analyte name	LOR	Method blank result	Actual Results		Recovery Limits	
			Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP080: BTEX - continued						
EP080: BTEX - (QC Lot: 176262) - continued						
meta- & para-Xylene	0.2 mg/kg	----	1	110	77	123
	0.2 mg/kg	<0.2	----	----	----	----
ortho-Xylene	0.2 mg/kg	----	1	108	76	122
	0.2 mg/kg	<0.2	----	----	----	----
Toluene	0.2 mg/kg	----	1	112	79	119
	0.2 mg/kg	<0.2	----	----	----	----

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

Matrix Type: WATER

Analyte name	LOR	Method blank result	Actual Results		Recovery Limits	
			Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EG020F: Dissolved Metals by ICP-MS						
EG020F: Dissolved Metals by ICP-MS - (QC Lot: 176664)						
Lead	0.001 mg/L	----	0.100	102	70	130
	0.001 mg/L	<0.001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176706)						
C10 - C14 Fraction	50 µg/L	----	524	80.7	64	112
	50 µg/L	<50	----	----	----	----
C15 - C28 Fraction	100 µg/L	----	840	103	66	130
	100 µg/L	<100	----	----	----	----
C29 - C36 Fraction	50 µg/L	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 180007)						
C6 - C9 Fraction	20 µg/L	----	260	105	72	123
	20 µg/L	<20	----	----	----	----
EP080: BTEX						
EP080: BTEX - (QC Lot: 180007)						
Benzene	1 µg/L	----	10	104	68	125
	1 µg/L	<1	----	----	----	----

Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 7 of 9
Issue Date : 13 Mar 2006



Matrix Type: WATER

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

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP080: BTEX - continued						
EP080: BTEX - (QC Lot: 180007) - continued		µg/L	µg/L	%	%	%
Ethylbenzene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	102	72	120
meta- & para-Xylene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	100	69	121
ortho-Xylene	2 µg/L	----	10	102	74	117
	2 µg/L	<2	----	----	----	----
Toluene	2 µg/L	----	10	104	72	119
	2 µg/L	<2	----	----	----	----



Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 8 of 9
Issue Date : 13 Mar 2006

ALS Environmental

Quality Control Report - Matrix Spikes (MS)

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 type is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQO's). 'Ideal' recovery ranges stated may be waived in the event of sample matrix interferences. - Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot. Abbreviations: **LOR** = Limit of Reporting, **RPD** = Relative Percent Difference.

* Indicates failed QC

Matrix Type: SOIL

Matrix Spike (MS) Report

					Actual Results		Recovery Limits		
						Sample Result	Spike Recovery	Static Limits	
						MS		Low	High
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration					
EG005T: Total Metals by ICP-AES									
EG005T: Total Metals by ICP-AES - (QC Lot: 176115)				mg/kg	mg/kg	%	%	%	
Lead	EB0601592-020	Anonymous	5 mg/kg	50.0	<5	106	70	130	
EP080/071: Total Petroleum Hydrocarbons									
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176201)				mg/kg	mg/kg	%	%	%	
C10 - C14 Fraction	EB0601644-029	Anonymous	50 mg/kg	314	<50	73.9	70	130	
C15 - C28 Fraction			100 mg/kg	496	<100	69.5	70	130	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 176262)				mg/kg	mg/kg	%	%	%	
C6 - C9 Fraction	EB0601657-002	Mary St BP Noosa - TP002 @ 1.5m road wall	2 mg/kg	28	<2	75.7	70	130	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 177269)				mg/kg	mg/kg	%	%	%	
C10 - C14 Fraction	EB0601657-006	Mary St BP Noosa - TP006 @ 1.3m	50 mg/kg	314	3910	* Not Determined	70	130	
C15 - C28 Fraction			100 mg/kg	496	350	84.7	70	130	
EP080: BTEX									
EP080: BTEX - (QC Lot: 176262)				mg/kg	mg/kg	%	%	%	
Benzene	EB0601657-002	Mary St BP Noosa - TP002 @ 1.5m road wall	0.2 mg/kg	2	<0.2	80.4	70	130	
Toluene			0.2 mg/kg	2	<0.2	79.1	70	130	

Matrix Type: WATER

Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
					Sample Result	Spike Recovery	Static Limits	
						MS	Low	High
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration				
EG020F: Dissolved Metals by ICP-MS								
EG020F: Dissolved Metals by ICP-MS - (QC Lot: 176664)				mg/L	mg/L	%	%	%
Lead	EB0601646-002	Anonymous	0.001 mg/L	0.100	0.002	110	70	130
EP080/071: Total Petroleum Hydrocarbons								
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 180007)				µg/L	µg/L	%	%	%

Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : ----

Page Number : 9 of 9
Issue Date : 13 Mar 2006



Matrix Type: WATER

Matrix Spike (MS) Report

					Actual Results		Recovery Limits		
Analyte name		Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery MS	Static Limits	
								Low	High
EP080/071: Total Petroleum Hydrocarbons - continued									
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 180007) - continued					µg/L	µg/L	%	%	%
C6 - C9 Fraction	EB0601740-001	Anonymous	20 µg/L	140	600	* Not Determined	70	130	
EP080: BTEX									
EP080: BTEX - (QC Lot: 180007)					µg/L	µg/L	%	%	%
Benzene	EB0601740-001	Anonymous	1 µg/L	10	2	92.9	70	130	
Toluene			2 µg/L	10	37	112	70	130	



CERTIFICATE OF ANALYSIS

Client	: ENVIRONMENT PROTECTION AUTH	Laboratory	: ALS Environmental Brisbane	Page	: 1 of 6
Contact	: MS JACINTA GRIFFIN	Contact	: Michael Heery	Work Order	: EB0601657
Address	: GPO BOX 2771 BRISBANE QLD AUSTRALIA 4000	Address	: 32 Shand Street Stafford QLD Australia 4053		
E-mail	: jacinta.griffin@epa.qld.gov.au	E-mail	: Michael.Heery@alsenviro.com		
Telephone	: (07)3225-8402	Telephone	: 61-7-32437222	Date received	: 20 Feb 2006
Facsimile	: (07)3225-8723	Facsimile	: 61-7-32437259	Date issued	: 13 Mar 2006
Project	: Mary St BP Noosa	Quote number	: ----	No. of samples	- Received : 7
Order number	: - Not provided -				Analysed : 7
C-O-C number	: - Not provided -				
Site	: - Not provided -				

ALSE - Excellence in Analytical Testing



NATA Accredited Laboratory
825

This document is issued in
accordance with NATA's
accreditation requirements.

Accredited for compliance with
ISO/IEC 17025.

This document has been digitally signed by those names that appear on this report and are the authorised signatories. Digital signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory	Position	Department
Carsten Emrich	Senior Organic Chemist	Organics - NATA 818 (Brisbane)
Stephen Hislop	Laboratory Diagnostician	Inorganics - NATA 818 (Brisbane)



Page Number : 2 of 6
Client : ENVIRONMENT PROTECTION AUTH
Work Order : EB0601657

Comments

This report for the ALSE reference EB0601657 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- **Analytical results for samples submitted**

When moisture determination has been performed, results are reported on a dry weight basis. When a reported 'less than' result is higher than the LOR, this may be due to primary sample extracts/digestion dilution and/or insufficient sample amount for analysis. Surrogate Recovery Limits are static and based on USEPA SW846 or ALS-QWI/EN38 (in the absence of specified USEPA limits). Where LOR of reported result differ from standard LOR, this may be due to high moisture, reduced sample amount or matrix interference. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number, LOR = Limit of Reporting. * Indicates failed Surrogate Recoveries.

- **Surrogate control limits**

The analytical procedures used by ALS Environmental are based on established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house procedure 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 herein. Reference methods from which ALSE methods are based are provided in parenthesis.

Specific comments for Work Order **EB0601657**

EP071: Poor matrix spike recovery due to matrix interference. Confirmed by re-extraction and re-analysis.

Page Number : 3 of 6

Client : ENVIRONMENT PROTECTION AUTH

Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID :

Mary St BP Noosa
TP001 @ 1.6m base

Mary St BP Noosa
TP002 @ 1.5m road
wall

Mary St BP Noosa
TP003 @ 1.2m wall

Mary St BP Noosa
TP004 @ 0.5m

Mary St BP Noosa
TP005 @ 1m

Sample Matrix Type / Description :

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

Laboratory Sample ID :

EB0601657-001

EB0601657-002

EB0601657-003

EB0601657-004

EB0601657-005

Analyte	CAS number	LOR	Units	EB0601657-001	EB0601657-002	EB0601657-003	EB0601657-004	EB0601657-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	24.0	22.0	7.8	13.4	28.7
EG005T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	15	<5	<5	13	11
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	78	<2	1800	393	3160
C10 - C14 Fraction		50	mg/kg	250	<50	3440	320	2300
C15 - C28 Fraction		100	mg/kg	170	100	840	<100	120
C29 - C36 Fraction		100	mg/kg	<100	<100	<100	<100	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	0.4	<0.2	1.5	0.5	2.7
Toluene	108-88-3	0.2	mg/kg	2.2	<0.2	65.8	6.9	36.6
Ethylbenzene	100-41-4	0.2	mg/kg	0.3	<0.2	27.4	9.1	49.6
meta- & para-Xylene	108-38-3	0.2	mg/kg	6.9	<0.2	350	81.0	451
ortho-Xylene	106-42-3							
	95-47-6	0.2	mg/kg	7.5	0.3	150	17.9	138
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	109	114	114	107	87.3
Toluene-D8	2037-26-5	0.1	%	99.9	101	99.8	108	94.9
4-Bromofluorobenzene	460-00-4	0.1	%	92.3	93.0	100	100	89.7

Page Number : 4 of 6

Client : ENVIRONMENT PROTECTION AUTH

Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID :

Mary St BP Noosa

TP006 @ 1.3m

Sample Matrix Type / Description :

SOIL

Sample Date / Time :

20 Feb 2006

15:00

Laboratory Sample ID :

EB0601657-006

Analyte	CAS number	LOR	Units				
EA055: Moisture Content							
Moisture Content (dried @ 103°C)		1.0	%	22.2			
EG005T: Total Metals by ICP-AES							
Lead	7439-92-1	5	mg/kg	13			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		2	mg/kg	6710			
C10 - C14 Fraction		50	mg/kg	3910			
C15 - C28 Fraction		100	mg/kg	350			
C29 - C36 Fraction		100	mg/kg	<100			
EP080: BTEX							
Benzene	71-43-2	0.2	mg/kg	5.9			
Toluene	108-88-3	0.2	mg/kg	120			
Ethylbenzene	100-41-4	0.2	mg/kg	185			
meta- & para-Xylene	108-38-3	0.2	mg/kg	922			
	106-42-3						
ortho-Xylene	95-47-6	0.2	mg/kg	237			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%	80.8			
Toluene-D8	2037-26-5	0.1	%	93.4			
4-Bromofluorobenzene	460-00-4	0.1	%	85.6			

Page Number : 5 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID : Mary St BP Noosa
 WS001-06 Pit Water
 Sample Matrix Type / Description : WATER
 Sample Date / Time : 20 Feb 2006
 15:00

Laboratory Sample ID :
 EB0601657-007

Analyte	CAS number	LOR	Units				
EG020F: Dissolved Metals by ICP-MS							
Lead	7439-92-1	0.001	mg/L	0.007			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		20	µg/L	4380			
C10 - C14 Fraction		50	µg/L	6360			
C15 - C28 Fraction		100	µg/L	3300			
C29 - C36 Fraction		50	µg/L	210			
EP080: BTEX							
Benzene	71-43-2	1	µg/L	142			
Toluene	108-88-3	2	µg/L	683			
Ethylbenzene	100-41-4	2	µg/L	45			
meta- & para-Xylene	108-38-3	2	µg/L	1410			
	106-42-3						
ortho-Xylene	95-47-6	2	µg/L	1020			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%	103			
Toluene-D8	2037-26-5	0.1	%	112			
4-Bromofluorobenzene	460-00-4	0.1	%	110			



ALS Environmental

Page Number : 6 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657

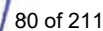
Surrogate Control Limits

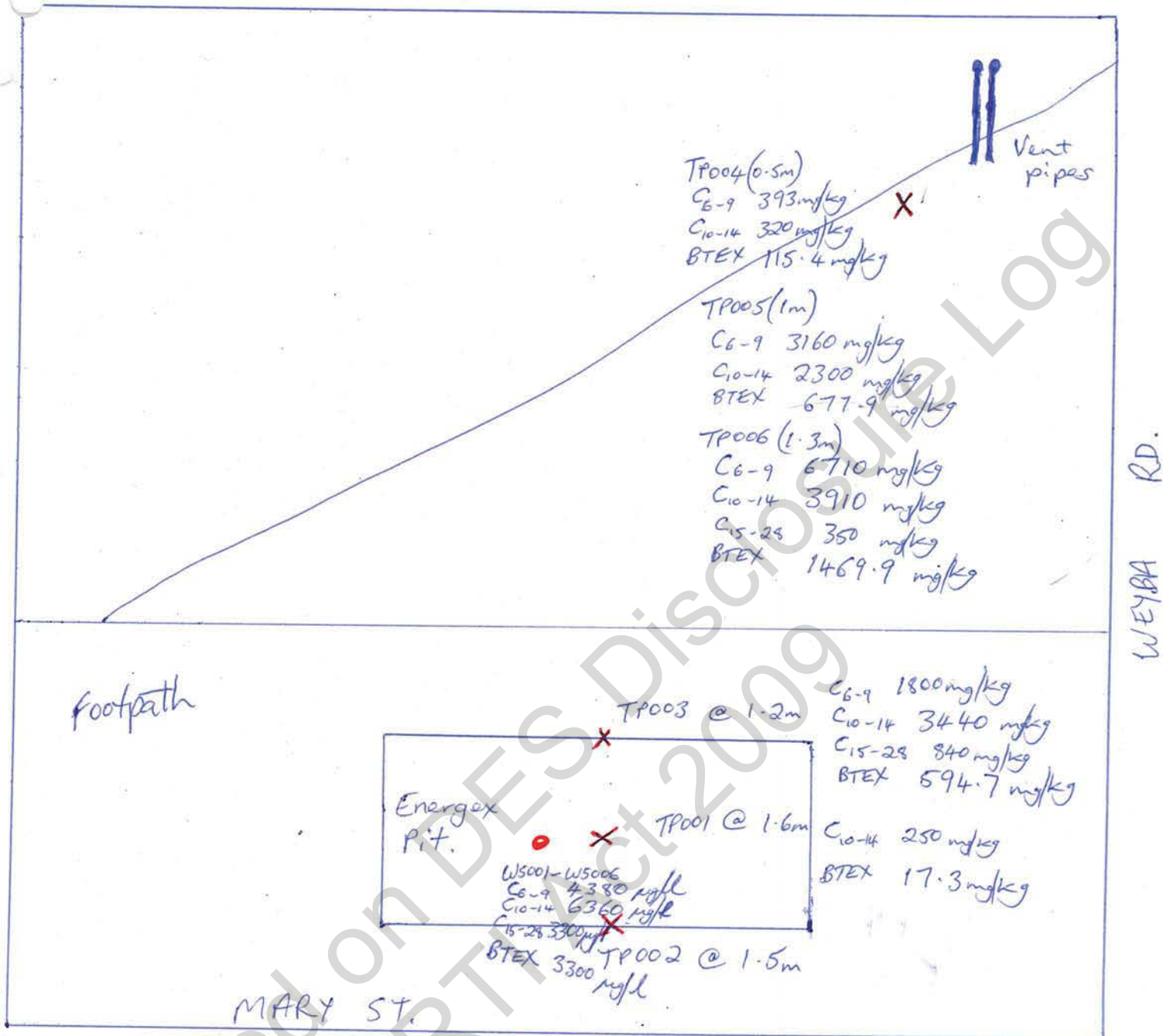
Matrix Type: WATER - Surrogate Control Limits

Method name	Analyte name	Surrogate Control Limits	
		Lower Limit	Upper Limit
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	88	110
	4-Bromofluorobenzene	86	115

Matrix Type: SOIL - Surrogate Control Limits

Method name	Analyte name	Surrogate Control Limits	
		Lower Limit	Upper Limit
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	81	117
	4-Bromofluorobenzene	74	121





INSET 1 - Not to scale



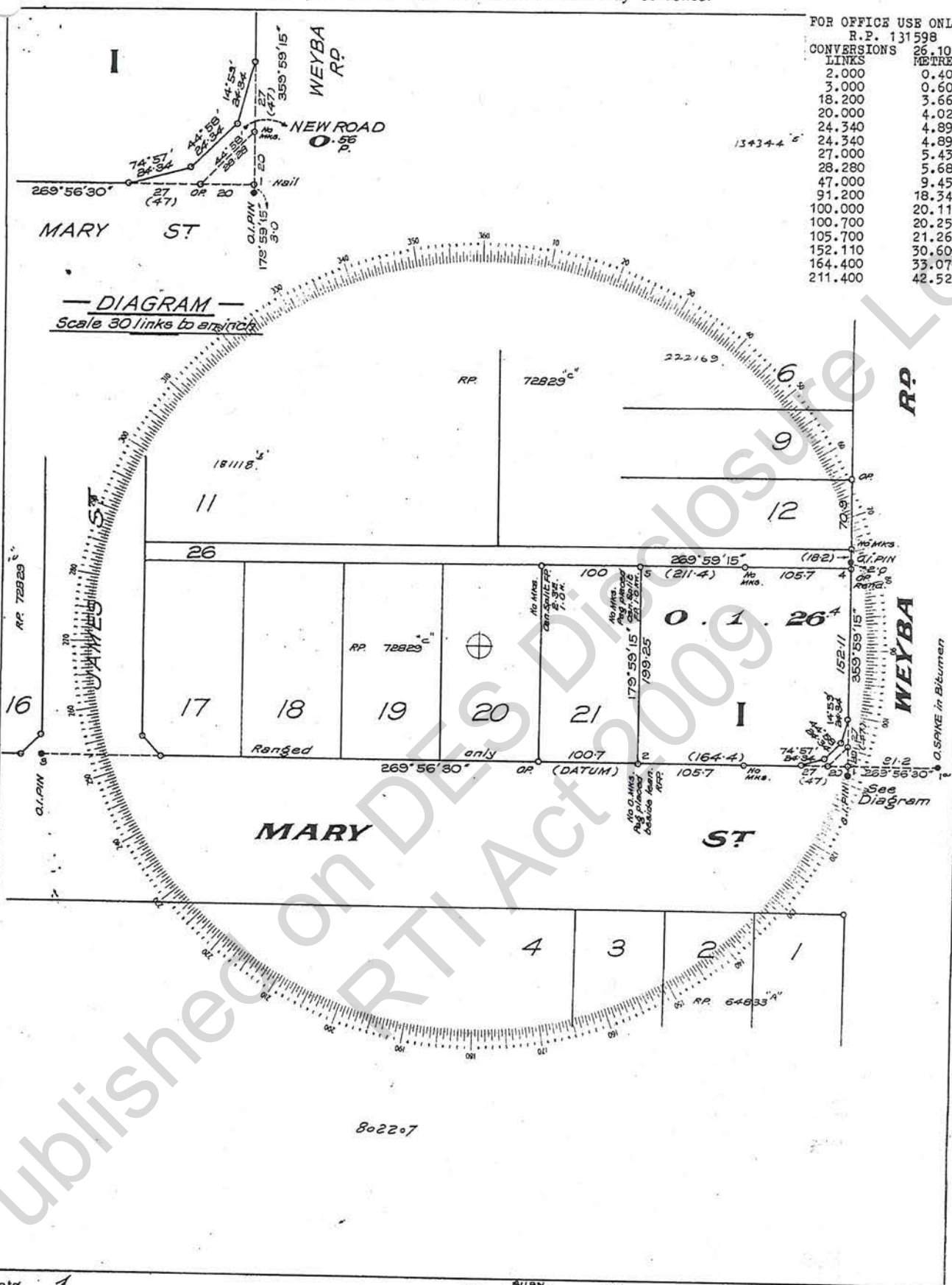
FOR OFFICE USE ONLY
R.P. 131598

CONVERSIONS	LINKS	METRES
26.10.76		
2.000	0.402	
3.000	0.604	
18.200	3.661	
20.000	4.023	
24.340	4.896	
24.340	4.896	
27.000	5.432	
28.280	5.689	
47.000	9.455	
91.200	18.347	
100.000	20.117	
100.700	20.258	
105.700	21.263	
152.110	30.600	
164.400	33.072	
211.400	42.527	

131598

Drawing of Plan must be restricted to the space inside the blue lines

131598



Lots 1
Cancelling Lots 1 & 2 on R.P. 112567
Surveyed by K. H. LAWRENCE 24/9/1971
Orig. Portion 8
Orig. Grant 65863
Town of Weyba
Parish of Weyba
SCALE 80 links to an inch

CROWN COPYRIGHT RESERVED
REGISTRAR OF TITLES, QUEENSLAND

REGISTERED PLAN

131598

CISP C

Weyl's

1. Henrietta Henry Lawrence of pl. Noosa Heads,
 Authorized Surveyor, do hereby solemnly and sincerely declare that I have faithfully and truly surveyed,
 measured and marked on the ground the parcel of land herein referred to, and that the measurements
 and boundaries given in this plan are correct, and do not to the best of my belief in any way interfere
 with the rights of any persons, owners or occupiers of the land adjoining the above land,
 and described in the said plan; and make this solemn declaration conscientiously believing the same to
 be true, and by virtue of the provisions of the

Authorized Surveyor

Made and Signed at Meesa Meesa this 15th day of Oct. 1971 before me.

Signature of Registrar of Titles or of a Magistrate

The Council of the Shore of Nassau certifies that all the requirements of this Council, the Local Government Acts of 1936 to 1971 and all By-Laws have been complied with and approves this Plan of Subdivision subject to

Dated this, 20 day of October, 1921

h4p4(6) Personal informatic

~~THE~~ WEYER SERVICES PTY. LTD

(Names in full) _____ as proprietor/s
of this land, agree to this Plan of subdivision, and dedicate the new roads shown hereon to public use.

Signature of Proprietor/s

sch4p4(6) Personal information

✓ New C.T. Ref. *

[illegible]

12.1.72

Fees short \$4.75

Calc. Bk. No. 279/28
Examined 11/1/72
Passed 11/1/72
Charted 20/1/72
Localed 20/1/72

12-1-72

Particulars entered in Register Book
Vol. 1012 Folio 37, 38

the 24 day of Jan 1972 at 9.2

6) Personal inf

SURVEY OF Lot 1

SURVEY OF Lot 1

County of March Parish of Weyba

Town of.....To the Depth of.....

Cancelling Lots 1 & 2 on RP 112567

Orig. Grant.....685.63.....Orig. ^{SUBN.}Portion.....8

- FOR OFFICE USE ONLY -

Previous Title CT 4012-37 Lot 1 RP 112567

-38 2

C.T.	Lots	New Rd.
4012 - 37	1	N.I.
- 38	1	

**For Additional Plan &
Document Filings
Refer to CISP**

FN. 30-12-71
 2
 84492
 \$20-55
 16-15
 (includes
 PAC
 FEES SHORT. 4-71
 25-
 5 JAN 1972
 65c
 C.D.

E14475?

RECEIVED
REG. B. FILE
DEC 30 2:37 PM '74

Lodged by:

BLAGENWAN, BUTLER & McDERMOTT
SOLICITORS
YAMBOUR

71- 41839

PLAN 131598

Jacinta Griffin

From: ALSE Brisbane Aus [alse.brisbane.aus@alsenviro.com]
Sent: Tuesday, 21 February 2006 2:46 PM
To: jacinta.griffin@epa.qld.gov.au
Subject: Your Reference : Mary St BP Noosa. COCAC/COAC for ALSE Workorder : EB0601657



eb0601657_coc.pdf eb0601657_coc_1.pdf

This e-mail has been automatically generated.

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ALS acknowledges the risks associated with suppling electronic media reports based on client requirements. This type of format has the ability to embed viruses within the code and as such, ALS has introduced a three tier layer of protection throughout their company resources. However, ALS can not guarantee any attachment is virus free and will not be held liable for any disruption to business. It is highly recommended that all attachments received are scanned prior to opening.

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7/3/06

Mark Foster

Discussed with [initials] and he advised to prepare
Enviro Evaluation on the basis of
late results

ch4p4(6) Personal informatio

PART COMPLETE REPORT

ALS Environmental



CERTIFICATE OF ANALYSIS

Client	: ENVIRONMENT PROTECTION AUTH	Laboratory	: ALS Environmental Brisbane	Page	: 1 of 6
Contact	: MS JACINTA GRIFFIN	Contact	: Michael Heery	Work Order	: EB0601657
Address	: GPO BOX 2771 BRISBANE QLD AUSTRALIA 4000	Address	: 32 Shand Street Stafford QLD Australia 4053		
E-mail	: Jacinta.griffin@epa.qld.gov.au	E-mail	: Michael.Heery@alsenviro.com		
Telephone	: (07)3225-8402	Telephone	: 61-7-32437222		
Facsimile	: (07)3225-8723	Facsimile	: 61-7-32437259		
Project	: Mary St BP Noosa	Quote number	:	Dale received	: 20 Feb 2006
Order number	: - Not provided •			Date issued	:
COC number	: • Not provided •			No. of samples	- Received : 7
Site	: • Not provided •				Analysed : 7

ALSE • Excellence in Analytical Testing



File A

NATA Accredited Laboratory
825

This document is issued in
accordance with NATA's
accreditation requirements.

Accredited for compliance with
ISO/IEC 17025.

This document has been digitally signed by those names that appear on this report and are the authorised signatories. Digital signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory	Position	Department
Carsten Emrich	Senior Organic Chemist	Organics • NATA 818 (Brisbane)
Stephen Hislop	Laboratory Diagnostician	Inorganics • NATA 818 (Brisbane)

PAR COMPLETE REPORT

Page Number : 2 of 6
Client : ENVIRONMENT PROTECTION AUTH
Work Order : EB0601657



Comments

This report for the ALSE reference EB0601657 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- **Analytical results for samples submitted**

When moisture determination has been performed, results are reported on a dry weight basis. When a reported 'less than' result is higher than the LOR, this may be due to primary sample extracts/digestion dilution and/or insufficient sample amount for analysis. Surrogate Recovery Limits are static and based on USEPA SW846 or ALS-QW/EN38 (in the absence of specified USEPA limits). Where LOR of reported result differ from standard LOR, this may be due to high moisture, reduced sample amount or matrix interference. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number, LOR = Limit of Reporting. * Indicates failed Surrogate Recoveries.

- **Surrogate control limits**

The analytical procedures used by ALS Environmental are based on established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house procedure 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 herein. Reference methods from which ALSE methods are based are provided in parenthesis.

PART COMPLETE REPORT

Page Number : 3 of 6

Client : ENVIRONMENT PROTECTION AUTH

Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID :

Mary St BP Noosa
TP001 @ 1.6m base

Mary St BP Noosa
TP002 @ 1.5m road
wall

Mary St BP Noosa
TP003 @ 1.2m wall

Mary St BP Noosa
TP004 @ 0.5m

Mary St BP Noosa
TP005 @ 1m

Sample Matrix Type / Description :

Sample Date / Time :

Laboratory Sample ID :

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

SOIL
20 Feb 2006
15:00

EB0601657-001

EB0601657-002

EB0601657-003

EB0601657-004

EB0601657-005

Analyte	CAS number	LOR	Units	EB0601657-001	EB0601657-002	EB0601657-003	EB0601657-004	EB0601657-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	24.0	22.0	7.8	13.4	28.7
EG005T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	15	<5	<5	13	11
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	78	<2	1800	393	3160
C10 - C14 Fraction		50	mg/kg	250	<50	3440	320	2300
C15 - C28 Fraction		100	mg/kg	170	100	840	<100	120
C29 - C36 Fraction		100	mg/kg	<100	<100	<100	<100	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	0.4	<0.2	1.5	0.5	2.7
Toluene	108-88-3	0.2	mg/kg	2.2	<0.2	65.8	6.9	36.6
Ethylbenzene	100-41-4	0.2	mg/kg	0.3	<0.2	27.4	9.1	49.6
meta- & para-Xylene	108-38-3	0.2	mg/kg	6.9	<0.2	350	81.0	451
ortho-Xylene	106-42-3							
	95-47-6	0.2	mg/kg	7.5	0.3	150	17.9	138
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	109	114	114	107	87.3
Toluene-D8	2037-26-5	0.1	%	99.9	101	99.8	108	94.9
4-Bromofluorobenzene	460-00-4	0.1	%	92.3	93.0	100	100	89.7

PAR. COMPLETE REPORT

Page Number : 4 of 6

Client : ENVIRONMENT PROTECTION AUTH

Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID : Mary St BP Noosa

TP006 @ 1.3m

Sample Matrix Type / Description : SOIL

Sample Date / Time : 20 Feb 2006
15:00

Laboratory Sample ID :

EB0601657-006

Analyte	CAS number	LOR	Units				
EA055: Moisture Content							
Moisture Content (dried @ 103°C)		1.0	%	22.2			
EG005T: Total Metals by ICP-AES							
Lead	7439-92-1	5	mg/kg	13			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		2	mg/kg	6710			
C10 - C14 Fraction		50	mg/kg	3910			
C15 - C28 Fraction		100	mg/kg	350			
C29 - C36 Fraction		100	mg/kg	<100			
EP080: BTEX							
Benzene	71-43-2	0.2	mg/kg	5.9			
Toluene	108-88-3	0.2	mg/kg	120			
Ethylbenzene	100-41-4	0.2	mg/kg	185			
meta- & para-Xylene	108-38-3	0.2	mg/kg	922			
	106-42-3						
ortho-Xylene	95-47-6	0.2	mg/kg	237			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%	80.8			
Toluene-D8	2037-26-5	0.1	%	93.4			
4-Bromofluorobenzene	460-00-4	0.1	%	85.6			

PART COMPLETE REPORT

Page Number : 5 of 6

Client : ENVIRONMENT PROTECTION AUTH

Work Order : EB0601657



ALS Environmental

Analytical Results

Client Sample ID :

Mary St BP Noosa
WS001-06 Pit Water

Sample Matrix Type / Description :

WATER

Sample Date / Time :

20 Feb 2006

15:00

Laboratory Sample ID :

EB0601657-007

Analyte	CAS number	LOR	Units				
EG020F: Dissolved Metals by ICP-MS							
Lead	7439-92-1	0.001	mg/L	0.007			
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction				Not Authorised			
C10 - C14 Fraction		50	µg/L	6360			
C15 - C28 Fraction		100	µg/L	3300			
C29 - C36 Fraction		50	µg/L	210			
EP080: BTEX							
Benzene	71-43-2			Not Authorised			
Toluene	108-88-3			Not Authorised			
Ethylbenzene	100-41-4			Not Authorised			
meta- & para-Xylene	108-38-3			Not Authorised			
	106-42-3						
ortho-Xylene	95-47-6			Not Authorised			
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1		Not Authorised			
Toluene-D8	2037-26-5	0.1		Not Authorised			
4-Bromofluorobenzene	460-00-4	0.1		Not Authorised			

PAR. COMPLETE REPORT

Page Number : 6 of 6
 Client : ENVIRONMENT PROTECTION AUTH
 Work Order : EB0601657



Surrogate Control Limits

Matrix Type: WATER - Surrogate Control Limits

Matrix Type: WATER - Surrogate Control Limits			
Method name	Analyte name	Lower Limit	Upper Limit
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	88	110
	4-Bromofluorobenzene	86	115

Matrix Type: SOIL - Surrogate Control Limits

Matrix Type: SOIL - Surrogate Control Limits			
Method name	Analyte name	Lower Limit	Upper Limit
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	81	117
	4-Bromofluorobenzene	74	121

20/2/06

12:20pm Helen Bankes and myself arrived at the BP service station on Mary St and Weyburn Rd Narraville. We identified the closest sensitive receptor as a tributary of the Nees river adjacent to Keyser Is. located ~ 30m west of the BP.

1pm Helen & I met

Sch4p4(6) Personal information

Asst. Manager and he gave permission for us to sample on the BP site. He provided us a copy of a Tank integrity test & analysis undertaken by Mastech. He indicated

that there were no tanks ~~off~~ or other infrastructure problems.

1:15pm We met ~~Personal in~~ ~~ch4p4(6) Personal informat~~ ~~Massa Shire~~ Council, and ~~Personal in~~ an Energex contractor from Hardie Bros. ~~Personal in~~ assisted us in sampling the open pit on the footpath where the hydrocarbon odours had been detected, when Energex had opened the pit 5 days earlier. When ~~Personal i~~ uncovered the abandoned over pit the hydrocarbon odours

were present & medium to strong.

1:30pm ~~Personal inf~~ took six water samples from the groundwater in the pit. Four ~~water~~ samples were collected for BTEX analysis, and two samples for oil & grease. ~~Personal inf~~ also took 3 soil samples, 1 from the lease, ^{5m} 1 from southern road side wall @ 1.5m depth and 1 from northern wall @ 1.2m. These were labelled & put on ice ^{into}.
2:05pm I hand augered a borehole in the garden bed, near the

vent pipes about
4m from the pit.
Sample ID TP004 was
taken at 0.5m depth
in sandy silt.
TP005 was taken at 1m
in sandy silt.
TP006 @ 1.3m depth
was taken from sand lag.
Visual black staining
& strong hydrocarbon
odors were observed
at TP005 and TP006.
See photos from bench.
These samples were
put into Estey on
ice. We handed over
samples to AHS at
6:15 pm.

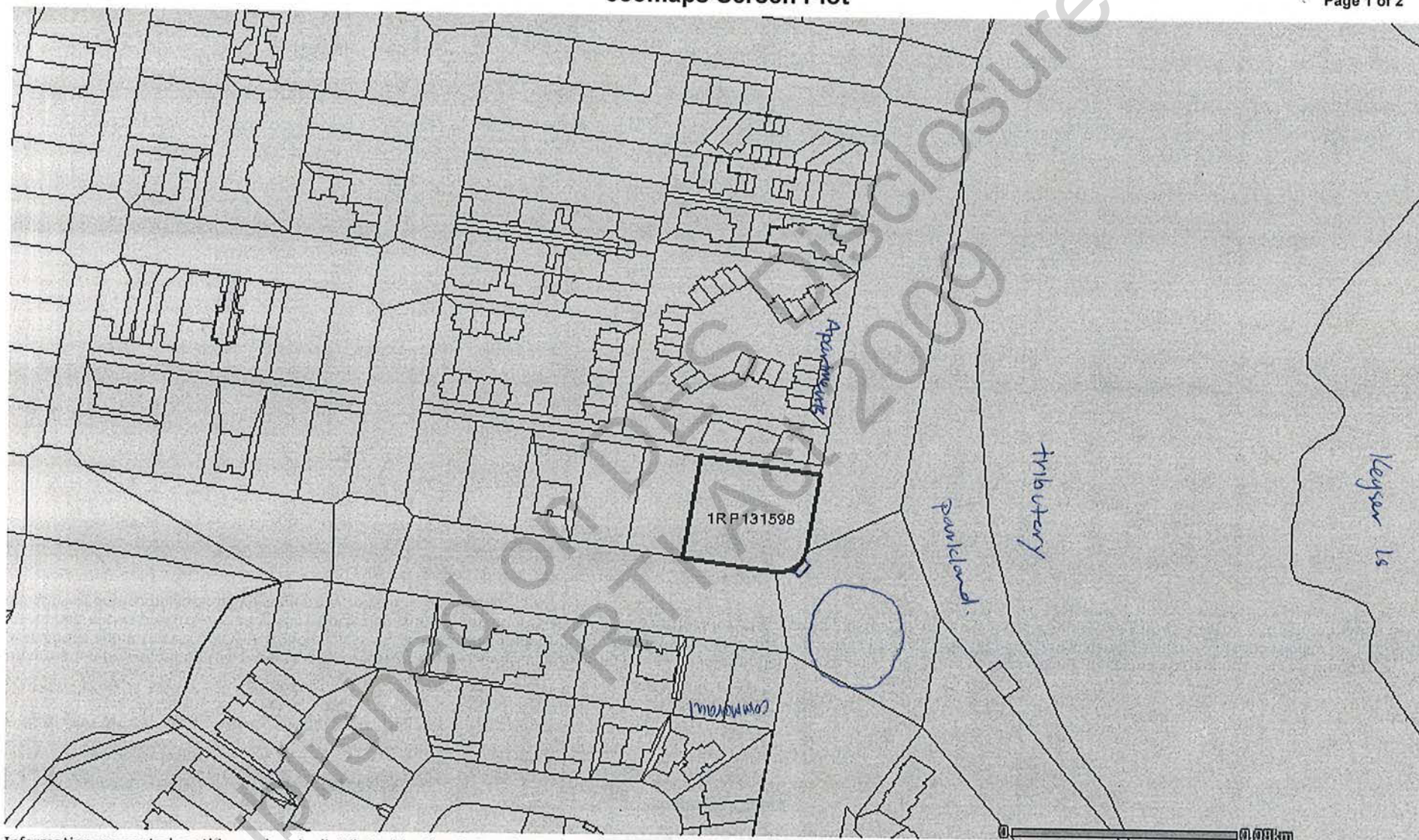
ecomaps

20/02/2006

Queensland Environmental Protection Agency

ecomaps Screen Plot

Page 1 of 2



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ecomaps

20/02/2006

Queensland Environmental Protection Agency

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ecomaps Screen Plot

ecomaps Layers

- ☐ Cadastra Selection ☐ Other States
☒ Grouped Cadastra
☐ Queensland

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ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Client Details

Client : ENVIRONMENT PROTECTION AUTH
Contact : MS JACINTA GRIFFIN
Address : GPO BOX 2771 BRISBANE QLD AUSTRALIA 4000

Project : Mary St BP Noosa
Order number : - Not provided -
C-O-C Number : - Not provided -
Site : - Not provided -
Sampler : - Not provided -

E-mail : jacinta.griffin@epa.qld.gov.au
Telephone : (07)3225-8402
Facsimile : (07)3225-8723

Laboratory Details

Laboratory : ALS Environmental Brisbane
Manager : Michael Heery
Address : 32 Shand Street Stafford QLD Australia 4053

Quote number : EB20040143
Work order : EB0601657

E-mail : Michael.Heery@alsenviro.com
Telephone : 61-7-32437222
Facsimile : 61-7-32437259

Dates

Date Samples Received : 20 Feb 2006
SRA Issue Date : 21 Feb 2006
Scheduled Reporting Date : 7 Mar 2006

Delivery Details

Mode of Delivery : Client Drop off.
No. of coolers/boxes : 1 LARGE
Security Seal : Intact.

Temperature : 8 C - Ice present
No. of samples :
- Received 7
- Analysed 7

Comments

- Sample containers do not comply to pretreatment / preservation standards (AS, APHA, USEPA). Please refer to the 'Sample Container(s) / Preservation Non-Compliance Log' at the end of this report for details.
- Sample(s) have been received within recommended holding times.
- Analytical work for this work order will be conducted at ALSE Brisbane.
- Please direct any queries related to sample condition / numbering / breakages to Charles Allom.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- When the sampling time is not supplied on the COC documentation, ALSE defaults the sampling time to that of the COC 'relinquishment' time (if supplied). If this also is not supplied, ALSE defaults the sampling time to the 'time of receipt at Laboratory'.

Disclaimer : This document contains privileged and confidential information intended only for the use of the addressee. If you are not the addressee, you are hereby notified that you must not disseminate, copy or take action of its contents. If you have received this document in error, please notify ALS immediately.

SAMPLE RECEIPT NOTIFICATION (SRN) - continued

Client : ENVIRONMENT PROTECTION AUTH
Project : Mary St BP Noosa

Work Order : EB0601657
ALS Quote Reference : EB20040143



Requested Reports

● MS JACINTA GRIFFIN	Email	jacinta.griffin@epa.qld.gov.au
- A4 - Certificate of Analysis - NEPM format	Email	jacinta.griffin@epa.qld.gov.au
- A4 - Quality Control Report - NEPM format	Email	jacinta.griffin@epa.qld.gov.au
- Chromatogram Report	Email	jacinta.griffin@epa.qld.gov.au
- ENMRG Export Format	Email	jacinta.griffin@epa.qld.gov.au
- Chain of Custody Acknowledgement	Email	jacinta.griffin@epa.qld.gov.au
- A4 - Sample Receipt Notification - Standard format	Email	jacinta.griffin@epa.qld.gov.au
- Invoice	Email	jacinta.griffin@epa.qld.gov.au

Sample Container(s) / Preservation Non-Compliance Log

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

Method Client Sample ID (ALS Sample ID.)	Sample Container Received	Preferred Sample Container for Analysis
● EG020A-F : Dissolved Metals by ICP-MS - Suite A		
- Mary St BP Noosa - WS001-06 Pit Water (EB0601657-007)	- Amber VOC Vial - HCl	- Clear Plastic Bottle - Nitric Acid; Filtered
● EP071 : TPH - Semivolatile Fraction		
- Mary St BP Noosa - WS001-06 Pit Water (EB0601657-007)	- Amber Glass Bottle - Sulphuric Acid	- Amber Glass Bottle - Unpreserved

Jacinta Griffin

From: ALSE Brisbane Aus [alse.brisbane.aus@alsenviro.com]
 Sent: Tuesday, 21 February 2006 2:46 PM
 To: jacinta.griffin@epa.qld.gov.au
 Subject: Your Reference : Mary St BP Noosa. COCAC/COAC for ALSE Workorder : EB0601657



eb0601657_coc.pdf eb0601657_coc_1.pdf

This e-mail has been automatically generated.

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Analysis Request / Chain of Custody Form

Company:	EPA - CLU.	Purchase Order Number:	
Contact:	Jacinta Griffin	Project Identification:	
Postal Address:	116 288 Edward St Bne City.	Quotation Reference:	
		Results Required By:	
Phone:	3225 1086	Special Requirements:	
Fax:			
E-mail:	Jacinta.griffin@epa.gld.gov.ao		
Result Format (Please Circle):	FAX MAIL	ALS Batch Number:	
Electronic:	EXCEL PDF	(Lab Use Only)	EB

METALS -Water Samples	TOTAL (USEPA 3005) FILTERED
(Please Circle)	ICPAES /ICPMS

SAMPLE DATA		
Sample Identification	Date	Sample Type/ Matrix
Mary St. BP Noosa		
① TP001 @ 1.6m base	20/2/06	soil
② TP002 @ 1.5m mid wall	"	"
③ TP003 @ 1.2m wall	"	"
④ TP004 @ 0.5m	"	"
⑤ TP005 @ 1m	"	"
⑥ TP006 @ 1.3m	"	"
⑦ { WS001 Pit water	"	water
WS002 Pit water	"	water
⑧ { WS003 Pit water	"	water
WS004 Pit water	"	water
WS005 Pit water	"	water
WS006 Pit water	"	water

[illegible]

ALS Environmental
Brisbane
Work Order
EB0601657



Report Version: AtkvoLabel 1.02
Telephone : 61-7-32437222

34 (6) Personal information Relinquished By		Received By	
Name:	Date: 20/2/06	Name: Matt G	Date: 20/2/06
Company: EPA	Time: 6:30am	Company: Australian Laboratory Services	Time: 6:30am

ENFM(75B/2)



- 50 soil jars
+ bottle guides

Analysis Request / Chain of Custody Form

Company:	EPA - CLU	Purchase Order Number:	
Contact:	Jacinta Griffin	Project Identification:	
Postal Address:	416 288 Edward St Bne City	Quotation Reference:	
Phone:	3225 1086	Results Required By:	
Fax:		Special Requirements:	
E-mail:	jacinta.griffin@epa.qld.gov.au		
Result Format (Please Circle):	FAX MAIL	ALS Batch Number:	
Electronic:	EXCEL PDF	(Lab Use Only)	EB

METALS - Water Samples	TOTAL (USEPA 3005) FILTERED	ANALYSIS REQUIRED											
(Please Circle)	ICPAES ICPMS												

SAMPLE DATA			ANALYSIS REQUIRED													
Sample Identification	Date	Sample Type/ Matrix	TPH	Pb												
① Mary St BP Noosa																
① TP001 @ 1.6m	20/2/06	soil	✓	✓												
② TP002 @ 1.5m	"	"	✓	✓												
③ TP003 @ 1.2m	"	"	✓	✓												
④ TP004 @ 0.5m	"	"	✓	✓												
⑤ TP005 @ 1m	"	"	✓	✓												
⑥ TP006 @ 1.3m	"	"	✓	✓												
WS001 Pit water	"	water	✓	✓												
WS002 Pit water	"	water	✓	✓												
⑦ WS003 Pit water	"	water	✓	✓												
WS004 Pit water	"	water	✓	✓												
WS005 Pit water	"	water	✓	✓												
WS006 Pit water	"	water	✓	✓												

TPH Filter required. filter for dissolved metals. 20/2/06

ALS Environmental
Brisbane
Work Order
EB0601657



Report Version: AliquotLabel 1.02
Telephone : 61-7-32437222

Relinquished By		Received By	
Name:	4(6) Personal inform	Name:	4(6) Personal inform
Company:	EPA	Company:	Australian Laboratory Services
Date:	20/2/06	Date:	20/2/06
Time:	6:30pm	Time:	6:30

ENFM(75B/2)



Tributary
of Noosa
River,
Weyla Is.

BP
Service
Station

Photo 1 : 20/2/06



Energex
pit on
footpath

TP004
to
TP006
in garden
bed of BP Marg St.
Noosaville

Photo 2 : 21/2/06 Hand auger borehole
next to rent pipes, where EPA
took TP004 - TP006



Photo 3 : 21/2/06 Energex pit on
the footpath of BP at Mary St, Noosa



Photo 4 : 21/2/06 Energex pit.



Photo 5 : 21/2/06 groundwater in lease of Energex pit @ 1.5m depth.

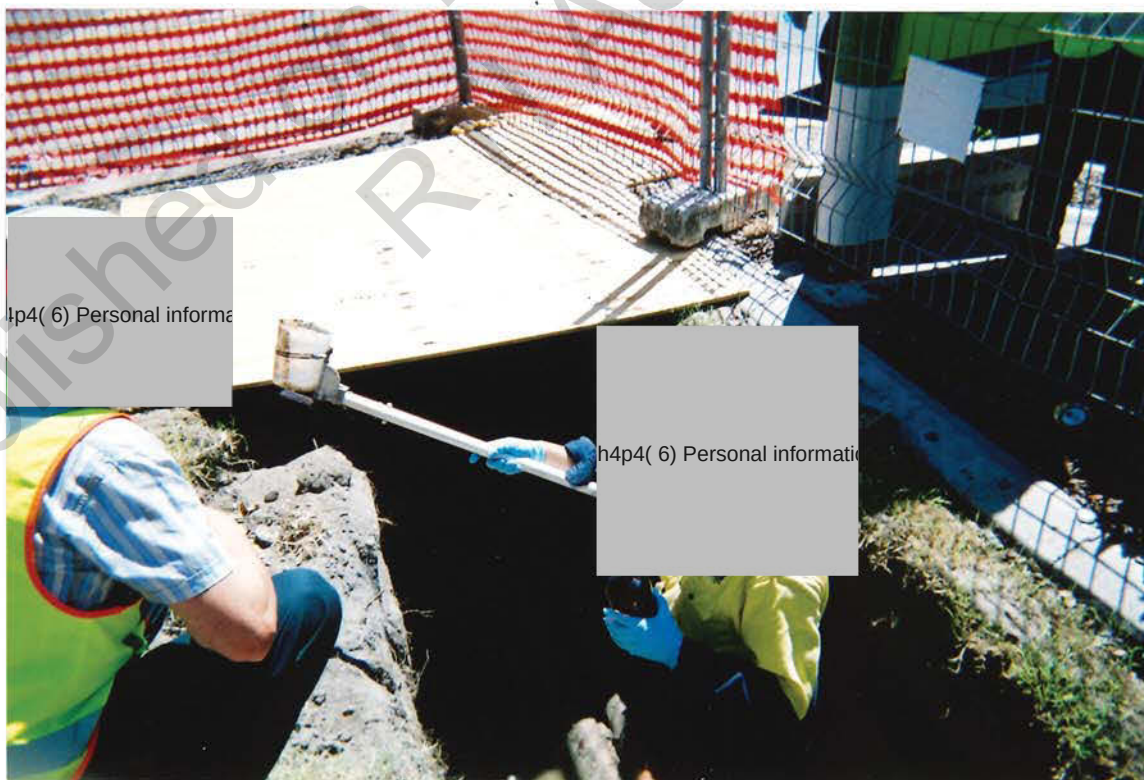


Photo 6 : 21/2/06 water samples taken by Energex contractor, Hardie Bros. Namely WS001 - WS006.



Photo 7 : 21/2/06 Energex pit on footpath
Shows soil profile 0.1 - 0.4m Sandy silty topsoil (A horizon)
0.4m - 0.6m Silty sandy (B horizon),
0.6m - 1.5m sandy soil



Photo 8 : 21/2/06 Soil sampling



Photo 9 : 21/2/06. Three distinct soil types identified
 ① 0.1 - 0.4m Sandy silt/clay
 ② 0.4 - 0.6m Silty sand
 ③ 0.6 - 1.5m Sand

Photo 10
 21/2/06
 BP garden bed
 near vent pipes
 borehole
 TP004 - TP006





Photo 11: Borehole hand augered
2/2/06 near vent pipes in BP Mary St. garden bed.
Visible staining & hydrocarbon odors @ 1m depth
for sample ID
TP005.



Photo 12: 2/2/06 TP006 Visual staining &
strong hydrocarbon odors 1-1.3m depth.



Photo 13 : 21/2/06

TP004 - TP006 borehole site
located next to vent pipes
@ BP Mary St, Noosaville



TO BE AMENDED SO AS NOT
TO INCLUDE ROADWAY IN 8 M
EXCLUSION ZONE.

DOCUMENT NO: VQ1423-HS-D001

DRAFT

ADDENDUM WORKPLACE HEALTH AND SAFETY ADVICE

FOR 
17.8.01

ENERGEX CABLE INSTALLATION WORKS CORNER OF WEYBA ROAD AND MARY STREET NOOSAVILLE

Client: **Caltex Australia Petroleum Pty Limited**

Project Title: **Energex Cable Installation Works, Corner of Weyba Road and Mary Street, Noosaville**

Work Plan No:

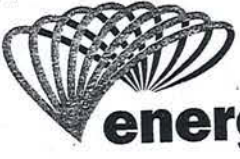
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writing

Darren White BAppSc
Environmental Geologist
Telephone (07) 3233 1821

Egis Consulting Australia Pty Limited
19th Floor, Central Plaza Two, 66 Eagle Street, Brisbane QLD 4000 Australia
GPO Box 684 Brisbane QLD 4001
Email: whited@bne.egisconsult.com.au Facsimile: (07) 3233 1649

DAVID
LOWE



energex

Scott Collingwood
Project Scoping Officer

ENERGEX Limited
27 Edgar Street
Northgate Qld 4013

Mobile 4 (6) Personal inform
Telephone
Facsimile (07) 5445 0251
Email
scottcollingwood@energex.com.au
Web www.energex.com.au

for which it
ng Australia
atter of this
consent in

A	14/8/01	Draft Issue
Rev	Date	Description

VQ1423/012260028-0+

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96
* See F 89 - This Addendum confirms that 8m exclusion zone does not include Council's roadway.

DOCUMENT NO: VQ1423-HS-L

Personal 22.8.01

DRAFT

ADDENDUM WORKPLACE HEALTH AND SAFETY ADVICE
FOR

**ENERGEX CABLE INSTALLATION WORKS
CORNER OF WEYBA ROAD AND
MARY STREET NOOSAVILLE**

Client: **Caltex Australia Petroleum Pty Limited**

Project Title: **Energex Cable Installation Works, Corner of Weyba Road and Mary Street, Noosaville**

Work Plan No:

ACN 000 912 630 / ABN 18 000 912 630

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A	14/8/01	Draft Issue					
Rev	Date	Description	By	Chk	Eng	Appd	Appd

VQ1423/012260028-0+

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PETROLEUM PTY LIMITED

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INSTALLATION WORKS
CORNER OF WEYBA ROAD
ROAD AND MARY STREET
NOOSAVILLE

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DN - VQ1423-HS-D001

Rev A

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CALTEX AUSTRALIA
PETROLEUM PTY LIMITED

ENERGEX CABLE
INSTALLATION WORKS
CORNER OF WEYBA ROAD
AND MARY STREET
NOOSAVILLE

1. INTRODUCTION

Egis Consulting Australia Pty Ltd (Egis) have been engaged by Caltex Australia Petroleum Pty Ltd (Caltex) to provide an addendum to the Energex Limited 'Workplace Health and Safety Plan' to provide advice regarding safety measures for dealing with petroleum hydrocarbons products which may be encountered during the installation of electrical cables adjacent to the Caltex service station on the corner of Weyba Road and Mary Street.

This document outlines the potential hazards that may be encountered and recommends appropriate workplace health and safety measures to ensure safe working conditions during cable installation.

2. OBJECTIVES

This Workplace Health and Safety Advice will address the objectives listed below, in conjunction with the Energex Limited Workplace Health & Safety Plan for the site.

- Compliance with relevant legislation and regulatory standards.
- Protection of site personnel and sub contractors undertaking the work from injury and the potential effects of a range of hazards at the site. In particular, measures will be taken to minimise inhalation, skin contact and ingestion of chemical contaminants at site while fulfilling stated work assignments.
- Review of the tasks involved, the nature of individual hazards and the most appropriate preventative and/or protective measures that may be taken to mitigate the hazards.
- Contingency procedures to be adopted in the event of accidents.
- Provision of a schedule which identifies hazards and details assessment and control procedures.

3. PROJECT ORGANISATION

Energex Limited is managing the site work with direct responsibility for the health and safety procedures and Egis will act in an advisory role to assist Energex in ensuring a safe working environment.

Egis will not be responsible for providing individual employees with suitable protective clothing or the coordination of site activities.



CALTEX AUSTRALIA
PETROLEUM PTY LIMITED

ENERGEX CABLE
INSTALLATION WORKS
CORNER OF WEYBA ROAD
AND MARY STREET
NOOSAVILLE

4. DESCRIPTION AND NATURE OF WORK

The site work entails the excavation of soil to expose Energex cable conduits. Egis personnel have been advised that Energex will not undertake cable joining. Hand trenching and mechanical trenching methods will be employed to expose the cable conduits. Strict safety precautions will be adopted during trenching to minimise the potential hazards. Hot work, naked flames and potential ignition sources (eg mobile phones) will not be permitted within the exclusion zone, which extends 8 metres around the excavation and hydrocarbon impacted soil stockpile(s) but not including the roadway. The exclusion zone shall be barricaded to prevent public access. A 1.6 m high physical barrier comprising fencing and shade cloth, panels or equivalent shall be erected along the roadway section of the exclusion zone.

5. NATURE OF HAZARDS

The potential hazards likely to be encountered at the site that are covered under this workplace health and safety addendum are petroleum hydrocarbon products, present in the soil and groundwater. The potential hazards include:

- Petrol and constituent compounds such as benzene.

- Lead.

Disturbance of the soil sub-surface provides a mechanism for site personnel to become exposed to the soil and groundwater contaminants listed above, presenting the following risks:

- Detrimental health effects, damage to property or the environment due to explosion or fire caused by the combustion of volatilised hydrocarbon compounds.
- Detrimental health effects due to inhalation of volatilised hydrocarbon compounds and/or dust particles with hydrogen compounds adhered to them.
- Detrimental health effects due to dermal contact with soil and/or groundwater containing hydrocarbon compounds and/or lead.
- Detrimental health effects due to ingestion of soil and/or groundwater containing hydrocarbon compounds and/or lead.

6. RISK IDENTIFICATION, ASSESSMENT AND CONTROL PROCEDURES

A schedule follows in Table 6.1.



Table 6.1 – Hazard Assessment and Risk Control Measures

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ENERGEX CABLE
INSTALLATION WORKS
CORNER OF WEYBA ROAD
ROAD AND MARY STREET
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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Mechanical Excavation	Fire and/or explosion of hydrocarbon vapours liberated by excavation of hydrocarbon impacted soil.	<p>Potential ignition sources, including naked flames, smoking, petrol engines and current emitting devices such as mobile phones are to be excluded from an 8 metre exclusion zone surrounding the excavation and stockpile but not including the roadway. The exclusion zone shall be barricaded to prevent public access.</p> <p>A 1.6 m high physical barrier comprising fencing and shade cloth, panels or equivalent shall be erected along the roadway section of the exclusion zone.</p> <p>Diesel powered machinery is permitted to operate within the exclusion zone provided that:</p> <ul style="list-style-type: none"> • Continuous monitoring of flammable gas concentrations in the atmosphere surrounding the equipment is conducted. • Machinery, with the exception of hydraulically operated excavation arms, is not permitted to operate within the 0.5 metre hazard zone surrounding the excavation. <p>Continuous monitoring of flammable vapour concentrations in the atmosphere surrounding the excavations is to be conducted with a calibrated portable gas meter that is intrinsically safe for operation in flammable atmospheres.</p> <p>Flammable gas concentrations in excess of 10% LEL (lower explosive limit) will necessitate the immediate shutdown of all machinery and the cessation of work. If flammable gas concentrations in excess of 10% LEL persist, appropriate control measures such as the use of an air blower will be required to be implemented. Work shall not recommence until flammable gas concentrations are below 10% LEL. Mechanical equipment used to control atmospheric flammable gas concentrations shall be operated outside the exclusion zone unless intrinsically safe for operation within flammable atmospheres.</p>

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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Mechanical Excavation (continued)	Detrimental human health effects due to the inhalation of hydrocarbon vapours.	<p>Operators of machinery are to work up-wind of the excavation and ensure that cab is closed off with the air conditioner operating.</p> <p>Continuous monitoring of atmospheric concentrations of volatile organic compounds present in the work area. Monitoring is to be conducted with a calibrated portable meter that is intrinsically safe for operation in flammable atmospheres.</p> <p>Atmospheric concentrations of volatile organic compounds in excess of 300 ppm will necessitate the use of breathing apparatus such as half face respirators fitted with chemical filters. Ventilation equipment may be used to reduce atmospheric concentrations of volatile organic compounds to below 300 ppm. Mechanical ventilation equipment is to be operated outside the exclusion zone or be intrinsically safe for operation within flammable atmospheres.</p> <p>Workers shall not continue working in respirators where volatile organic compound (VOC) concentrations in the breathing zone of the workers exceed 1,000 ppm.</p>

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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Hand Trenching and Cable Handling	Fire and/or explosion of hydrocarbon vapours liberated by excavation of contaminated soil.	<p>Potential ignition sources, including naked flames, smoking, petrol engines and current emitting devices such as mobile phones are to be excluded from an 8 metre exclusion zone surrounding the excavation and stockpile but not including the roadway. The exclusion zone shall be barricaded to prevent public access. A 1.6 m high physical barrier comprising fencing and shade cloth, panels or equivalent shall be erected along the roadway section of the exclusion zone.</p> <p>Cable handling is to be conducted in a manner that does not use a heat source such as blow torches or welders. Hand trenching and cable handling activities are to be conducted in a manner that minimises the potential for ignition to occur. Hand excavation is to be conducted in a way that prevents the generation of sparks.</p> <p>Continuous monitoring of flammable vapour concentrations in the atmosphere surrounding the excavations is to be conducted with a calibrated portable gas meter that is intrinsically safe for operation in flammable atmospheres.</p> <p>Flammable gas concentrations in excess of 10% LEL (lower explosive limit) will necessitate the immediate shutdown of all machinery and the cessation of work. If flammable gas concentrations in excess of 10% LEL persist, appropriate control measures such as the use of an air blower will be required to be implemented. Work shall not recommence until flammable gas concentrations are below 10% LEL. Mechanical equipment used to control atmospheric flammable gas concentrations shall be operated outside the exclusion zone unless intrinsically safe for operation within flammable atmospheres.</p>

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INSTALLATION WORKS
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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Hand Trenching and Cable Handling (continued)	Detrimental human health effects due to the inhalation of hydrocarbon vapours.	<p>Continuous monitoring of atmospheric concentrations of volatile organic compounds present in the work area. Monitoring is to be conducted with a calibrated portable meter that is intrinsically safe for operation in flammable atmospheres.</p> <p>Atmospheric concentrations of volatile organic compounds in excess of 300 ppm will necessitate the use of breathing apparatus such as half face respirators fitted with chemical filters. Ventilation equipment may be used to reduce atmospheric concentrations of volatile organic compounds to below 300 ppm. Mechanical ventilation equipment is to be operated outside the exclusion zone or be intrinsically safe for operation within flammable atmospheres.</p> <p>Workers should not continue working in respirators where VOC concentrations in the breathing zone of workers exceed 1,000 ppm.</p>
	Detrimental human health effects due to dermal contact and/or ingestion of soil contaminants.	<p>Appropriate personal protective equipment (PPE) is to be used. Equipment is to include neck to toe clothing, disposable nitrile gloves, eye protection and Wellington boots. Additional equipment such as Tyvek suits and elbow length nitrile gloves are to be available if required.</p> <p>Dermal contact with hydrocarbon impacted soil and groundwater is to be avoided.</p> <p>Personal hygiene practices that include removal of contaminated clothing and PPE followed by thorough washing of hands and face prior to eating or smoking is to be implemented.</p> <p>A first aid kit and potable water shall be readily available.</p>
Handling and Storage of Excavated Clean Soil	None identified	Soil is to be considered to be contaminated with hydrocarbons until it has been established otherwise. Therefore contaminated soil control measures shall be adopted for all soil excavated.

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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Handling and Storage of Excavated Contaminated Soil	Fire and/or explosion of hydrocarbon vapours liberated by excavation of contaminated soil.	<p>Potential ignition sources, including naked flames, smoking, petrol engines and current emitting devices such as mobile phones are to be excluded from an 8 metre exclusion zone surrounding the excavation and stockpile but not including the roadway. The exclusion zone shall be barricaded to prevent public access.</p> <p>Diesel powered machinery is permitted to operate within the exclusion zone provided that:</p> <ul style="list-style-type: none"> • Continuous monitoring of flammable gas concentrations in the atmosphere surrounding the equipment is conducted. • Machinery, with the exception of hydraulically operated excavation arms, is not permitted to operate within the 0.5 metre hazard zone surrounding the excavation. <p>Continuous monitoring of flammable gas concentrations in the atmosphere surrounding the stockpiles. Gas monitoring is to be conducted with a calibrated portable gas meter that is intrinsically safe for operation in flammable atmospheres.</p> <p>Flammable gas concentrations in excess of 10% LEL (lower explosive limit) will necessitate the immediate shutdown of all machinery and the cessation of work. If flammable gas concentrations in excess of 10% LEL persist, appropriate control measures such as the use of an air blower, vapour suppressants such as Bio Solve or covering with overburden will be required to be implemented. Work shall not recommence until flammable gas concentrations are below 10% LEL. Mechanical equipment used to control atmospheric flammable gas concentrations shall be operated outside the exclusion zone unless intrinsically safe for operation within flammable atmospheres.</p>

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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Handling and Storage of Excavated Contaminated Soil (continued)	<p>Detrimental human health effects due to the inhalation of hydrocarbon vapours.</p>	<p>Operators of machinery are to work up-wind of the excavation and ensure that cab is closed off with the air conditioner operating.</p> <p>Continuous monitoring of atmospheric concentrations of volatile organic compounds present in the work area. Monitoring is to be conducted with a calibrated portable meter that is intrinsically safe for operation in flammable atmospheres.</p> <p>Atmospheric concentrations of volatile organic compounds in excess of 300 ppm will necessitate the use of breathing apparatus such as half face respirators fitted with chemical filters. Ventilation equipment or vapour suppressants such as Bio Solve may be used to reduce atmospheric concentrations of volatile organic compounds to below 300 ppm. Mechanical ventilation equipment is to be operated outside the exclusion zone or be intrinsically safe for operation within flammable atmospheres.</p> <p>Workers should not continue working in respirators where volatile organic compound concentrations in the breathing zone of the workers exceed 1,000 ppm.</p>
Handling and Storage of Excavated Contaminated Soil (continued)	<p>Detrimental human health effects due to dermal contact and/or ingestion of soil contaminants.</p>	<p>Appropriate personal protective equipment (PPE) is to be used. Equipment is to include neck to toe clothing, disposable nitrile gloves, eye protection and Wellington boots. Additional equipment such as Tyvek suits and elbow length nitrile gloves are to be available if required.</p> <p>Dermal contact with hydrocarbon impacted soil and groundwater is to be avoided.</p> <p>Personal hygiene practices that include removal of contaminated clothing and PPE followed by thorough washing of hands and face prior to eating or smoking is to be implemented.</p> <p>A first aid kit and potable water shall be readily available.</p>



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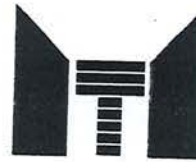
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INSTALLATION WORKS
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Activity	Description of Potential Hazards and Associated Risks	Control Measures
Hot Work/Cable Joining	Hot work activities are not to be conducted under his plan.	

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MassTech Australia PTY LTD
ABN 49 080 728 641
Suite 1, 96 Camberwell Road,
Hawthorn East, Victoria, 3123

Melbourne
Telephone: (03) 9813 5122
Facsimile: (03) 9813 5144

Sydney
Telephone: (02) 9673 6222

Website: www.masstech.com.au

UPSS Precision Test Report

25th October 2005

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

Test Date: 17th, 18th & 24th October 2005

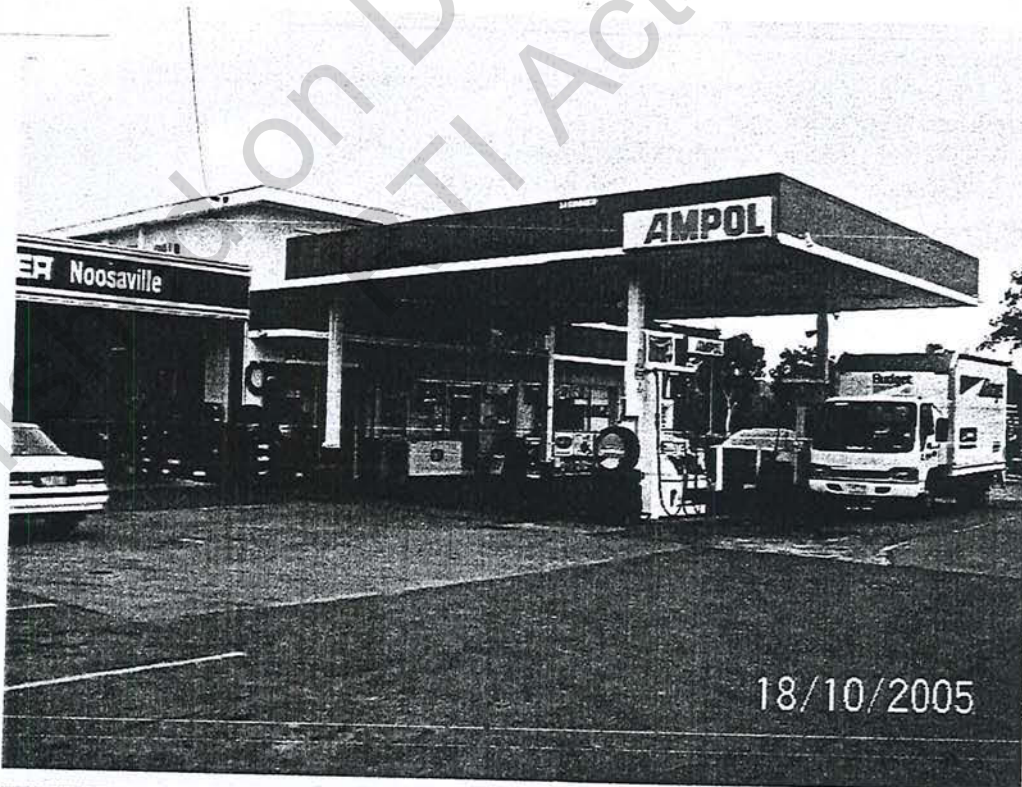
Reason for Test: Due Diligence

Customer Contact: Craydex, p4(6) Personal information

Executive Summary

All tanks and lines have passed the tests.

There are no recommendations. It has been shown that all tank systems meet the USEPA requirements for leak detection using precision testing methods.



Aim

To investigate the integrity of the UPSSs as a due diligence exercise.

Method

The tanks and all their associated lines (i.e. vent, dip, fill and product lines) were subjected to the MassTech tank test. Individual tests were also performed on the product lines.

Summary of Tank Results as Tested

Test Round 1			
Tank	Test	Result	Rate
ULP Tank 1 (30 kl) at 21193 litres or 68.6 % fill (& 15 mm H ₂ O) 18 Oct 2005 Cert. No. 64251	Wet Static Test	PASS	
	Wet Pressure Test	pass (i)	0.34 lt/hr
	Ullage Test	PASS	
PULP Tank 2 (34.8 kl) at 22750 litres or 63.5 % fill (& 0 mm H ₂ O) 18 Oct 2005 Cert. No. 64252	Wet Static Test	pass (i)	0.37 lt/hr
	Wet Pressure Test	pass (i)	0.38 lt/hr
	Ullage Test	PASS	
ULP Tank 3 (17.8 kl) at 10737 litres or 58.6 % fill (& 0 mm H ₂ O) 18 Oct 2005 Cert. No. 64253	Wet Static Test		
	Wet Pressure Test	*PASS	
	Ullage Test	PASS	
ULP Tank 4 (9 kl) at 9063 litres or 97.8 % fill (& 0 mm H ₂ O) 17 Oct 2005 Cert. No. 64233	Wet Static Test	pass (e)	0.25 lt/hr
	Wet Pressure Test	pass (i)	0.09 lt/hr
	Ullage Test	PASS	
Diesel Tank 6 (11.7 kl) at 7930 litres or 65.8 % fill (& 0 mm H ₂ O) 17 Oct 2005 Cert. No. 64234	Wet Static Test	PASS	
	Wet Pressure Test	PASS	
	Ullage Test	PASS	

Nomenclature for tables above

- A 6.5 times ullage fail is the nitrogen decay equivalent to a liquid leak under 10kPa at the USEPA threshold of 0.38 lt/hr
- 0.38 lt/hr is the PASS/FAIL criteria for a USEPA precision test.
- (i) indicates a liquid ingress was detected during the test at the noted rate
- (e) indicates a liquid egress was detected during the test at the noted rate
- INC indicates an inconclusive result was obtained

Summary of Line Results as Tested

Line Test Round 1			
Product Lines	Date	Line	Valve
Regular Unleaded Tank (1,3) to Pump (5,6)	24-Oct-05	PASS	PASS
Regular Unleaded Tank (1,3) to Pump (8,9)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 1 to Pump (1,2)	24-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (1,2)	24-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (10,11)	17-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (5,6)	24-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (8,9)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 3 to Pump (10,11)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (1,2)	24-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (10,11)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (5,6)	24-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (8,9)	17-Oct-05	PASS	PASS
Diesel Tank 6 to Pump (7)	24-Oct-05	PASS	PASS
Other Lines			
Other Lines	Date	Line	Valve
Premium Unleaded Tank 2 Dip	18-Oct-05	PASS	NA
Premium Unleaded Tank 2 Fill	18-Oct-05	PASS	NA
Regular Unleaded Tank 3 Dip	18-Oct-05	PASS	NA
Regular Unleaded Tank 3 Fill	18-Oct-05	PASS	NA
Regular Unleaded Tank 4 Dip	17-Oct-05	PASS	NA
Regular Unleaded Tank 4 Fill	17-Oct-05	PASS	NA

Line Test Reporting Legend	PASS	pass	weep	drip	fail	FAIL
Detected Leak Rate (ml/hour) @250kPa	90	115	140	165	190	
					USEPA threshold	

Other Relevant Observations

- All visible parts of the systems, sealed by the technician, were shown to be tight using soapy water.
- Depth to ground water was measured at 1500 mm below grade in a monitoring well.
- There are two vents connected to ULP Tank 3.

Comments/Discussions

All tanks and lines have passed the tests.

An overall wet result was declared for ULP Tank 3 (due to a data quality issue with the initial mass readings), producing a clear pass result.

Some liquid movement was detected for the wet tests for Tanks 1, 2 and 4 however in each case the movement is in a pattern consistent with that related to the associated suction line systems and is therefore not deemed to be significant.

The dip and fill points associated with tanks 2, 3 and 4 do not have internal drop tube breather perforations and as such were not tested as part of the ullage. They were each tested individually against the static head of liquid in the tanks and all passed these tests.

Recommendations

There are no recommendations. It has been shown that all tank systems meet the USEPA requirements for leak detection using precision testing methods.

Addendum

Date of Test: 17th, 18th & 24th October 2005
Licensed MassTech Tester: Jason Weber
Report Prepared by: Tom Billings
Report ID: Noosaville CA2043 Diagnostic Report to 24-Oct-05.doc

Glossary of Acronyms used

MTA MassTech Australia Pty Ltd
HC Hydrocarbons
PSH Phase Separated Hydrocarbons
UPP Brand specific double wall high density polyethylene piping
UPSSs Underground Petroleum Storage Systems
USEPA United States of America Environmental Protection Agency

The underground pipe and tank configurations contained in this report are deduced from information gathered at the site by MassTech Australia and by information given to MassTech Australia by the client.

Leighton O'Brien Pty Ltd is the Australian licensee of the MassTech test. The MassTech test is owned and operated by MassTech International Limited and is independently certified as meeting the USEPA standard evaluation for tank tightness testing methods.

MassTech Australia services are provided on the terms and conditions set out in the conditions of sale document. The MassTech service is warranted to the invoiced value of testing services performed as covered in section 68a of the Trade Practices Act.

Details of Pressure Line Test

Regular Unleaded Tank (1,3) to Pump (5,6)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	9:17:08	155.376	
Tested	wet	9:18:08	155.221	20.4
		9:19:37	204.477	
Date	24-Oct-05	9:20:37	204.423	4.6
Unit SN	200202	9:22:54	253.099	
Cert. No.	64311	9:23:54	252.986	6.3

Regular Unleaded Tank (1,3) to Pump (8,9)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:48:48	153.948	
Tested	wet	11:49:48	153.713	30.0
		11:53:39	202.236	
Date	17-Oct-05	11:54:40	202.063	11.5
Unit SN	200080	11:55:55	254.003	
Cert. No.	64229	11:56:55	253.951	2.6

Regular Unleaded Tank 1 to Pump (1,2)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:40:12	155.919	
Tested	wet	10:41:12	155.803	13.8
		10:42:42	209.060	
Date	24-Oct-05	10:43:42	208.867	11.5
Unit SN	200202	10:45:40	253.593	
Cert. No.	64311	10:46:40	253.059	22.3

Premium Unleaded Tank 2 Dip				
Line	PASS	time	kPa	%loss/hr
Valve	NA	15:33:02	109.879	
Tested	dry	15:34:02	109.880	-0.7
		15:35:02	109.881	
Date	18-Oct-05	15:36:02	109.882	-0.7
Unit SN	200080	15:37:02	109.883	
Cert. No.	64244	15:38:02	109.884	-0.7

Premium Unleaded Tank 2 Fill				
Line	PASS	time	kPa	%loss/hr
Valve	NA	15:16:46	109.740	
Tested	dry	15:17:46	109.742	-1.1
		15:18:46	109.744	
Date	18-Oct-05	15:19:46	109.745	-1.1
Unit SN	200080	15:20:46	109.747	
Cert. No.	64244	15:21:46	109.748	-1.1

Premium Unleaded Tank 2 to Pump (1,2)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:05:20	155.128	
Tested	wet	11:06:19	155.079	4.5
		11:07:48	207.767	
Date	24-Oct-05	11:08:48	207.584	11.0
Unit SN	200080	11:10:27	252.521	
Cert. No.	64312	11:11:27	252.414	4.2

Premium Unleaded Tank 2 to Pump (10,11)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:33:41	151.247	
Tested	wet	10:34:41	151.218	4.6
		10:35:53	201.557	
Date	17-Oct-05	10:36:53	201.363	11.6
Unit SN	200080	10:37:56	255.102	
Cert. No.	64229	10:38:56	254.847	11.2

Premium Unleaded Tank 2 to Pump (5,6)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	9:44:22	173.531	
Tested	wet	9:45:22	173.395	14.8
		9:46:34	202.302	
Date	24-Oct-05	9:47:34	202.210	6.9
Unit SN	200080	9:48:52	252.381	
Cert. No.	64312	9:49:52	252.378	1.9

Premium Unleaded Tank 2 to Pump (8,9)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:12:39	157.549	
Tested	wet	11:13:39	157.538	2.2
		11:15:16	213.562	
Date	17-Oct-05	11:16:16	213.402	9.2
Unit SN	200080	11:19:19	252.306	
Cert. No.	64229	11:20:19	252.103	8.7

Regular Unleaded Tank 3 Dip				
Line	PASS	time	kPa	%loss/hr
Valve	NA	11:47:07	109.318	
Tested	dry	11:48:07	109.317	0.9
		11:49:07	109.316	
Date	18-Oct-05	11:50:07	109.315	0.9
Unit SN	200080	11:51:07	109.313	
Cert. No.	64245	11:52:07	109.312	0.9

Regular Unleaded Tank 3 Fill				
Line	PASS	time	kPa	%loss/hr
Valve	NA	12:03:26	109.016	
Tested	dry	12:04:26	109.016	-0.7
		12:05:26	109.017	
Date	18-Oct-05	12:06:26	109.018	-0.7
Unit SN	200080	12:07:26	109.019	
Cert. No.	64245	12:08:26	109.020	-0.7

Regular Unleaded Tank 3 to Pump (10,11)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:09:25	156.974	
Tested	wet	10:10:25	156.946	5.1
		10:12:02	210.972	
Date	17-Oct-05	10:13:02	210.730	15.4
Unit SN	200202	10:14:41	252.014	
Cert. No.	64230	10:15:42	251.797	9.7

Regular Unleaded Tank 4 Dip				
Line	PASS	time	kPa	%loss/hr
Valve	NA	15:55:11	114.619	
Tested	dry	15:56:10	114.615	-4.4
		15:57:11	114.612	
Date	17-Oct-05	15:58:10	114.612	0.0
Unit SN	200080	15:59:11	114.608	
Cert. No.	64228	16:00:10	114.605	-1.8

Regular Unleaded Tank 4 Fill				
Line	PASS	time	kPa	%loss/hr
Valve	NA	16:12:29	114.514	
Tested	dry	16:13:29	114.516	-0.9
		16:14:29	114.521	
Date	17-Oct-05	16:15:29	114.520	0.4
Unit SN	200080	16:16:29	114.513	
Cert. No.	64228	16:17:29	114.513	0.0

Regular Unleaded Tank 4 to Pump (1,2)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:41:44	150.313	
Tested	wet	10:42:44	150.249	10.0
		10:44:14	202.442	
Date	24-Oct-05	10:45:14	202.244	12.5
Unit SN	200080	10:47:12	252.759	
Cert. No.	64312	10:48:12	252.187	23.9

Regular Unleaded Tank 4 to Pump (10,11)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:10:43	148.652	
Tested	wet	10:11:43	148.430	30.4
		10:13:20	204.937	
Date	17-Oct-05	10:14:20	204.564	23.8
Unit SN	200080	10:15:59	251.558	
Cert. No.	64229	10:16:59	251.033	22.2

Regular Unleaded Tank 4 to Pump (5,6)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	9:18:40	157.585	
Tested	wet	9:19:40	157.649	-0.7
		9:21:09	203.747	
Date	24-Oct-05	9:22:09	203.625	10.0
Unit SN	200080	9:25:33	253.946	
Cert. No.	64312	9:26:33	253.803	6.8

Regular Unleaded Tank 4 to Pump (8,9)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:11:22	155.590	
Tested	wet	11:12:22	155.564	2.9
		11:13:58	204.163	
Date	17-Oct-05	11:14:58	204.010	10.4
Unit SN	200202	11:18:12	252.595	
Cert. No.	64230	11:19:12	252.301	12.3

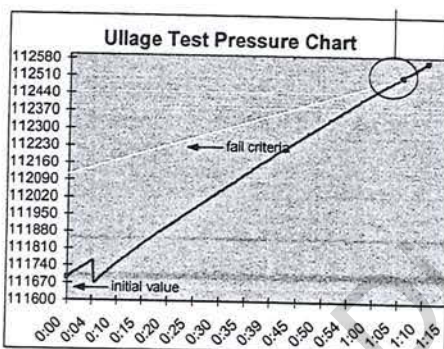
Diesel Tank 6 to Pump (7)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:51:59	158.107	
Tested	wet	11:52:58	158.089	1.9
		11:54:18	201.213	
Date	24-Oct-05	11:55:18	200.976	14.2
Unit SN	200080	11:56:35	258.094	
Cert. No.	64312	11:57:35	257.625	17.9

MassTech Tank Test Report

Wet (static) **PASS**
 Wet (pressure) **pass (i)**
 Dry **PASS**

Facility Details
 Ampol Noosaville
 Cnr Mary Street & Weyba Road
 Noosaville QLD

ULP Tank 1

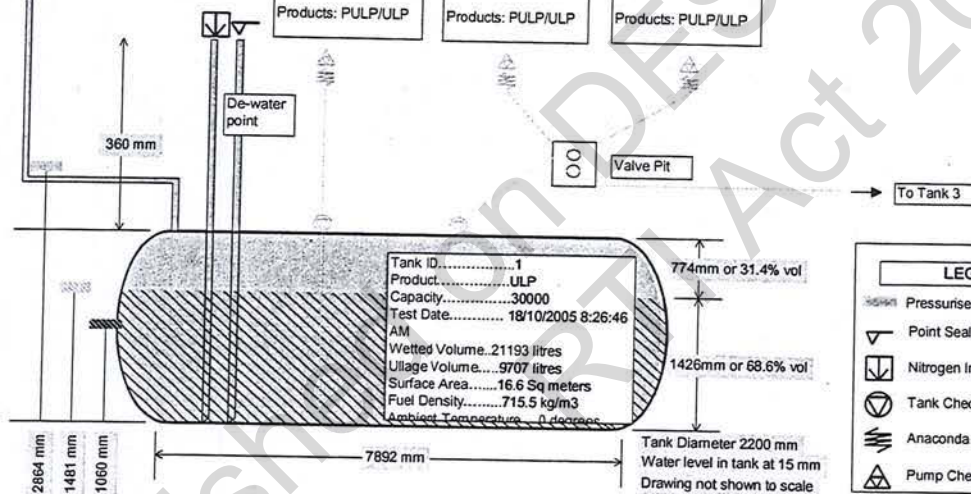


Mass Test	Time	Units
Mass 1	8:26:46 AM	9.69984
Mass 2	8:30:32 AM	9.69985
Mass 3	9:19:43 AM	9.69999
Mass 4	9:24:14 AM	9.70000
Mass 5	9:27:18 AM	9.70001
Mass 6	11:25:42 AM	9.70035
Mass 7	11:28:40 AM	9.70036
Mass 8	11:31:52 AM	9.70038
Ullage Test	Time	Pascals
Initial Value	10:03:07	111694
Test 1 Value	11:08:57	112518
Test 2 Value	11:13:57	112577
	dP/dT (Pa/5min)	59
	Pass limit (Pa/5min)	30.8

Pump ID: 1/2
 Type: MPP6
 Products: PULP/ULP

Pump ID: 5/6
 Type: MPP6
 Products: PULP/ULP

Pump ID: 8/9
 Type: MPP6
 Products: PULP/ULP



LEGEND	
	Pressurised Product Level
	Point Sealed for Ullage Test
	Nitrogen Injection Point
	Tank Check Valve
	Anaconda
	Pump Check Valve

MassTech Tank Test Report

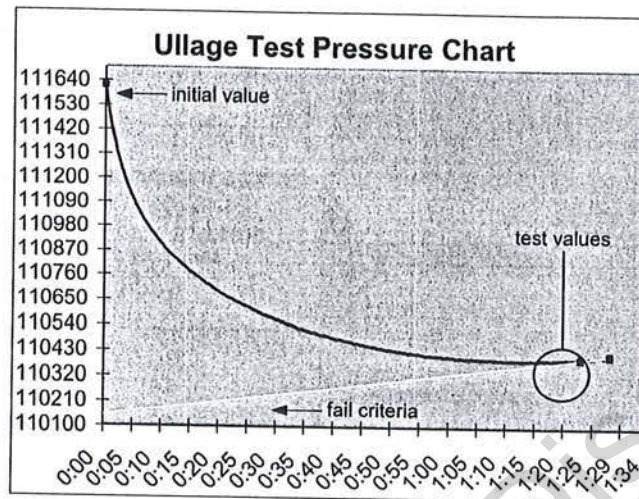
Wet (static)
Wet (pressure)
Dry

pass (i)
pass (i)
PASS

Facility Details

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

PULP Tank 2



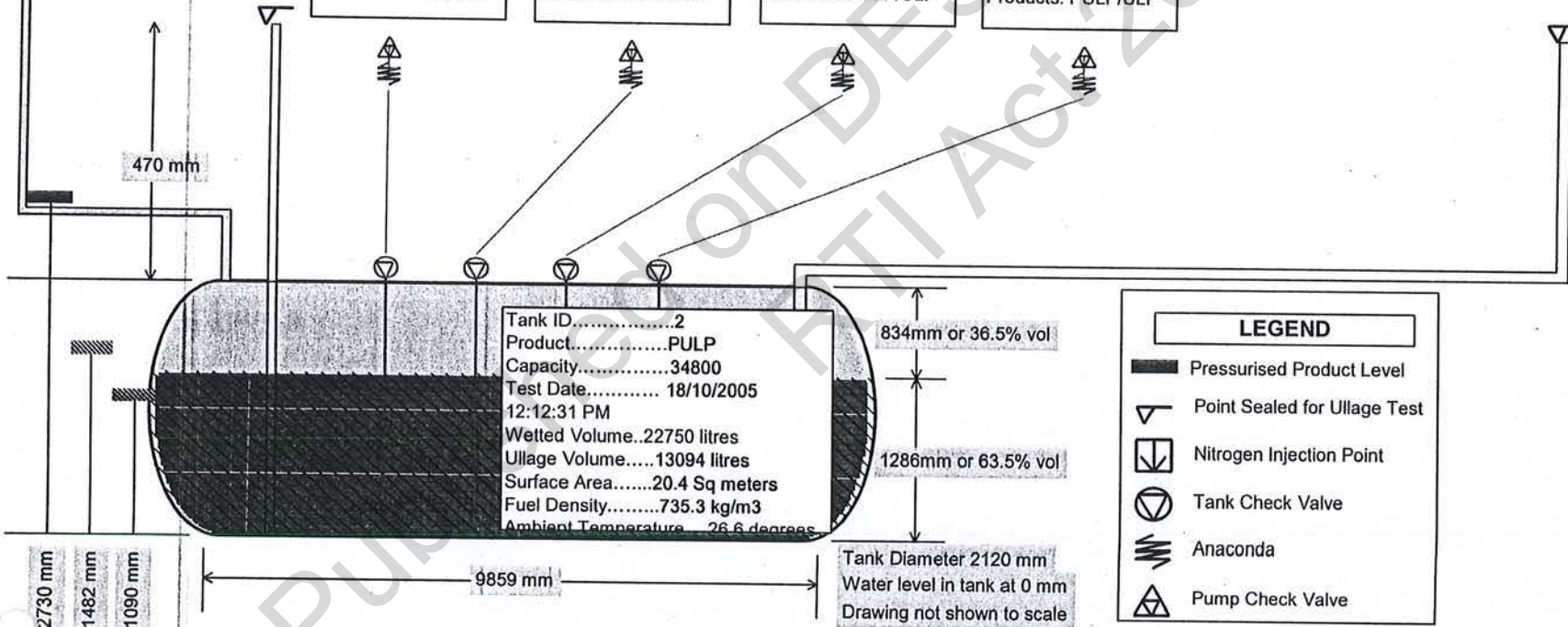
Mass Test	Time	Units
Mass 1	12:17:10 PM	8.95199
Mass 2	12:19:30 PM	8.95200
Mass 3	1:00:51 PM	8.95297
Mass 4	1:03:06 PM	8.95298
Mass 5	3:01:04 PM	8.95567
Mass 6	3:03:29 PM	8.95568
Ullage Test	Time	Pascals
Initial Value	13:17:03	111620
Test 1 Value	14:40:13	110401
Test 2 Value	14:45:12	110415
	dP/dT (Pa/5min)	14
	Pass limit (Pa/5min)	15.2

Pump ID: 1/2
Type: MPP6
Products: PULP/ULP

Pump ID: 5/6
Type: MPP6
Products: PULP/ULP

Pump ID: 8/9
Type: MPP6
Products: PULP/ULP

Pump ID: 10/11
Type: MPP6
Products: PULP/ULP



LEGEND	
	Pressurised Product Level
	Point Sealed for Ullage Test
	Nitrogen Injection Point
	Tank Check Valve
	Anaconda
	Pump Check Valve

MassTech Tank Test Report

Wet (static)
Wet (pressure)
Dry

*PASS
PASS

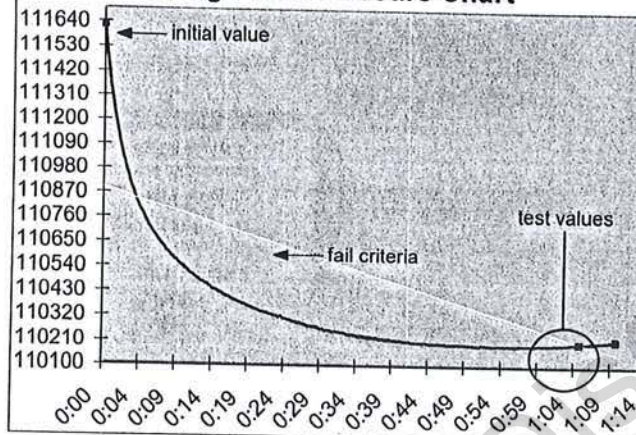


Facility Details

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

ULP Tank 3

Ullage Test Pressure Chart



Mass Test	Time	Units
Mass 1	8:27:58 AM	8.39501
Mass 2	8:31:45 AM	8.39502
Mass 3	9:20:54 AM	8.39646
Mass 4	9:25:27 AM	8.39647
Mass 5	9:28:31 AM	8.39648
Mass 6	11:26:55 AM	8.39548
Mass 7	11:29:53 AM	8.39549
Mass 8	11:33:04 AM	8.39550
Ullage Test	Time	Pascals
Initial Value	10:04:27	111626
Test 1 Value	11:10:16	110208
Test 2 Value	11:15:16	110221
	dP/dT (Pa/5min)	13
	Pass limit (Pa/5min)	-52.0

Pump ID: 5/6

Type: MPP6

Products: PULP/ULP

Pump ID: 8/9

Type: MPP6

Products: PULP/ULP

Pump ID: 10/11

Type: MPP6

Products: PULP/ULP

De-water point

650 mm

To Tank 1

Valve Pit

Tank ID.....3
Product.....ULP
Capacity.....17800
Test Date..... 18/10/2005 8:27:58 AM
Wetted Volume...10737 litres
Ullage Volume.....7597 litres
Surface Area.....10.7 Sq meters
Fuel Density.....749.3 kg/m3
Ambient Temperature 23.5 degrees

904mm or 41.4% vol

1186mm or 58.6% vol

Tank Diameter 2090 mm
Water level in tank at 0 mm
Drawing not shown to scale

LEGEND

- Pressurised Product Level
- Point Sealed for Ullage Test
- Nitrogen Injection Point
- Tank Check Valve
- Anaconda
- Pump Check Valve

MassTech Tank Test Report

Wet (static)
Wet (pressure)
Dry

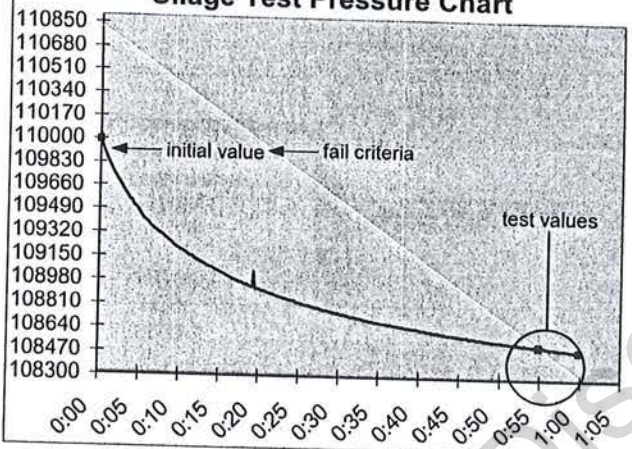
pass (e)
pass (i)
PASS

Facility Details

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

ULP Tank 4

Ullage Test Pressure Chart



Mass Test	Time	Units
Mass 1	1:01:25 PM	13.97492
Mass 2	1:04:55 PM	13.97494
Mass 3	2:02:56 PM	13.97291
Mass 4	2:06:31 PM	13.97292
Mass 5	2:09:59 PM	13.97294
Mass 6	3:29:57 PM	13.97399
Mass 7	3:33:17 PM	13.97401
Mass 8	3:39:08 PM	13.97403
Ullage Test	Time	Pascals
Initial Value	14:21:11	109990
Test 1 Value	15:16:01	108533
Test 2 Value	15:21:01	108501
	dP/dT (Pa/5min)	-32
	Pass limit (Pa/5min)	-208.8

Pump ID: 1/2

Type: MPP6

Products: PULP/ULP

Pump ID: 5/6

Type: MPP6

Products: PULP/ULP

Pump ID: 8/9

Type: MPP6

Products: PULP/ULP

Pump ID: 10/11

Type: MPP6

Products: PULP/ULP

580 mm

Tank ID.....4
Product.....ULP
Capacity.....9000
Test Date..... 17/10/2005 1:01:25 PM
Wetted Volume..9063 litres
Ullage Volume.....207 litres
Surface Area.....2.5 Sq meters
Fuel Density.....731.5 kg/m3
Ambient Temperature 24.9 degrees

119mm or 2.2% vol

1991mm or 97.8% vol

3245 mm
1627 mm
1190 mm

2574 mm

Tank Diameter 2110 mm
Water level in tank at 0 mm
Drawing not shown to scale

LEGEND

- Pressurised Product Level
- Point Sealed for Ullage Test
- Nitrogen Injection Point
- Tank Check Valve
- Anaconda
- Pump Check Valve

MassTech Tank Test Report

Wet (static)
Wet (pressure)
Dry

PASS
PASS
PASS

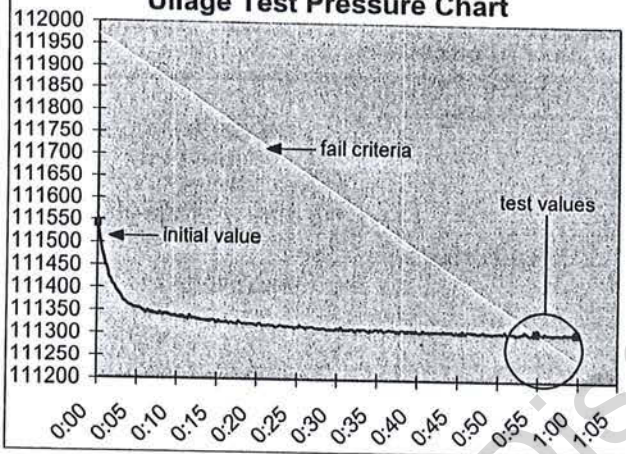


Facility Details

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

Diesel Tank 6

Ullage Test Pressure Chart



Mass Test	Time	Units
Mass 1	1:00:15 PM	11.37454
Mass 2	1:03:45 PM	11.37455
Mass 3	2:01:46 PM	11.37451
Mass 4	2:05:22 PM	11.37452
Mass 5	2:08:49 PM	11.37453
Mass 6	3:28:47 PM	11.37477
Mass 7	3:32:07 PM	11.37479
Mass 8	3:37:58 PM	11.37480
Ullage Test	Time	Pascals
Initial Value	14:19:53	111541
Test 1 Value	15:14:43	111308
Test 2 Value	15:19:43	111306
	dP/dT (Pa/5min)	-2
	Pass limit (Pa/5min)	-60.7

Pump ID: 7

Type: Eline

Products: Diesel

Tank ID.....6
Product.....Diesel
Capacity.....11700
Test Date..... 17/10/2005 1:00:15 PM
Wetted Volume...7930 litres
Ullage Volume.....4121 litres
Surface Area.....6.4 Sq meters
Fuel Density.....854.4 kg/m3
Ambient Temperature 0 degrees

839mm or 34.2% vol

1401mm or 65.8% vol

Tank Diameter 2240 mm
Water level in tank at 0 mm
Drawing not shown to scale

LEGEND

- External Groundwater Level
- Groundwater Product Equivalent
- Pressurised Product Level
- Point Sealed for Ullage Test
- Nitrogen Injection Point
- Tank Check Valve
- Anaconda
- Pump Check Valve

EMR

Lot 1 Plan RP131598 Category NOTIFIABLE ACTIVITY Record Type BP ID 10224
Hist ID 92-4028
LGA NOOSA SHIRE COUNCIL Region S AMA
Site Name BP NOOSAVILLE Notified By DATACONV
Street 54 MARY ST Entry Date 27/06/1998 Notif Rec'd
Suburb NOOSAVILLE Post code 4566 Ext Ref Last Altered
Date
Owner n4p4(6) Personal informati
Owner Address 52 MARY ST
NOOSAVILLE

Haz Cont

Parcel C
Status

Post code 4566
Area 1679 m² File 900551 Officer NIL
Offsite Disposal Date

Notifiable Activities

SERVICE STATIONS

Comments

Date User ID Corr N Officer Name Finalised How Finalised Registered Site ID 10224

Sensis® Sites

White Pages®

Yellow Pages®

CitySearch.com.au®

Trading Post®

LinkMe™

Whereis[®]
.com

(sensis)

Search location: 55 Mary St, Noosaville Queensland
Map provided for ZOOM request

Edit

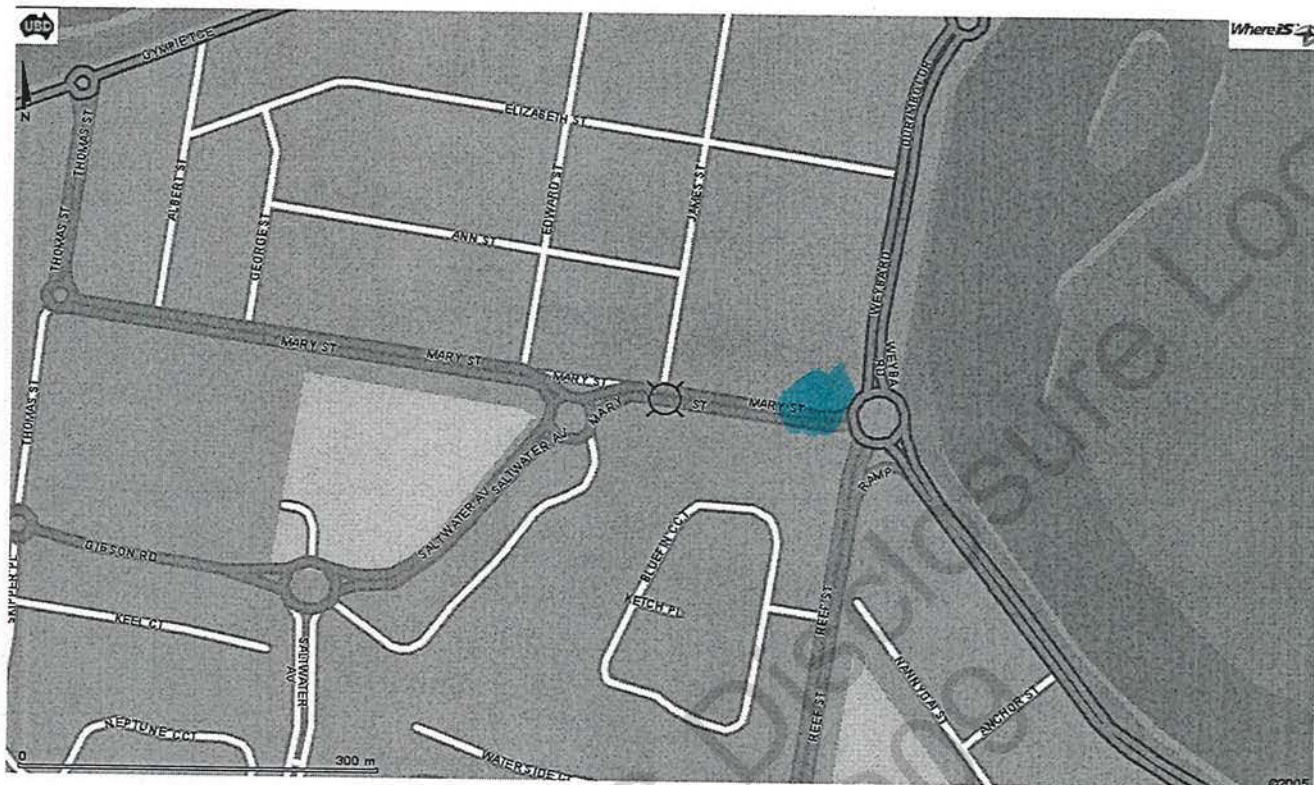


Map size:

advertisement



Search location: 55 Mary St, Noosaville Queensland
Initial Map Response



Jacinta Griffin

From: Paul Neilson [paul.neilson@epa.qld.gov.au]
Sent: Friday, 17 February 2006 11:34 AM
To: Jacinta Griffin
Subject: Site inspections - Noosaville BP SS & Illegal Waste Dumping

Jacinta,

As discussed, I have facilitated the inspection for Monday 20 February 2006. Noosa Council and Energex will hopefully be on-site at 12.00pm to assist where required. I understand the following information is required:

Noosaville SS Scope Preliminary Site Investigation

Aim : To determine potential for environmental (serious?) harm.
Scope:

1. Identify Surrounding Sensitive Receptors.
2. Identify potential source(s).
3. Identify Chemical or Potential Concern.
4. Collect soil samples (~2) from open-pit with the assistance of Energex. Also consider collecting pit-water sample.
5. Take photos. *use disposable camera*

Outcome: I anticipate, that this information will potentially be used for future action; either by the Unit, the Sunshine Coast office or to assist council.

Bruce Highway, Chevallon *(Forest Glen)*

Aim: To determine if there is an illegal dumping operation being undertaken at the rear of 'Landrover World'.
Scope:

1. Take photographs.
2. Brief blurb in Officer notebook

Outcome: Information will probably be passed onto Sunshine Coast for further investigation with our technical assistance.

If you have any questions or clarifications, do not hesitate to ask.

Cheers,

Paul

6 Moonah Street
CHAPEL HILL
QLD 4069
Australia

Tel/Fax: 07 3878 7107

Email: LeVert@bigpond.net.au

Kim Barry
Contaminated Land Unit
Environmental Protection Agency
PO Box 2771
BRISBANE
QLD 4001

26th October 2006

Dear Kim,

RE: GROUND CONTAMINATION ASSESSMENT BP SERVICE STATION, 54 MARY STREET, NOOSAVILLE, QUEENSLAND (LOT 1 RP131598).

Please find enclosed a copy of the above site investigation report that Caltex have asked to pass onto the EPA.

Caltex commissioned LeVert to conduct a normal site assessment as part of lease arrangements and coincidentally the EPA (Jacinta Griffin) had asked the site owner also to conduct a site investigation. The investigation report is dated May 2006.

Please do not hesitate to call me if you require further assistance.

Yours Sincerely for LeVert

sch4p4(6) Personal information

Mike Bennett

Cc sch4p4(6) Personal information Caltex Australia Pty Ltd



LeVert

FINAL REPORT

GROUND CONTAMINATION ASSESSMENT
BP SERVICE STATION, 54 MARY STREET,
NOOSAVILLE, QUEENSLAND. (Lot 1 RP131598)

Prepared for
Caltex Australia Pty Ltd
May 2006

06194-001

Rec'd
20/10/06

4p4(6) Personal informat

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LeVert

FIGURES AND ANNEXES

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- | | |
|---------|---|
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| Annex B | Soil Bore Logs |
| Annex C | Tabulated Laboratory Results |
| Annex D | Laboratory Certificates |
| Annex E | Photo Log |
| Annex F | EPA Correspondence, Tank Integrity Test |

LeVert

1 INTRODUCTION

1.1 INTRODUCTION

LeVert Environmental was commissioned by Caltex Australia Pty Ltd to undertake site investigation works at the operational BP service station situated at 54 Mary Street, Noosaville, Queensland, (Lot 1 RP131598). The service station was operated by Caltex until the end of 2005 when BP took over operation of the site. This report describes the procedures for soil and groundwater investigation at the site.

An incident triggered by Energex excavating just outside the southern site boundary after LeVert Environmental was commissioned by Caltex to undertake the investigation caused the Queensland Environmental Protection Agency (EPA) to inspect the site and to issue a request for an investigation into the extent of hydrocarbon contamination in soil and groundwater and the site operator to provide a strategy for the future control of contamination originating from the site, (a copy of the EPA letter is provided in *Annex G*). This investigation has been conducted to initially identify the extent of contamination on the subject site and to form the basis for further off site investigation and monitoring if required.

1.2 OBJECTIVES

The objectives of the site investigation were to:

- To assess the suitability of soil and groundwater at the site for on going use as a service station prior to a lease hand back of the site by Caltex; and
- To compile a report detailing the findings of the site investigation.

1.3 SCOPE OF WORKS

The following scope of works was conducted by LeVert to complete the investigation works which were carried out on 26th April 2006:

- Review of regional geology, hydrology, hydrogeology;
- Preliminary site inspection and location of underground services prior to commencement of investigation, a dial before you dig search was also conducted;
- Discussion with site manager on recent site history;
- Construction of seven soil bores using a Geoprobe rig to a maximum depth of 3.6m and two soil bores constructed with a hand auger to a maximum depth of 1.2m;
- Screening of soil samples with a Photon-ionisation Detector (PID) meter;
- Collection of eighteen soil samples and two groundwater samples;
- Laboratory analysis of eighteen soil samples including one duplicate for Total Petroleum Hydrocarbons (TPH) with chain length breakdown (C₆-C₉, C₁₀-C₁₄, C₁₅-C₂₈)

and C₂₉-C₃₆) benzene, toluene, ethylbenzene, xylenes, (BTEX), and lead and two water samples for TPH and BTEX;

- Interpretation of data; and
- Preparation of a site investigation report.

1.4 CONDITIONS AND LIMITATIONS

For a detailed review of the extent of limitations of this report, attention is drawn to the report conditions stated in *Annex A*.

2 SITE STATUS

2.1 SITE LOCATION

The subject site comprises an operational BP service station located on the corner of Mary Street and Weyba Road as indicated in *Figure 1*.

The real property description is described as Lot 1 on RP131598. The local authority is Noosa Shire Council.

Photographs of the site are provided in *Annex E*.

2.2 SITE DESCRIPTION AND INSPECTION

The site was inspected prior to investigation on 26th April 2006. *Figure 2* provides a site layout.

The site is located in a mainly residential area, though some of the houses have been converted into office type accommodation. The site is approximately rectangular and covers an area of approximately 0.1679ha. Currently the site is almost entirely laid to either bitumen or concrete.

The site is flat and slopes very gently towards the east and Weyba Road which is followed by Weyba Creek located within approximately 50m of the eastern site boundary. The general surrounding area is low lying and flat. Local drainage would tend east in conjunction with the road drainage to join Weyba Creek.

Infrastructure noted at the site comprised a sales area, a tyre workshop that that also undertook minor vehicle service work, six operational underground fuel storage tanks including a waste oil tank (USTs), one abandoned UST, a vehicle hoist, five bowser islands beneath two canopies, and an LPG tank with bottle top up point. The tank inventory obtained from the site manager is provided in the table below.

Description of Fuel Storage Tanks

Tank	Type	Product	Capacity (Litres)
1	UST	Unleaded Petrol	34,000
2	UST	Unleaded Petrol	34,000
3	UST	Premium Unleaded Petrol	18,000
4	UST	Premium Unleaded Petrol	9,000
5	UST	Diesel	10,000 abandoned
6	UST	Diesel	12,000
7	UST	Waste Oil	5,000

Attached to the service station sales building was a tire workshop which performed minor vehicle service work. Inspection of the workshop showed it to have a single inground vehicle hoist. Waste oil was collected in an underground waste oil tank, the workshop manager stated that there was no interceptor.

The surfacing of the forecourt was laid mainly to concrete in the area of the tanks and bowsers and was observed to be in fair condition with few penetrative cracks. There was some staining around the diesel bowser. The remainder of the forecourt was laid to bitumen which was in fair condition with some minor patching.

The south and eastern perimeter of the site was bordered by garden beds which appeared to be outside the site property line. In the south east corner of the site in the grass verge between the garden beds and the road it was possible to see the extent of the Energex trenching where the grass had been replaced with new turf.

2.3 SITE BOUNDARY AND ADJOINING LAND USES

Neighbours include:

North: An easement followed by residential properties followed by the Noosa River approximately 500m to the north.

West: Residential properties.

South: Mary Street followed by residential properties.

East: Wyeba Road followed by a strip of parkland fronting Wyeba Creek.

The general area comprises residential/commercial properties, there were no other potential sources of contamination noted within 250m of the site.

2.4 CURRENT CONTAMINATION ISSUES

The site manager informed the investigator that he understood the service station to have been constructed in the mid nineteen seventies. He was unsure about the age of the tanks or whether they had been replaced. An off site contamination issue had been identified at the south eastern corner of the site in 2001 and he understood that Egis (now GHD) undertook a site investigation, though no details were provided. Egis also prepared a site management plan to manage soil at the site in the event of excavation, this was briefly reviewed on site but a copy was not provided.

Copies of a tank and line integrity test were provided and are attached in *Annex F*. The test completed in October 2005 stated that all tanks and lines passed the test.

The EPA inspected a trench excavated by Energex in the grass verge as shown in *Figure 2*. The EPA collected a number of soil and groundwater samples from the excavation and the adjacent garden bed. In a letter to the site owner dated 28th March 2006 (copy attached *Annex F*) the EPA expressed concern over the levels of hydrocarbons in soil and groundwater and requested the following:

- Delineation of the extent of hydrocarbon contamination in soil and groundwater;

- Provide a description of the measures proposed to be undertaken to control any contamination source; and
- A remediation strategy to address the off site impacts from the activity.

This investigation was commissioned by Caltex prior to the EPA investigation and requests and is considered as the first step in providing a solution to the potential issue of off site migration of hydrocarbons.

3 SITE GEOLOGY, HYDROGEOLOGY AND HYDROLOGY

3.1 GEOLOGY

Reference to the Geological Map Moreton Bay 1:500 000 indicates that the site is underlain by Quaternary estuarine flood plain tidal delta deposits.

Observations during the investigation showed the geology at the site to comprise gravely sand/clay road base immediately beneath the hard standing followed by sand and Coffee Rock to a depth of approximately 3.6m below ground.

Full test pit log descriptions are provided in *Annex B*.

3.2 HYDROGEOLOGY

Groundwater was encountered at a depth of approximately 1.2m below ground level in monitoring well MW-1 located to the west of the workshop. This appeared consistent with other groundwater levels recorded in soil bores from observation of soil cores.

3.3 HYDROLOGY

Storm water at the site flows to the east into Wyeba Road and then into Weyba Creek approximately 50m to the east of the site.

4 SITE INVESTIGATION METHODOLOGY

4.1 SAMPLING RATIONALE

Soil sampling procedures and collection were undertaken in accordance with the Queensland EPA *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland* May 1998.

The sampling density does not conform to the Australian Standard AS4482.1-1997 *Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds*. However with respect to the size of the site, and the preliminary nature of the investigation sampling locations were selected to cover areas of potential contamination as identified by the location of infrastructure and the off site contamination issue.

The site was inspected prior to commencement of soil sample collection. Evidence of specific contamination was observed at the locations noted in the table below. Sampling locations were then selected within these potential areas to provide coverage. Nine soil bores were drilled at the site. Soil bore locations are presented on *Figure 2*.

Rationale for Soil Bore Locations

Soil Bore Number & Location	Rationale and Sample Analyses
SB-1. South east of site.	Down gradient of USTs, close to Energex excavation. Analysis for TPH, BTEX and lead.
SB-2. South east of site.	Down gradient of USTs close to Energex excavation. Analysis for TPH, BTEX and lead.
SB-3. South west corner of site.	Delineation of lateral extent of contamination. Analysis for TPH, BTEX and lead.
SB-4. Southern part of site.	Down gradient of diesel UST, and to identify lateral extent of contamination. Analysis for TPH, BTEX and lead.
SB-5. Southern boundary.	Down gradient of diesel UST, and to identify lateral extent of contamination. . Analysis for TPH, BTEX and lead.
SB-6. Southern bowers.	General investigation into soil south of diesel bowser. Analysis for TPH, BTEX and lead.
SB-7. Eastern bowers.	General investigation into soil south of petrol bowser. Analysis for TPH, BTEX and lead.
SB-8. North eastern part of site.	Delineation of lateral extent of contamination. Analysis for TPH, BTEX and lead.

Soil Bore Number & Location	Rationale and Sample Analyses
SB-9. Western bowers.	Delineation of lateral extent of contamination. Analysis for TPH, BTEX and lead.

4.1.1 Sampling Procedures

A Geoprobe drilling rig was used for the collection of soil which provided a continuous core sample for each hole. Samples of the core were collected for analysis.

Soil samples were collected applying the following steps:

- The sampler wore a new pair of disposable nitrile gloves for each sampling event;
- A stainless steel trowel was used occasionally, this was decontaminated between sampling events using a non phosphate detergent and rinsed in potable water;
- Soil samples were screened using the PID meter which had been calibrated using 100ppm isobutylene, samples were placed in sealed polythene bags for a minimum of five minutes prior to inserting the PID probe into the bag;
- Samples were placed in 125ml glass jars, sealed and labelled with the sample identification number, site location and date of collection;
- Samples were then placed in a cool box with ice.

Samples were then recorded on a chain of custody form and dispatched to LabMark laboratory in Sydney, the nominated laboratory to undertake the analysis. LabMark are NATA accredited for the analysis carried out.

Two groundwater samples were collected from the existing groundwater monitoring wells MW-1 and MW-3, there were a total of four groundwater monitoring wells present at the site. These were selected on the basis of MW-1 being up gradient and also adjacent to the waste oil tank, and MW-3 being the most down gradient well and likely to be the most impacted. The water samples were collected immediately after bailing the hole for three well volumes with a disposable bailer and allowing it to recover.

4.2 QUALITY ASSURANCE AND CONTROL

All fieldwork was conducted in accordance with industry accepted standards to ensure reliability of results. A single duplicate soil sample was collected. Soil analyses were conducted by a laboratory certified by the National Association of Testing Authorities, (NATA). The laboratory also undertook QA/QC analysis, comprising matrix spikes, and surrogates and reference sampling for inorganics. Results of laboratory QC testing are provided in laboratory reports, *Annex D*.

5 CONTAMINATION RESULTS

5.1 ASSESSMENT CRITERIA FOR SOILS

The investigation works were undertaken to assess the site as suitable for ongoing use as a service station. On this basis, Queensland EPA Environmental Investigation Levels, (EILs) have been used as site assessment criteria. Analysis results below the EIL value indicate that the site may be regarded as uncontaminated for the purpose of the EP Act.

EIL criteria are more conservative than Health based investigation level criteria (HILs), listed as Category F (Commercial/industrial use) of the EPA soil guidelines. HILs may be referenced where results are above EILs but below HILs.

In the absence of official guidelines for TPH and BTEX in soil, the values listed in the table below are considered acceptable by the EPA however these are for residential use, there are no commercial industrial guideline criteria set for hydrocarbons in Queensland.

Site Assessment Criteria (soils)

ANALYTE	QUEENSLAND EPA (EIL) CRITERIA (mg/kg)	QUEENSLAND EPA (HIL) CRITERIA (mg/kg) (Setting F)
TPH (C ₆ -C ₉)	100	Not Specified
TPH (C ₁₀ -C ₁₄)	100	Not Specified
TPH (C ₁₅ -C ₂₈)	1000	Not Specified
TPH (C ₂₉ -C ₃₆)	1000	Not Specified
Benzene	1	Not Specified
Toluene	-	Not Specified
Ethyl Benzene	-	Not Specified
Total Xylenes	-	Not Specified
Total BTEX	7	Not Specified
Lead	300	1500

Groundwater quality was compared with both ANZECC 2000, *Australian Water Quality Guidelines* for 95% species protection for freshwater aquatic ecosystems and *Dutch Intervention Levels* where no corresponding ANZECC guideline was specified. ANZECC guidelines are conservative in that they apply to surface water and not groundwater, the Dutch values apply to groundwater. It is assumed that some level of natural attenuation of contaminants in groundwater at the site would occur before coming into contact with surface water and therefore these guidelines are probably fairly conservative for groundwater assessment.

Groundwater Assessment Criteria

ANALYTE	A (microgrammes/ litre)	D (microgrammes/ litre)
TPH (C ₆ -C ₉)	Not specified	Not specified
TPH (C ₁₀ -C ₃₆)	Not specified	600

ANALYTE	A (microgrammes/ litre)	D (microgrammes/ litre)
Benzene	950	30
Toluene	Not specified	1000
Ethyl Benzene	Not specified	150
Meta & para Xylene	Not specified	70
Ortho Xylene	350	Not specified
Lead	3.4	75

Notes:

A. ANZECC 2000, Australian Water Quality Guidelines for 95% species protection for freshwater aquatic ecosystems.

D. Dutch Intervention Level.

5.2 DISCUSSION OF RESULTS

A total of 18 soil samples (including a single duplicate) and 2 water samples were laboratory analysed. Laboratory results are tabulated in *Annex C* while laboratory certificates are presented in *Annex D*. Sample locations are presented in *Figure 2* and a contamination assessment is provided in *Figure 3*.

Generally soils observed at the site comprised sandy clay with gravel immediately below the hard standing followed by fine to medium grained sand with occasional coffee rock. Groundwater was identified at 1.2m below ground level.

Hydrocarbons Soils

PID measurements on soil samples using standard head space methods detected the highest vapour concentrations at the soil groundwater interface (1.2mbgl) in soil bores SB-1, SB-2 and SB-9. These readings coincided with strong odours and sample analysis values exceeding the adopted EPA criteria. Less high PID values were also identified in soil bores, SB-6 at 1.2mbgl and SB-7 at 1.0mbgl. PID values are provided in the logs in *Annex B*.

TPH and BTEX impact above the EPA guideline criteria in soil were identified in soil bores SB-1, SB-2, SB-6, SB-7 and SB-9. Impact occurred between SB-9 mid way along the Weyba Road boundary to soil bore SB-6 south of the bowers facing Mary Street. Based on this data it would appear that the impacted area may extend further north of SB-9 along Weyba Road somewhere up to soil bore SB-8 which was clean and further west of soil bore SB-2 up to soil bores SB-4 and SB-3 which were also clean. Soil bore SB-5 met refusal at 0.5m on concrete in two places and therefore soil samples were not obtained from this area. Contamination assessment is provided in *Figure 3*.

The following table provides soil analysis data for samples exceeding the EPA criteria in greater detail.

Soil Bore	Depth m	Analyte	Value mg/kg	EPA EIL mg/kg	Comments
SB-1	1.2-1.3	TPH C ₆ -C ₉	1,720	100	Samples collected at 0.4m and 1.8m above and below the water table, not impacted.
		TPH C ₁₀ -C ₁₄	1,720	100	
		Benzene	21	1	
		Total BTEX	921	7	
SB-2	0.8-1.0	TPH C ₆ -C ₉	1,620	100	Samples collected at

Soil Bore	Depth m	Analyte	Value mg/kg	EPA EIL mg/kg	Comments
SB-6	0.5-0.75	TPH C ₁₀ -C ₁₄	3,190	100	1.4m, below the water table not impacted.
		Benzene	17	1	
		Total BTEX	849	7	
		TPH C ₆ -C ₉	<10	100	
		TPH C ₁₀ -C ₁₄	140	100	
SB-7	0.8-1.0	Benzene	Not detected	1	
		Total BTEX	Not detected	7	
		TPH C ₆ -C ₉	1,110	100	
		TPH C ₁₀ -C ₁₄	680	100	
		Benzene	41	1	
SB-9.1	0.8-1.0	Total BTEX	658	7	
		TPH C ₆ -C ₉	450	100	
		TPH C ₁₀ -C ₁₄	790	100	
		Benzene	2.7	1	
		Total BTEX	170	7	
SB-9.2	1.8-2.0	TPH C ₆ -C ₉	470	100	Sample collected beneath water table in shelly zone.
		TPH C ₁₀ -C ₁₄	220	100	
		Benzene	7.3	1	
		Total BTEX	197	7	

All other soil samples analysed returned values of TPH and BTEX below the level of laboratory detection and therefore below EPA EILs.

Lead Soils

All samples returned concentrations of lead below EPA EILs.

Hydrocarbons Water

The table below provides groundwater gauging details.

Groundwater Gauging

Monitoring Well	Depth (m)	Depth Water to Top Casing (m)
MW-1	Not measured	1.2
MW-3	Not measured	1.2

Groundwater collected from MW-1 returned values for TPH and BTEX within the adopted guideline lines.

Groundwater from MW-3 was impacted with TPH fractions C₆-C₉, C₁₀-C₁₄, C₁₅-C₂₈ and C₂₉-C₃₆, values 1610, 4,290, 1,440 and 310 microgrammes per litre respectively. The total for all fractions exceeds the Dutch Intervention value of 600 microgrammes per litre.

Benzene did not exceed the ANZECC 2000 criteria for 95% species protection and had a value of 110 microgrammes per litre, while total BTEX had a value of 690 microgrammes per litre.

5.3 QUALITY ASSURANCE

A total of eighteen soil samples and two groundwater samples were analysed. Samples were preserved in ice during transit to LabMark and were analysed within holding times.

A duplicate sample, Dup 1 was collected with soil sample SB-7.1. Relative percent differences (RPDs) calculated for TPH fractions C₆-C₉ and C₁₀-C₁₄ provided values of 155% and 168% while BTEX values ranged between 139% and 154%. These values exceed the general acceptable criteria however sample collection is likely to be the reason for the variation. The push tube method of drilling used only produces a relatively small diameter core and therefore getting a duplicate sample is not possible, in practise the duplicate comes from immediately below or above the sample collected. This also indicates that hydrocarbon impaction is generally confined to soil in the vicinity of the water table.

Analytical data reported by LabMark was judged to have met data quality objectives for the assessment of reference project Noosaville. Data assessment examined laboratory results, COC documentation and field QA/QC precision. A QA/QC report is provided as part of *Annex E*.

The QA/QC data reported by LabMark for the documented soil samples were assessed to be of sufficient quality to provide reliable data. It was therefore concluded that the QA/QC data and field duplicate results are free of systematic and method biases.

5.4 DISCUSSION AND RECOMMENDATIONS

Based on the preliminary soil and groundwater assessment conducted at the site and information and letter from the EPA provided by the site owner, off site migration of hydrocarbons is occurring along the south eastern and south western boundaries of the site. The investigation was generally confined to the site boundaries and no investigations have been conducted off site in the down gradient areas.

A site management plan prepared by Egis in 2001 describing methods for management of soil at the site suggests that the issue of impacted soil in the southern corner of the site has been known since at least this date. Tank integrity tests completed in October 2005 showed the tanks and lines to have passed all leak tests and therefore on this basis it is assumed that the source (USTs and lines) has been isolated. It is recommended that further work is conducted on the site to determine if there is a secondary source such as highly TPH concentrated water in tank pits resulting from fill point spillages.

The site is bounded by roads both to the south east and south west and Weyba Creek is within 50m of the site to the east. The inferred groundwater flow would be from the site east to Weyba Creek and therefore it would be an environmentally sensitive receptor, although the groundwater gradient observed at the site appeared to be very low and therefore the corresponding groundwater velocity would be fairly low.

The Queensland EPA guideline criteria this assessment is based on relates to residential use and there are no official hydrocarbon criteria for industrial/commercial use. The inferred plume extends south and east beneath the road and park, both are not classed as residential. Therefore the primary issue would be to identify any potential impacts on Weyba Creek the service station may be causing. It is recommended that

the following scope of works is conducted to understand the level of risk presented by the site.

1. Review documentation relating to previous investigations of this issue around 2001 and check for evidence of compliance between then and the present. Determine what the sub surface concrete structure was in the area of SB-5.
2. Review service station procedures for deliveries including inventories and check for secondary sources of hydrocarbon contamination on site.
3. Ensure that the management plan provided by Egis is provided to contractors working on site or on the site margins to safeguard their health and safety.
4. Drill two soil bores in the verge to the south of SB-5 clear of the concrete which caused the refusal.
5. Install a series of groundwater monitoring bores in both the traffic island south east of the site and the strip of park land between Weyba Road and Weyba Creek and sample groundwater for hydrocarbons.

The location of proposed soil bores and groundwater monitoring bores is provided in *Figure 4*.

6 CONCLUSIONS

Based on the fieldwork investigations and laboratory analysis test results for soil and groundwater samples obtained from the Ampol Service Station Labrador, LeVert concludes the following:

- The site is an operational BP Service Station located on the corner of Weyba Road and Mary Street, Noosaville, Queensland, the site was originally a Caltex service station.
- An off site migration of hydrocarbons issue had been identified by the EPA in the south east corner of the site, this issue had previously been identified by the site operator in 2001 when a soil management plan was prepared, a copy of which is kept on site.
- Site geology observed during investigation consisted of road base underlain by sands and coffee rock to a depth of 3.6m the depth of the investigation.
- Groundwater was identified at a depth of 1.2m below ground level at the site.
- Nine soil bores were drilled at the site to assess soil, four groundwater monitoring wells were already in place.
- Laboratory analysis was undertaken on thirteen soil samples for Total Petroleum Hydrocarbons, BTEX compounds and lead and two water samples for Total Petroleum Hydrocarbons, BTEX compounds.
- TPH and BTEX impact above the EPA guideline criteria in soil for residential use (there is no official industrial/commercial guidelines for hydrocarbons in Queensland), were identified in soil bores SB-1, SB-2, SB-6, SB-7 and SB-9. Impact occurred between SB-9 mid way along the Weyba Road boundary to soil bore SB-6 south of the bowers facing Mary Street. Based on this data it would appear that the impacted area may extend further north of SB-9 along Weyba Road somewhere up to soil bore SB-8 which was clean and further west of soil bore SB-2 up to soil bores SB-4 and SB-3 which were also clean. The most concentrated impact occurred at the groundwater interface at approximately 1.2m below ground level.
- Analysis of groundwater from a single well at the site returned values for TPH and BTEX within the adopted guideline lines.
- QA/QC for sample analysis was judged sufficient to provide reliable data.
- The inferred hydrocarbon plume extends south and east beneath the road and park, both are not classed as residential which is the EPA criteria used for assessing soil and groundwater. The primary issue is to identify potential impacts on Weyba Creek the service station may be causing. It is recommended that further investigation is conducted to understand the level of risk presented by the site comprising of drilling up to two additional soil bores along the site boundary with Mary Street and installing three groundwater monitoring wells in the traffic island and in the park bordering Weyba Creek.

- Ensure that the management plan provided by Egis is provided to contractors working on site or on the site margins to safeguard their health and safety.

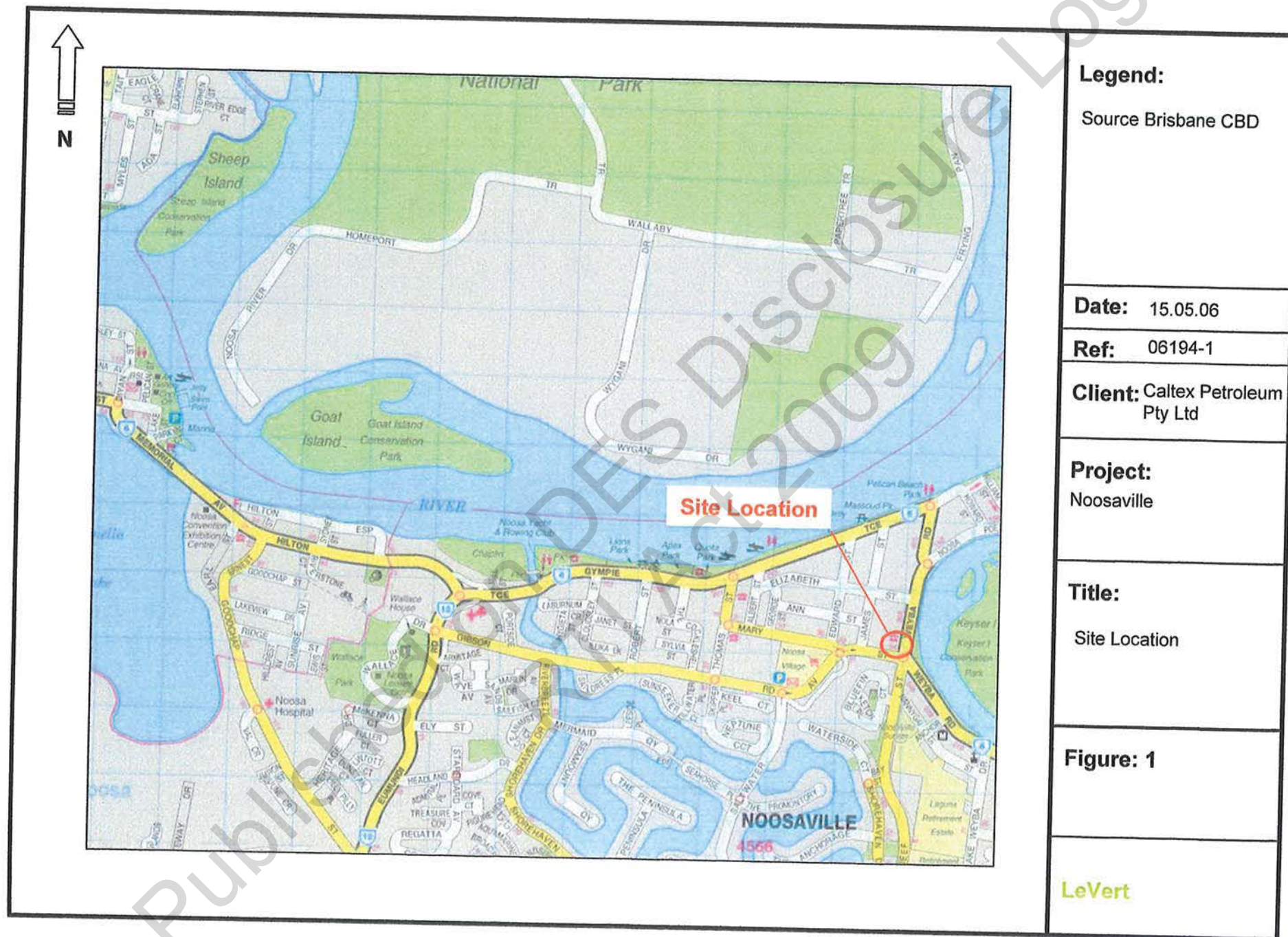
Based on the scope of work conducted and described in this report and the laboratory analysis of eighteen soil samples and two groundwater samples for petroleum hydrocarbons and lead, it is recommended that further assessment as described is carried out to ensure that the service station is not creating an environmental impact on Weyba Creek.

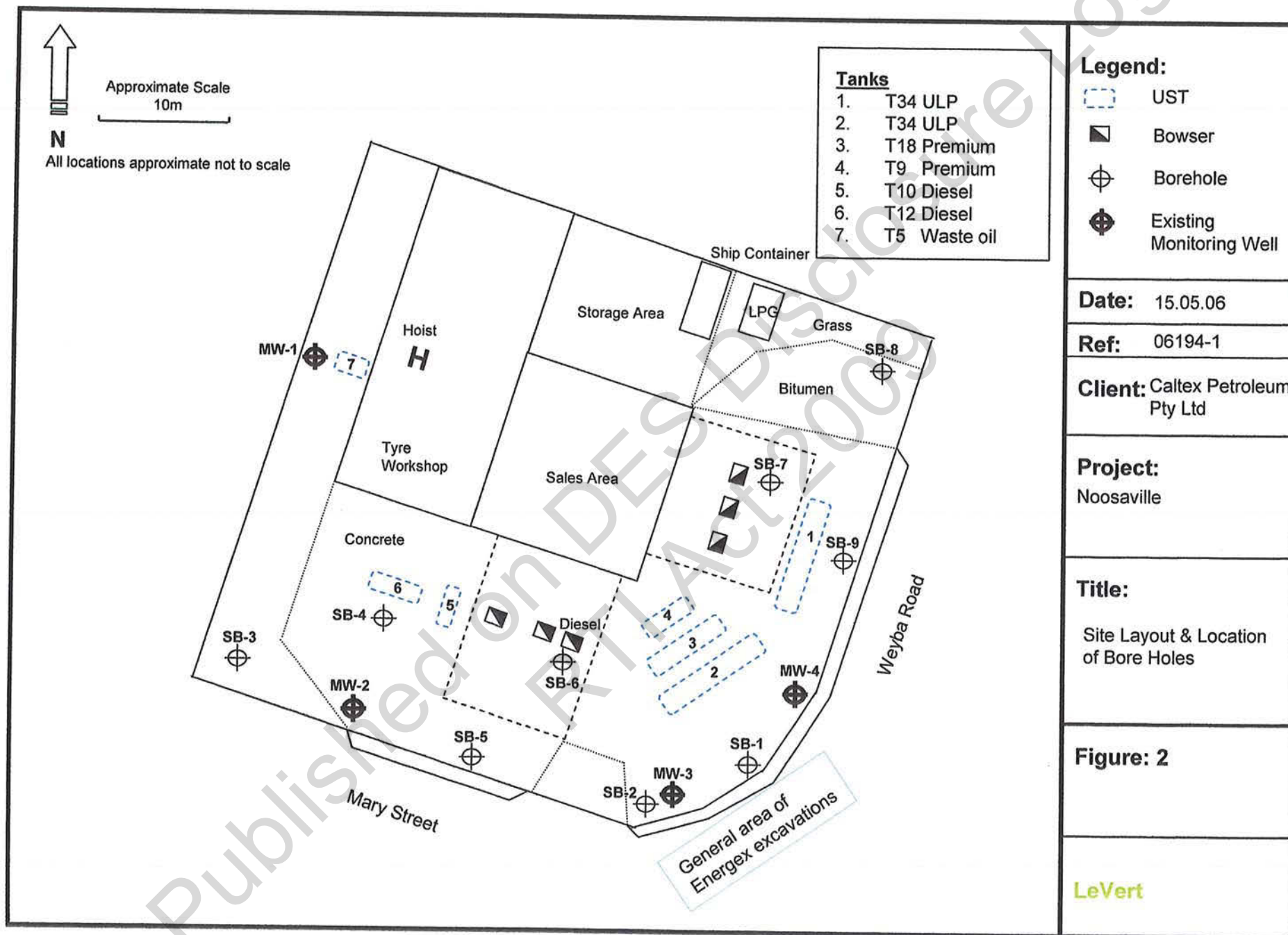
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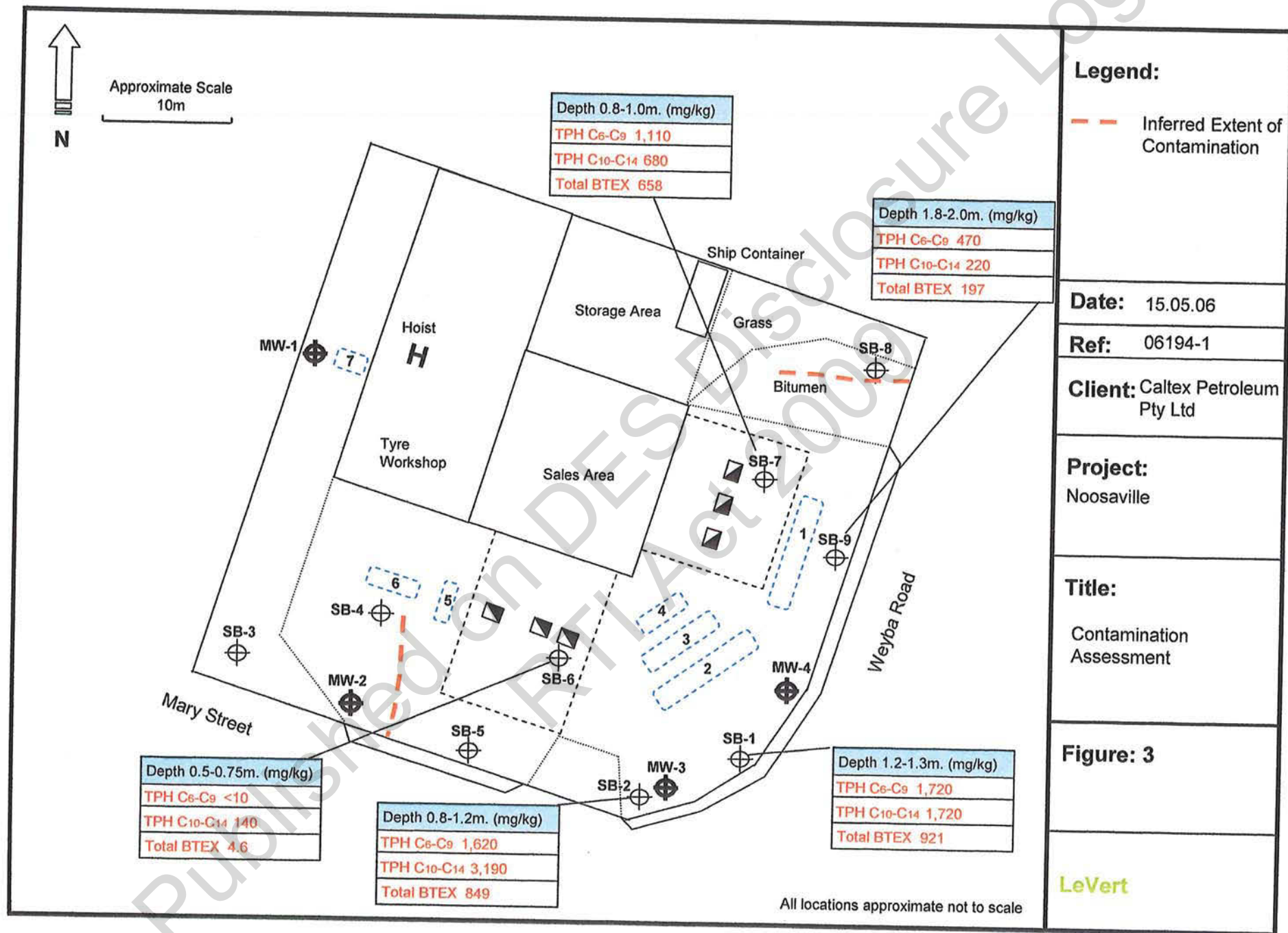
FIGURES

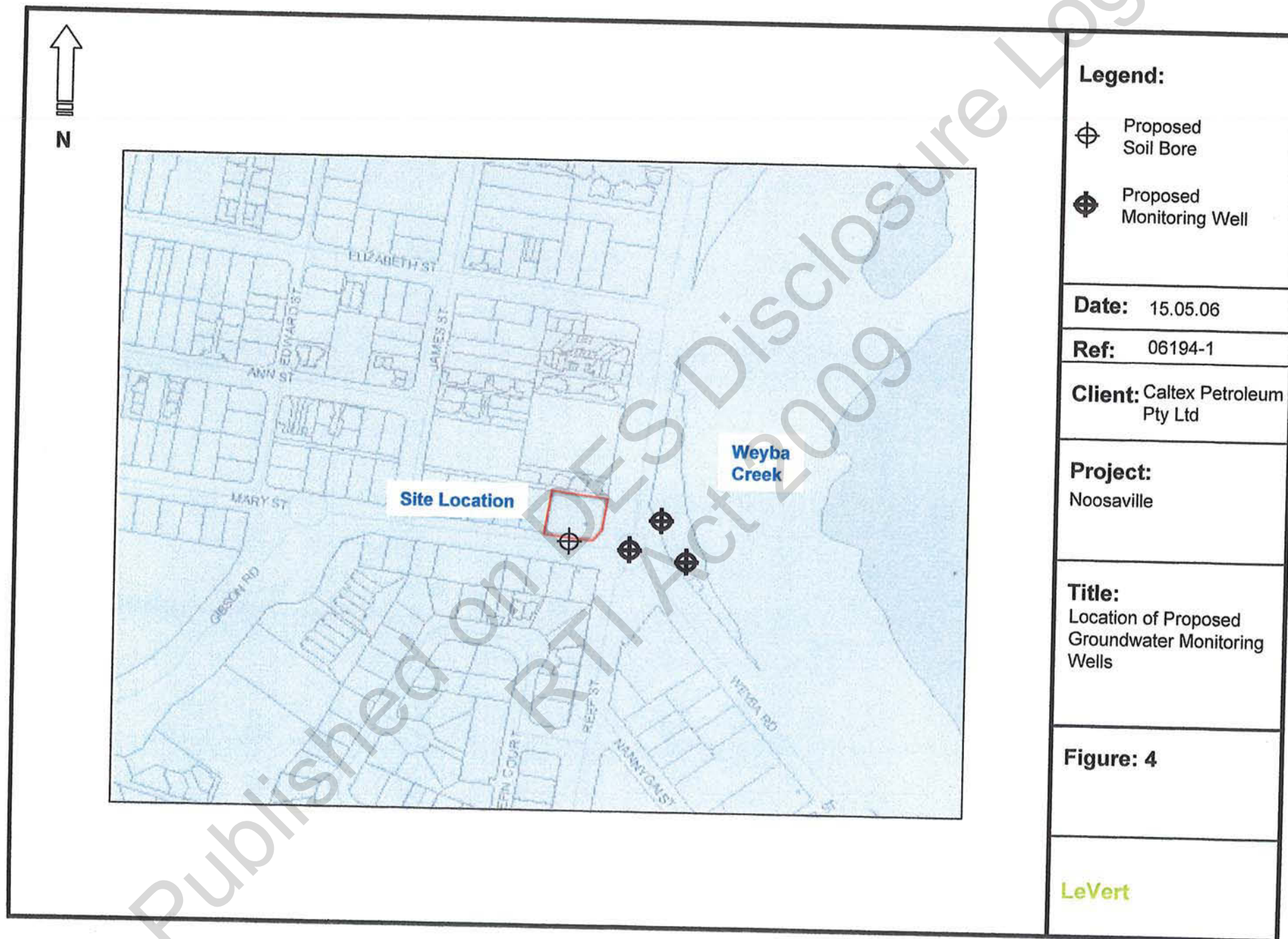
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ANNEX A
TERMS AND CONDITIONS OF REPORTING

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LIMITATIONS TO THE USE OF THIS INVESTIGATION REPORT

This report is produced solely for the benefit of Caltex Australia Pty Ltd and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to LeVert. In time, improved practices or amended legislation may necessitate a re-assessment of the site.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

The report is limited to those aspects of land contamination specifically reported on and is necessarily restricted to this and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents. The opinions expressed in this report cannot be absolute due to the limitations of time and resources imposed by an agreed client brief and the possibility of unrecorded previous site use and abuse of the site and adjacent sites.

The findings of this report are based on the Scope of Work outlined in this report. LeVert performed the services in a manner consistent with the normal level of care and expertise exercised by members of the contaminated land remediation and environmental auditing profession. No warranties, or guarantees, express or implied, are made.

Subject to the Scope of Work, LeVert's assessment is limited strictly to identifying typical environmental conditions associated with the subject property and does not evaluate structural conditions of any buildings on the subject property, nor any other issues. Although normal standards of professional practice have been applied, the absence of any identified hazardous or toxic materials (including soil and groundwater) on the subject property should not be interpreted as a guarantee that such materials do not exist on the site.

This assessment is based on site inspection and investigations conducted by LeVert personnel, sampling and analyses described in the report and information provided by the property owner or other people with a knowledge of site conditions. Where test results undertaken by others have been made available, these can only be regarded as a limited sample.

All conclusions and recommendations made in the report are the professional opinions of LeVert personnel involved with the project and, while normal checking of the accuracy of data has been conducted, some of the opinions are based on unconfirmed data. LeVert assumes no responsibility or liability for errors in data obtained from regulatory agencies or any other external sources, nor from occurrences outside the scope of this project.

LeVert is not engaged in environmental auditing and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes.

ANNEX B
SOIL BORE LOGS

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ENVIRONMENTAL LOG			SOIL BORE No. SB-1 SHEET 1 of 1			
PROJECT: CALTEX/BP NOOSAVILLE			DATE COMMENCED: 26/04/06			
LOCATION: 54 MARY STREET			DATE COMPLETED: 26/04/06			
SOIL BORE LOCATION: Refer Figure 2			LOGGED BY: MJB			
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
			Bitumen	0		
			Road Base. Sand/clay, red, grey, coarse, loose.			
0.5			Sand. White, fine grained loose, occasional dark black clay rich sand lense.	0.3	SB1.1 (0.3-0.4m)	Slight odour
1				1059	SB1.2 (1.2-1.3m)	Strong odour
1.5			Sand. Grey, cream, fine to medium grained, wet.			Groundwater 1.2m
2				2.3	SB1.3 (1.8-2.0m)	
2.5			TD 2.4m			
3						
3.5						
4						
DRILLING METHOD: GeoProbe					R.L. Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG				SOIL BORE No. SB-2 SHEET 1 of 1		
PROJECT: CALTEX/BP NOOSAVILLE LOCATION: 54 MARY STREET SOIL BORE LOCATION: Refer Figure 2				DATE COMMENCED: 26/04/06 DATE COMPLETED: 26/04/06 LOGGED BY: MJB		
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
			Concrete	0		
			Road Base. Sand/clay, red, grey, coarse, loose.			
0.5			Sand. White, fine grained loose, occasional dark black clay rich sand lense.	288		
1				920	SB2.1 (0.8-1.0m)	
				1900		Strong odour
1.5			Sand. Grey, cream, fine to medium grained, wet.		SB2.2 (1.2-1.4m)	Groundwater 1.2m
2				5		
					SB2.3 (2.1-2.2m)	
2.5			Coffee Rock. Black sandy organic, soft.	0		
3				0		
3.5				0		
4			TD 3.6m			
DRILLING METHOD: GeoProbe						R.L Surface: R.L. Datum:
LeVert Environmental						Job No. 06194-1

ENVIRONMENTAL LOG			SOIL BORE No. SB-3 SHEET 1 of 1			
PROJECT: CALTEX/BP NOOSAVILLE			DATE COMMENCED: 26/04/06			
LOCATION: 54 MARY STREET			DATE COMPLETED: 26/04/06			
SOIL BORE LOCATION: Refer Figure 2			LOGGED BY: MJB			
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
			Bitumen	0		
0.5			Fill. Dark brown/black sand, organic.	0		
1			Sand. Yellow, cream, fine grained loose.	0	SB3.1 (0.5-0.75m)	
1.5				0		
2				0	SB3.2 (1.2-1.4m)	Groundwater 1.2m
2.5				0		
3						
3.5						
4						
DRILLING METHOD: GeoProbe					R.L Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG			SOIL BORE No. SB-4 SHEET 1 of 1			
PROJECT: CALTEX/BP NOOSAVILLE			DATE COMMENCED: 26/04/06			
LOCATION: 54 MARY STREET			DATE COMPLETED: 26/04/06			
SOIL BORE LOCATION: Refer Figure 2			LOGGED BY: MJB			
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
			Bitumen.			
			Road Base. Sand & gravel.	5.7		
0.5			Sand. Dark brown/black sand, organic.		SB4.1 (0.5-0.75m)	
1				7.7		
1.5			Sand. Yellow, cream, fine grained loose.	0		Groundwater 1.2m
2					SB4.2 (1.2-1.4m)	
2.5				0		
3			TD 2.4m	0		
3.5						
4						
DRILLING METHOD: GeoProbe					R.L Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG			SOIL BORE No. SB-5 SHEET 1 of 1			
PROJECT: CALTEX/BP NOOSAVILLE LOCATION: 54 MARY STREET SOIL BORE LOCATION: Refer Figure 2			DATE COMMENCED: 26/04/06 DATE COMPLETED: 26/04/06 LOGGED BY: MJB			
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
0.5			Concrete.		No sample	
			Road Base. Sand & gravel.			
			Concrete.			
			Refusal 0.5m Move rig 0.5m N, same refusal.			
1						
1.5						
2						
2.5						
3						
3.5						
4						
4.5						
DRILLING METHOD: GeoProbe					R.L Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG				SOIL BORE No. SB-6 SHEET 1 of 1		
PROJECT: CALTEX/BP NOOSAVILLE				DATE COMMENCED: 26/04/06		
LOCATION: 54 MARY STREET				DATE COMPLETED: 26/04/06		
SOIL BORE LOCATION: Refer Figure 2				LOGGED BY: MJB		
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
0			Concrete	0		
0.5			Road Base. Sand/clay, red, grey, coarse, loose.	83		
1			Fill. Dark brown/black sand, organic.	57	SB6.1 (1.1-1.2m)	Groundwater 1.2m
1.5			Sand. White, fine grained loose.			
2			TD 1.2m			
2.5						
3						
3.5						
4						
4.5						
DRILLING METHOD: Hand Auger					R.L Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG			SOIL BORE No. SB-7 SHEET 1 of 1			
PROJECT: CALTEX/BP NOOSAVILLE LOCATION: 54 MARY STREET SOIL BORE LOCATION: Refer Figure 2			DATE COMMENCED: 26/04/06 DATE COMPLETED: 26/04/06 LOGGED BY: MJB			
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION	PID value (ppm)	Sample Nos.	Comments
			Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.			
			Concrete			
0.5			Sand. Dark brown/black sand, organic.	60		
				94		Strong odour
1			TD 1.0m	982	SB7.1 (0.8-1.0m)	
1.5						
2						
2.5						
3						
3.5						
4						
4.5						
DRILLING METHOD: Hand Auger					R.L Surface:	
					R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG				SOIL BORE No. SB-8 SHEET 1 of 1		
PROJECT: CALTEX/BP NOOSAVILLE				DATE COMMENCED: 26/04/06		
LOCATION: 54 MARY STREET				DATE COMPLETED: 26/04/06		
SOIL BORE LOCATION: Refer Figure 2				LOGGED BY: MJB		
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.	PID value (ppm)	Sample Nos.	Comments
			Bitumen	0		
			Road Base. Sand/clay, red, grey, coarse, loose.			
0.5			Sand. Dark brown/black sand, organic.	0	SB8.1 (0.5-0.75m)	
1				0		
1.5			Sand. Yellow, cream, fine grained loose.	0	SB8.2 (1.2-1.4m)	Groundwater 1.2m
2				0		
2.5			TD 2.4m	0		
3						
3.5						
4						
4.5						
DRILLING METHOD: GeoProbe					R.L Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ENVIRONMENTAL LOG			SOIL BORE No. SB-9 SHEET 1 of 1			
PROJECT: CALTEX/BP NOOSAVILLE			DATE COMMENCED: 26/04/06			
LOCATION: 54 MARY STREET			DATE COMPLETED: 26/04/06			
SOIL BORE LOCATION: Refer Figure 2			LOGGED BY: MJB			
Depth (m)	USCS Symbol	Graphic Symbol	SOIL DESCRIPTION	PID value (ppm)	Sample Nos.	Comments
			Soil Type: Plasticity, or particle characteristics, colour, secondary & minor components, moisture & consistency or relative density.			
			Bitumen	25		
			Road Base. Sand/clay, red, grey, coarse, loose.			
0.5				122		
1			Sand. Black, occasionally cream, medium to fine grained, loose, wet.	749	SB9.1 (0.8-1.0m)	
1.5				856		
2			Sand. Shelly.	26	SB9.2 (1.8-2.0m)	
2.5				34		
3			Sand. Black, medium to fine grained, wet.	0	SB9.3 (3.0-3.2m)	
3.5				0		
4			TD 3.6m			
4.5						
DRILLING METHOD: GeoProbe					R.L Surface: R.L. Datum:	
LeVert Environmental					Job No. 06194-1	

ANNEX C
TABULATED LABORATORY RESULTS

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ANALYTICAL RESULTS SOIL TPH BTEX LEAD- BP/CALTEX

NOOSAVILLE

JOB No: 06194

Sample Soil Depth m Geology Date				SB1.1 0.3-0.4 Sand 26/04/2006	SB1.2 1.2-1.3 Sand 26/04/2006	SB1.3 1.8-2.0 Sand 26/04/2006	SB2.1 0.8-1.0 Sand 26/04/2006	SB2.2 1.2-1.4 Sand 26/04/2006	SB2.3 2.1-2.2 Sand 26/04/2006	SB3.1 0.5-0.75 Sand 26/04/2006	SB3.2 1.2-1.4 Sand 26/04/2006	SB4.1 0.5-0.75 Sand 26/04/2006	SB4.2 1.2-1.4 Sand 26/04/2006
	Units	LOR	QLD EPA EIL mg/kg										
TOTAL PETROLEUM HYDROCARBONS													
C6 - C9 Fraction	mg/kg	10	100	<10	1720	<10	1620	<10	<10	<10	<10	<10	<10
C10 - C14 Fraction	mg/kg	50	100	<50	1720	<50	3190	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	mg/kg	100	1000	<100	<100	<100	410	<100	<100	<100	<100	<100	<100
C29 - C36 Fraction	mg/kg	100	1000	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sum C10-C36 Fraction	mg/kg			<LOR	1720	<LOR	3600	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
BTEX													
Benzene	mg/kg	0.2	1	<0.2	21	<0.2	17	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	0.5	NE	<0.5	202	<0.5	127	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	0.5	NE	<0.5	120	<0.5	118	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	mg/kg	1	NE	<1	560	<1	570	<1	<1	<1	<1	<1	<1
ortho-Xylene	mg/kg	0.5	NE	<0.5	18	<0.5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total BTEX	mg/kg		7	<LOR	921	<LOR	849	<LOR	<LOR	<LOR	<LOR	0.6	<LOR
LEAD													
Lead	mg/kg	2		<2	3	<2	5	<2	2	<2	<2	<2	<2
Sample Soil Depth m Geology Date				SB6.1 0.5-0.75 Sand 26/04/2006	SB7.1 0.8-1.0 Sand 26/04/2006	DUP 1 0.8-1.0 Sand 26/04/2006 Dup 7.1	RPD %	SB8.1 0.5-0.75 Sand 26/04/2006	SB8.2 1.2-1.4 Sand 26/04/2006	SB9.1 0.8-1.0 Sand 26/04/2006	SB9.2 1.8-2.0 Sand 26/04/2006	SB9.3 3.0-3.2 Sand 26/04/2006	
	Units	LOR	QLD EPA EIL mg/kg										
TOTAL PETROLEUM HYDROCARBONS													
C6 - C9 Fraction	mg/kg	10	100	<10	1110	140	155	<10	<10	450	470	<10	
C10 - C14 Fraction	mg/kg	50	100	140	680	60	168	<50	<50	790	220	<50	
C15 - C28 Fraction	mg/kg	100	1000	<100	<100	<100	NE	<100	<100	<100	<100	<100	
C29 - C36 Fraction	mg/kg	100	1000	<100	<100	<100	NE	<100	<100	<100	<100	<100	
Sum C10-C36 Fraction	mg/kg			140	680	60	168	<LOR	<LOR	790	220	<LOR	
BTEX													
Benzene	mg/kg	0.2	1	<0.2	41	6.2	147	<0.2	<0.2	2.7	7.3	<0.2	
Toluene	mg/kg	0.5	NE	<0.5	192	25	154	<0.5	<0.5	1.5	22	<0.5	
Ethylbenzene	mg/kg	0.5	NE	0.7	70	11	146	<0.5	<0.5	16	19	<0.5	
meta- & para-Xylene	mg/kg	1	NE	3	250	45	139	<1	<1	140	130	<1	
ortho-Xylene	mg/kg	0.5	NE	0.9	105	15	150	<0.5	<0.5	9.4	19	<0.5	
Total BTEX	mg/kg		7	4.6	658	102.2	146	<LOR	<LOR	169.6	197.3	<LOR	
LEAD													
Lead	mg/kg	2		4	4	<2	NE	3	<2	2	2	2	

NOTES

NE = Not Established

na = Not Analysed

LEGEND

Exceeds QLD EPA EILS

GROUNDWATER TPH BTEX- BP/CALTEX

NOOSAVILLE

JOB No: 06194

Bore					MW-1	MW-3
Date					26/04/2006	26/04/2006
	Units	LOR	ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%	Dutch Intervention		
TOTAL PETROLEUM HYDROCARBONS						
C6 - C9 Fraction	ug/L	50	NE	NE	<50	1610
C10 - C14 Fraction	ug/L	50	NE	NE	<50	4290
C15 - C28 Fraction	ug/L	200	NE	NE	<200	1440
C29 - C36 Fraction	ug/L	50	NE	NE	<50	310
Sum C10-C36 Fraction	ug/L	NE	NE	600	<LOR	6040
BTEX	ug/L					
Benzene	ug/L	1	950	30	<1	110
Toluene	ug/L	1	NE	1000	<1	6
Ethylbenzene	ug/L	1	NE	150	<1	660
meta- & para-Xylene	ug/L	2	NE	70	<2	23
ortho-Xylene	ug/L	1	350	NE	<1	7
Total BTEX	ug/L	NE	NE	NE	<LOR	690

NOTES

Exceeds ANZECC water quality guidelines

Exceeds Dutch Intervention Criteria

NS = Not Specified

NE = Not Established

ANNEX D
LABORATORY CERTIFICATES

Published on DES Disclosure Log
RTI Act 2009

LeVert



CUSTOMER CENTRIC - ANALYTICAL CHEMISTS

Accredited for compliance with ISO/IEC 17025. The results of tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. NATA is a signatory to the APLAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

Quarantine Approved premises criteria 5.1 for quarantine containment level 1 (QCI) facilities. Class five criteria cover premises utilised for research, analysis and/or testing of biological material, soil, animal, plant and human products.

FINAL CERTIFICATE OF ANALYSIS - ENVIRONMENTAL DIVISION

Laboratory Report No: E026387
Client Name: LeVert
Client Reference: Noosaville
Contact Name: Mike Bennett
Chain of Custody No: na
Sample Matrix: SOIL & WATER

Cover Page 1 of 4
 plus Sample Results

Date Received: 28/04/2006
Date Reported: 05/05/2006

This Final Certificate of Analysis consists of sample results, DQI's, method descriptions, laboratory definitions, and internationally recognised NATA accreditation and endorsement. The DQO compliance relates specifically to QA/QC results as performed as part of the sample analysis, and may provide an indication of sample result quality. Transfer of report ownership from Labmark to the client shall only occur once full & final payment has been settled and verified. All report copies may be retracted where full payment has not occurred within the agreed settlement period.

QUALITY ASSURANCE CRITERIA

Accuracy: matrix spike: 1 in first 5-20, then 1 every 20 samples
 lcs, crm, method: 1 per analytical batch
 surrogate spike: addition per target organic method

Precision: laboratory duplicate: 1 in first 5-10, then 1 every 10 samples
 laboratory triplicate: re-extracted & reported when duplicate RPD values exceed acceptance criteria

Holding Times: soils, waters: Refer to LabMark Preservation & THT table
 VOC's 14 days water / soil
 VAC's 7 days water or 14 days acidified
 VAC's 14 days soil
 SVOC's 7 days water, 14 days soil
 Pesticides 7 days water, 14 days soil
 Metals 6 months general elements
 Mercury 28 days

Confirmation: target organic analysis: GC/MS, or confirmatory column

Sensitivity: EQL: Typically 2-5 x Method Detection Limit (MDL)

QUALITY CONTROL GLOBAL ACCEPTANCE CRITERIA (GAC)

Accuracy: spike, lcs, crm surrogate: general analytes 70% - 130% recovery
 phenol analytes 50% - 130% recovery
 organophosphorous pesticide analytes 60% - 130% recovery
 phenoxy acid herbicides 50% - 130% recovery

anion/cation bal: +/- 10% (0-3 meq/l),
 +/- 5% (>3 meq/l)

Precision: method blank: not detected >95% of the reported EQL
 duplicate lab 0-30% (>10xEQL), 0-75% (5-10xEQL)
 RPD (metals): 0-100% (<5xEQL)
 duplicate lab 0-50% (>10xEQL), 0-75% (5-10xEQL)
 RPD: 0-100% (<5xEQL)

QUALITY CONTROL ANALYTE SPECIFIC ACCEPTANCE CRITERIA (ASAC)

Accuracy: spike, lcs, crm surrogate: analyte specific recovery data
 <3xstd of historical mean

Uncertainty: spike, lcs: measurement calculated from historical analyte specific control charts

RESULT ANNOTATION

DQO: Data Quality Objective	s: matrix spike recovery	p: pending
DQI: Data Quality Indicator	d: laboratory duplicate	lcs: laboratory control sample
EQL: Estimated Quantitation Limit	t: laboratory triplicate	crm: certified reference material
--: not applicable	r: RPD relative % difference	mb: method blank

sch4p4(6) Personal information

David Burns
Quality Control (Report signatory)
 david.burns@labmark.com.au

Geoff Weir
Authorising Chemist (NATA signatory)
 geoff.weir@labmark.com.au

Simon Mills
Authorising Chemist (NATA signatory)
 simon.mills@labmark.com.au

This document is issued in accordance with NATA's accreditation requirements.

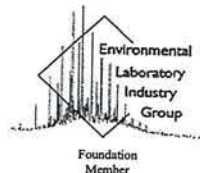
LabMark PTY LTD ABN 27 079 798 397
 * SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077
 * Telephone: (02) 9476 6533 * Fax: (02) 9476 8219

* MELBOURNE: 116 Moray Street, South Melbourne VIC 3205
 * Telephone: (03) 9686 8344 * Fax: (03) 9686 7344 176 of 211

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CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



Laboratory Report: E026387

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NEPC GUIDELINE COMPLIANCE - DQO

1. GENERAL

- A. Results relate specifically to samples as received. Sample results are not corrected for matrix spike, lcs, or surrogate recovery data.
- B. EQL's are matrix dependant and may be increased due to sample dilution or matrix interference.
- C. Laboratory QA/QC samples are specific to this project.
- D. Inter-laboratory proficiency results are available upon request. NATA accreditation details available at www.nata.asn.au.
- E. VOC spikes & surrogates added to samples during extraction, SVOC spikes & surrogates added prior to extraction.
- F. Recovery data outside GAC limits shall be investigated and compared to ASAC (historical mean +/- 3sd). If recovery data <20%, then the relevant results for that compound are considered not reliable.
- G. Recovery data (ms, surrogate, crm, lcs) outside ASAC limits shall initiate an investigative action. Anomalous QC data is examined in conjunction with other QC samples and a final decision whether to accept or reject results is provided by the professional judgement of the senior analyst. The USEPA-CLP National Functional Guidelines are referred to for specific recommendations.
- H. Extraction (preparation) date refers to the date that sample preparation was initiated. Note that certain methods not requiring sample preparation (eg. VOCs in water, etc) may report a common extraction and analysis date.
- I. LabMark shall maintain an official copy of this Certificate of Analysis for all traceable reference purposes.

2. CHAIN OF CUSTODY (COC) & SAMPLE RECEIPT NOTICE (SRN) REQUIREMENTS

- A. SRN issued to client upon sample receipt & login verification.
- B. Preservation & sampling date details specified on COC and SRN, unless noted.
- C. Sample Integrity & Validated Time of Sample Receipt (VTSR) Holding Times verified (preservation may extend holding time, refer to preservation chart).

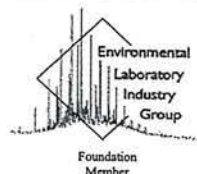
3. NATA ACCREDITED METHODS

- A. NATA accreditation held for each method and sample matrix type reported, unless noted below.
- B. NATA accredited in-house laboratory methods are referenced from NEPC, ASTM, modified USEPA / APHA documents. Corporate Accreditation No. 13542.
- C. Subcontracted analyses: Refer to Sample Receipt Notice and additional DQO comments.

This document is issued in accordance with NATA's accreditation requirements.



CUSTOMER CENTRIC - ANALYTICAL CHEMISTS

**Laboratory Report: E026387**

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4. QA/QC FREQUENCY COMPLIANCE TABLE SPECIFIC TO THIS REPORT**Matrix: SOIL**

Page:	Method:	Totals:	#d	%d-ratio	#t	#s	%s-ratio
1	Volatile TPH by P&T (vTPH)	18	2	11%	0	1	6%
1	BTEX by P&T	18	2	11%	0	1	6%
4	Petroleum Hydrocarbons (TPH)	18	2	11%	0	1	6%
9	Acid extractable lead	18	2	11%	0	1	6%
11	Moisture	18	--	--	--	--	--

Matrix: WATER

Page:	Method:	Totals:	#d	%d-ratio	#t	#s	%s-ratio
7	BTEX by P&T	2	0	0%	0	0	0%
7	Volatile TPH by P&T (vTPH)	2	0	0%	0	0	0%
8	Petroleum Hydrocarbons (TPH)	2	0	0%	0	0	0%

GLOSSARY:

#d	number of discrete duplicate extractions/analyses performed.
%d-ratio	NEPC guideline for laboratory duplicates is 1 in 10 samples (min 10%).
#t	number of triplicate extractions/analyses performed.
#s	number of spiked samples analysed.
%s-ratio	USEPA guideline for laboratory matrix spikes is 1 in 20 samples (min 5%).

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* SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077

* Telephone: (02) 9476 6533 * Fax: (02) 9476 8219

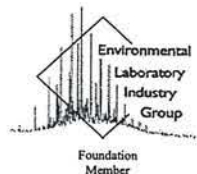
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* Telephone: (03) 9686 8344 * Fax: (03) 9686 7344



CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



Laboratory Report: E026387

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5. THERE ARE NO ADDITIONAL COMMENTS SPECIFIC TO THIS REPORT

A. All tests were conducted by LabMark Environmental Sydney, NATA accreditation No. 13542, Corporate Site No. 13535., unless indicated below.

Laboratory QA/QC data shall relate specifically to this report, and may provide an indication of site specific sample result quality. LabMark DOES NOT report NON-RELEVANT BATCH QA/QC data. Acceptance of this self assessment certificate does not preclude any requirement for a QA/QC review by a accredited contaminated site EPA auditor, when and wherever necessary. Laboratory QA/QC self assessment references available upon request.

This document is issued in accordance with NATA's accreditation requirements.

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19-393

* MELBOURNE: 116 Moray Street, South Melbourne VIC 3205
* Telephone: (03) 9686 8344 * Fax: (03) 9686 7344



Laboratory Report No: E026387
Client Name: LeVert
Contact Name: Mike Bennett
Client Reference Noosaville 06194

Page: 1 of 12
 plus cover page
Date: 05/05/06

Final
Certificate
 of Analysis



This report supercedes reports issued on: N/A

Laboratory Identification			18963	18964	18965	18966	18967	18968	18969	18970	18971	18972
Sample Identification			SB1.1	SB1.2	SB1.3	SB2.1	SB2.2	SB2.3	SB3.1	SB3.2	SB4.1	SB4.2
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06
Laboratory Extraction (Preparation) Date			2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06
Laboratory Analysis Date			3/5/06	4/5/06	3/5/06	4/5/06	3/5/06	3/5/06	3/5/06	3/5/06	4/5/06	3/5/06
Method	BTEX by P&T	EQL										
E002.2	Benzene	0.2	<0.2	21	<0.2	17	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Toluene	0.5	<0.5	202	<0.5	127	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Ethylbenzene	0.5	<0.5	120	<0.5	118	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
	meta- and para-Xylene	1	<1	560	<1	570	<1	<1	<1	<1	<1	<1
	ortho-Xylene	0.5	<0.5	18	<0.5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Total Xylene	--	--	578	--	587	--	--	--	--	--	--
	CDFB (Surr @ 10mg/kg)	--	106%	#	100%	#	102%	102%	108%	103%	101%	102%
Method	Volatile TPH by P&T (vTPH)	EQL										
E003.2	C6 - C9 Fraction	10	<10	1720	<10	1620	<10	<10	<10	<10	<10	<10

Results expressed in mg/kg dry weight unless otherwise specified

Comments: # Percent recovery not available due to significant background levels of analyte in sample.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.



Laboratory Report No: E026387
Client Name: LeVert
Contact Name: Mike Bennett
Client Reference: Noosaville 06194

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 plus cover page
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Final
Certificate
 of Analysis



This report supercedes reports issued on: N/A

Laboratory Identification			18973	18974	18975	18976	18977	18978	18979	18980	18963d	18963r
Sample Identification			SB6.1	SB7.1	SB8.1	SB8.2	SB9.1	SB9.2	SB9.3	Dup 1	QC	QC
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	--	--
Laboratory Extraction (Preparation) Date			2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	--
Laboratory Analysis Date			4/5/06	4/5/06	4/5/06	3/5/06	3/5/06	3/5/06	3/5/06	4/5/06	3/5/06	--
Method	BTEX by P&T	EQL										
E002.2	Benzene	0.2	<0.2	41	<0.2	<0.2	2.7	7.3	<0.2	6.2	<0.2	--
	Toluene	0.5	<0.5	192	<0.5	<0.5	1.5	22	<0.5	25	<0.5	--
	Ethylbenzene	0.5	0.7	70	<0.5	<0.5	16	19	<0.5	11	<0.5	--
	meta- and para-Xylene	1	3	250	<1	<1	140	130	<1	45	<1	--
	ortho-Xylene	0.5	0.9	105	<0.5	<0.5	9.4	19	<0.5	15	<0.5	--
	Total Xylene	--	3.9	355	--	--	149.4	149	--	60	--	--
	CDFB (Surr @ 10mg/kg)	--	99%	#	96%	102%	121%	110%	103%	97%	106%	0%
Method	Volatile TPH by P&T (vTPH)	EQL										
E003.2	C6 - C9 Fraction	10	<10	1110	<10	<10	450	470	<10	140	<10	--

Results expressed in mg/kg dry weight unless otherwise specified

Comments: # Percent recovery not available due to significant background levels of analyte in sample.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.



No. 13542

LabMark Pty Ltd ABN 27 079 798 397 SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077 Telephone: (02) 9476 6533 Fax: (02) 9476 8219 MELBOURNE: 116 Moray Street, South Melbourne VIC 3205 Telephone: (03) 9686 8344 Fax: (03) 9686 7344

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 19-393

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Laboratory Report No: E026387
Client Name: LeVert
Contact Name: Mike Bennett
Client Reference: Noosaville 06194

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plus cover page

Date: 05/05/06

This report supercedes reports issued on: N/A

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of Analysis



Laboratory Identification			18975d	18975r	18964s	lcs	mb				
Sample Identification			QC	QC	QC	QC	QC				
Depth (m)			--	--	--	--	--				
Sampling Date recorded on COC			--	--	--	--	--				
Laboratory Extraction (Preparation) Date			2/5/06	--	2/5/06	2/5/06	2/5/06				
Laboratory Analysis Date			4/5/06	--	3/5/06	2/5/06	2/5/06				
Method	BTEX by P&T	EQL									
E002.2	Benzene	0.2	<0.2	--	#	99%	<0.2				
	Toluene	0.5	<0.5	--	#	106%	<0.5				
	Ethylbenzene	0.5	<0.5	--	#	102%	<0.5				
	meta- and para-Xylene	1	<1	--	#	115%	<1				
	ortho-Xylene	0.5	<0.5	--	#	105%	<0.5				
	Total Xylene	--	--	--	--	--	--				
	CDFB (Surr @ 10mg/kg)	--	97%	1%	88%	100%	100%				
Method	Volatile TPH by P&T (vTPH)	EQL									
E003.2	C6 - C9 Fraction	10	<10	--	#	97%	<10				

Results expressed in mg/kg dry weight unless otherwise specified

Comments: # Percent recovery not available due to significant background levels of analyte in sample.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.



No. 13542

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Form QS0145, Rev. 0 : Date Issued 10/03/05

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File A

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Laboratory Report No: E026387
Client Name: LeVert
Contact Name: Mike Bennett
Client Reference: Noosaville 06194

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 plus cover page
Date: 05/05/06

Final
Certificate
 of Analysis



This report supercedes reports issued on: N/A

Laboratory Identification			18963	18964	18965	18966	18967	18968	18969	18970	18971	18972
Sample Identification			SB1.1	SB1.2	SB1.3	SB2.1	SB2.2	SB2.3	SB3.1	SB3.2	SB4.1	SB4.2
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06
Laboratory Extraction (Preparation) Date			2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06
Laboratory Analysis Date			3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06
Method	Petroleum Hydrocarbons (TPH)	EQL										
E006.2	C10 - C14 Fraction	50	<50	1720	<50	3190	<50	<50	<50	<50	<50	<50
	C15 - C28 Fraction	100	<100	<100	<100	410	<100	<100	<100	<100	<100	<100
	C29 - C36 Fraction	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	Sum of TPH C10 - C36	--	--	1720	--	3600	--	--	--	--	--	--

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E006.2: 8-10g soil extracted with 20ml DCM/Acetone (8:2). Analysis by GC/FID.



No. 13542

LabMark Pty Ltd ABN 27 079 798 397 SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077 Telephone: (02) 9476 6533 Fax: (02) 9476 8219 MELBOURNE: 116 Moray Street, South Melbourne VIC 3205 Telephone: (03) 9686 8344 Fax: (03) 9686 7344

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File A

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Laboratory Report No: E026387
Client Name: LeVert
Contact Name: Mike Bennett
Client Reference: Noosaville 06194

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Certificate
of Analysis



This report supercedes reports issued on: N/A

Laboratory Identification			18973	18974	18975	18976	18977	18978	18979	18980	18963d	18963r
Sample Identification			SB6.1	SB7.1	SB8.1	SB8.2	SB9.1	SB9.2	SB9.3	Dup 1	QC	QC
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	--	--
Laboratory Extraction (Preparation) Date			2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	--
Laboratory Analysis Date			3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	--
Method	Petroleum Hydrocarbons (TPH)	EQL										
E006.2	C10 - C14 Fraction	50	140	680	<50	<50	790	220	<50	60	<50	--
	C15 - C28 Fraction	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	--
	C29 - C36 Fraction	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	--
	Sum of TPH C10 - C36	--	140	680	--	--	790	220	--	60	--	--

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E006.2: 8-10g soil extracted with 20ml DCM/Acetone (8:2). Analysis by GC/FID.



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LabMark Pty Ltd ABN 27 079 798 397 SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077 Telephone: (02) 9476 6533 Fax: (02) 9476 8219 MELBOURNE: 116 Moray Street, South Melbourne VIC 3205 Telephone: (03) 9686 8344 Fax: (03) 9686 7344

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Laboratory Identification			18975d	18975r	18964s	lcs	mb				
Sample Identification			QC	QC	QC	QC	QC				
Depth (m)			--	--	--	--	--				
Sampling Date recorded on COC			--	--	--	--	--				
Laboratory Extraction (Preparation) Date			2/5/06	--	2/5/06	2/5/06	2/5/06				
Laboratory Analysis Date			3/5/06	--	3/5/06	2/5/06	2/5/06				
Method	Petroleum Hydrocarbons (TPH)	EQL									
E006.2	C10 - C14 Fraction	50	<50	--	--	--	<50				
	C15 - C28 Fraction	100	<100	--	84%	82%	<100				
	C29 - C36 Fraction	100	<100	--	--	--	<100				
	Sum of TPH C10 - C36	--	--	--	--	--	--				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E006.2: 8-10g soil extracted with 20ml DCM/Acetone (8:2). Analysis by GC/FID.



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Contact Name: Mike Bennett
Client Reference: Noosaville 06194

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Laboratory Identification			18981	18982	les	mb					
Sample Identification			MW-1	MW-3	QC	QC					
Depth (m)			--	--	--	--					
Sampling Date recorded on COC			26/4/06	26/4/06	--	--					
Laboratory Extraction (Preparation) Date			1/5/06	1/5/06	1/5/06	1/5/06					
Laboratory Analysis Date			1/5/06	1/5/06	1/5/06	1/5/06					
Method	BTEX by P&T	EQL									
E002.1	Benzene	1	<1	110	108%	<1					
	Toluene	1	<1	6	114%	<1					
	Ethylbenzene	1	<1	660	112%	<1					
	meta- & para-Xylene	2	<2	23	120%	<2					
	ortho-Xylene	1	<1	7	109%	<1					
	Total Xylene	--	--	30	--	--					
	4-BFB (Surr @ 100ug/l)	--	130%	128%	101%	98%					
Method	Volatile TPH by P&T (vTPH)	EQL									
E003.1	C6-C9	50	<50	1610	102%	<50					

Results expressed in ug/l unless otherwise specified

Comments: -

E002.1: Direct injection into P&T/GC/PID/MSD.

E003.1: Direct injection into P&T/GC/FID.



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Laboratory Identification			18981	18982	lcs	mb					
Sample Identification			MW-1	MW-3	QC	QC					
Depth (m)			--	--	--	--					
Sampling Date recorded on COC			26/4/06	26/4/06	--	--					
Laboratory Extraction (Preparation) Date			1/5/06	1/5/06	1/5/06	1/5/06					
Laboratory Analysis Date			2/5/06	2/5/06	2/5/06	2/5/06					
Method	Petroleum Hydrocarbons (TPH)	EQL									
E004.1	C10-C14 Fraction	50	<50	4290	--	<50					
	C15-C28 Fraction	200	<200	1440	90%	<200					
	C29-C36 Fraction	50	<50	310	--	<50					
	Sum of TPH C10 - C36	--	--	6040	--	--					

Results expressed in ug/l unless otherwise specified

Comments:

E004.1: Triple extraction with DCM. Analysis by GC/FID.



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Laboratory Identification			18963	18964	18965	18966	18967	18968	18969	18970	18971	18972
Sample Identification			SB1.1	SB1.2	SB1.3	SB2.1	SB2.2	SB2.3	SB3.1	SB3.2	SB4.1	SB4.2
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06
Laboratory Extraction (Preparation) Date			4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06
Laboratory Analysis Date			4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06
Method	Acid extractable lead	EQL										
E022.2	Lead	2	<2	3	<2	5	<2	2	<2	<2	<2	<2

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E022.2: 0.50g digested with nitric/hydrochloric acid. Analysis by ICP/MS.

Laboratory Identification			18973	18974	18975	18976	18977	18978	18979	18980	18963d	18963r
Sample Identification			SB6.1	SB7.1	SB8.1	SB8.2	SB9.1	SB9.2	SB9.3	Dup 1	QC	QC
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	--	--
Laboratory Extraction (Preparation) Date			4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	--
Laboratory Analysis Date			4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	4/5/06	5/6/06	5/6/06	4/5/06	--
Method	Acid extractable lead	EQL										
E022.2	Lead	2	4	4	3	<2	2	2	2	<2	<2	--

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E022.2: 0.50g digested with nitric/hydrochloric acid. Analysis by ICP/MS.



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Laboratory Identification			18975d	18975r	18964s	crm	lcs	mb				
Sample Identification			QC	QC	QC	QC	QC	QC				
Depth (m)			--	--	--	--	--	--				
Sampling Date recorded on COC			--	--	--	--	--	--				
Laboratory Extraction (Preparation) Date			4/5/06	--	4/5/06	4/5/06	4/5/06	4/5/06				
Laboratory Analysis Date			4/5/06	--	4/5/06	4/5/06	4/5/06	4/5/06				
Method	Acid extractable lead	EQL										
E022.2	Lead	2	3	0%	104%	108%	104%	<2				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E022.2: 0.50g digested with nitric/hydrochloric acid. Analysis by ICP/MS.



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Laboratory Identification			18963	18964	18965	18966	18967	18968	18969	18970	18971	18972
Sample Identification			SB1.1	SB1.2	SB1.3	SB2.1	SB2.2	SB2.3	SB3.1	SB3.2	SB4.1	SB4.2
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06
Laboratory Extraction (Preparation) Date			2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06
Laboratory Analysis Date			3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06
Method	Moisture	EQL										
E005.2	Moisture	--	5	11	22	8	18	20	9	18	10	15

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.

Laboratory Identification			18973	18974	18975	18976	18977	18978	18979	18980	18963d	18963r
Sample Identification			SB6.1	SB7.1	SB8.1	SB8.2	SB9.1	SB9.2	SB9.3	Dup 1	QC	QC
Depth (m)			--	--	--	--	--	--	--	--	--	--
Sampling Date recorded on COC			26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	26/4/06	--	--
Laboratory Extraction (Preparation) Date			2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	2/5/06	--
Laboratory Analysis Date			3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	3/5/06	--
Method	Moisture	EQL										
E005.2	Moisture	--	10	16	16	16	15	15	15	13	6	18%

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.



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Laboratory Identification			18975d	18975r							
Sample Identification			QC	QC							
Depth (m)			--	--							
Sampling Date recorded on COC			--	--							
Laboratory Extraction (Preparation) Date			2/5/06	--							
Laboratory Analysis Date			3/5/06	--							
Method	Moisture	EQL									
E005.2	Moisture	--	16	0%							

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.



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LABMARK		NATA 13542, AQIS N0356		Client Details		Safety Precaution: laboratory sample bottles may contain preservation acid / chemicals, refer to SAFETEX label on bottle.																																																																																																																																																																																																																																																																				
Dispatch samples to: Unit/18 Leighton Place Asquith NSW 2077 or 116 Mooray Street South Melbourne VIC 3205		Tel (SYD): 612-9476-8533 Fax (SYD): 612-9476-8219 Tel (MEL): 613-9686-8344 Fax (MEL): 613-9686-7344 (DB): 0409449684, (PW): 0439390209 ros.schacht@labmark.com.au paul.woodward@labmark.com.au		Company & Address: <u>LeVal Environmental</u> Project Manager: <u>M. Bennett</u> Project Name: <u>Noosaville</u> Project Type (eg. Service Station): _____		Tel: <u>07 3878 7107</u> Fx: <u>1A/A</u> Date Required: <u>Normal</u> Lab. Quote No: <u>Let M-L 05-</u>																																																																																																																																																																																																																																																																				
Global Specifications I require (default is Not required if Not ticked):						Analysis Request																																																																																																																																																																																																																																																																				
YES (tick) 1. Urgent TAT required? (please circle: 1 day 2 days 3 days days) 2. Fast TAT Guarantee required? (Surcharge may apply - Receipt cutoff time 3.00pm) 3. Do you wish sediment present in waters to be included in organic/inorganic extractions? 4. Additional QA/QC reported where sample batches submitted are < 10 samples? 5. Do you require DIFFERENT standard EQL's from those stated in the current LabMark price catalogue? 6. Do you wish chromatograms to be supplied? (Additional fee applies). 7. Electronic data transfer (circle: fax .xls .csv .pdf). Please specify. Note1: Additional water sample must be submitted for lab. duplicate & spike analysis. Note2: Contact lab if consolidating multiple analyses into a single sample container.						<table border="1" style="width:100%; font-size: x-small;"> <thead> <tr> <th colspan="4">Volatile Tests</th> <th colspan="4">Semi- & Non-Volatile Tests</th> <th colspan="2">Leach</th> <th colspan="4">Nutrient Tests</th> <th colspan="2">Other</th> </tr> <tr> <th colspan="4">125g</th> <th colspan="4">125g (max. 4 tests)</th> <th colspan="2"></th> <th colspan="4">125g (max. 4 tests)</th> <th colspan="2">(eg. TCLP tests here)</th> </tr> <tr> <th>2x43 ml</th> <th>2x43ml</th> <th>2x43ml</th> <th></th> <th>500 ml</th> <th>500 ml</th> <th>500 ml</th> <th>500 ml</th> <th>1 L</th> <th>125 ml</th> <th>250g</th> <th colspan="4">0.1 - 1L (chemical groups)</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>BTEX+TPH (C&B) PT-GC/FID/DIMS</td> <td>VOC PT-GCMS</td> <td>THM PT-GCMS</td> <td>MTBE PT-GCMS</td> <td>VAC PT-GCMS</td> <td>VOC PT-GCMS</td> <td>TPH (C&B) GC/FID</td> <td>PAH's GC/MS</td> <td>Phenols GC/MS</td> <td>Aromatic/Alicyclic TPH GC/FID</td> <td>C&O, OC, OP, PCB GC/ECD/GC/MS</td> <td>SVOC GC/MS</td> <td>Phenoxy Acid Herbicides GC/MS</td> <td>Explosives HPLC</td> <td>Explosives HPLC (dissolved / total)</td> <td>TCLP (specify test - other)</td> <td>ZHE TCLP (specify test - other)</td> <td>pH, EC</td> <td>NH₄, TN, N_{org}, TP</td> <td>NO₃, NO₂</td> <td>TP, ortho-P, TKP</td> <td>Cl⁻, F⁻, SO₄²⁻</td> <td>Total Alk, Speciated Alk</td> <td>Free CN, WAD, Total CN</td> <td>Total Phenolics</td> <td>Major Cations (Ca, Mg, Na, K)</td> </tr> </tbody> </table>										Volatile Tests				Semi- & Non-Volatile Tests				Leach		Nutrient Tests				Other		125g				125g (max. 4 tests)						125g (max. 4 tests)				(eg. TCLP tests here)		2x43 ml	2x43ml	2x43ml		500 ml	500 ml	500 ml	500 ml	1 L	125 ml	250g	0.1 - 1L (chemical groups)						BTEX+TPH (C&B) PT-GC/FID/DIMS	VOC PT-GCMS	THM PT-GCMS	MTBE PT-GCMS	VAC PT-GCMS	VOC PT-GCMS	TPH (C&B) GC/FID	PAH's GC/MS	Phenols GC/MS	Aromatic/Alicyclic TPH GC/FID	C&O, OC, OP, PCB GC/ECD/GC/MS	SVOC GC/MS	Phenoxy Acid Herbicides GC/MS	Explosives HPLC	Explosives HPLC (dissolved / total)	TCLP (specify test - other)	ZHE TCLP (specify test - other)	pH, EC	NH ₄ , TN, N _{org} , TP	NO ₃ , NO ₂	TP, ortho-P, TKP	Cl ⁻ , F ⁻ , SO ₄ ²⁻	Total Alk, Speciated Alk	Free CN, WAD, Total CN	Total Phenolics	Major Cations (Ca, Mg, Na, K)																																																																																																																																																																																
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						125g				125g (max. 4 tests)						125g (max. 4 tests)				(eg. TCLP tests here)																																																																																																																																																																																																																																																						
						2x43 ml	2x43ml	2x43ml		500 ml	500 ml	500 ml	500 ml	1 L	125 ml	250g	0.1 - 1L (chemical groups)																																																																																																																																																																																																																																																									
BTEX+TPH (C&B) PT-GC/FID/DIMS	VOC PT-GCMS	THM PT-GCMS	MTBE PT-GCMS	VAC PT-GCMS	VOC PT-GCMS	TPH (C&B) GC/FID	PAH's GC/MS	Phenols GC/MS	Aromatic/Alicyclic TPH GC/FID	C&O, OC, OP, PCB GC/ECD/GC/MS	SVOC GC/MS	Phenoxy Acid Herbicides GC/MS	Explosives HPLC	Explosives HPLC (dissolved / total)	TCLP (specify test - other)	ZHE TCLP (specify test - other)	pH, EC	NH ₄ , TN, N _{org} , TP	NO ₃ , NO ₂	TP, ortho-P, TKP	Cl ⁻ , F ⁻ , SO ₄ ²⁻	Total Alk, Speciated Alk	Free CN, WAD, Total CN	Total Phenolics	Major Cations (Ca, Mg, Na, K)																																																																																																																																																																																																																																																	
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Relinquished by (print): <u>M. Bennett</u>				Signed: _____		Date: <u>27/4/06</u>				Received By: _____		Date: _____ Time: _____																																																																																																																																																																																																																																																														
Relinquished by (print): _____				Signed: _____		Date: _____				Received By: _____		Date: <u>28/4</u> Time: <u>10.25</u>																																																																																																																																																																																																																																																														

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Relinquished by (print): M. B. Smith		Signed: [Redacted]		Date: 27/4/06		Received By: [Redacted]		Date: 28/4 Time: 10:25	
Relinquished by (print):		Signed: [Redacted]		Date:		Received By: [Redacted]		Date: 28/4 Time: 10:25	



Quality, Service, Support

Report Date : 28/04/2006
Report Time : 3:24:54PM

Sample Receipt Notice (SRN) for E026387



Client Details		Laboratory Reference Information	
Client Name: LeVert Client Phone: 07 3878 7107 Client Fax: 07 3878 7107 Contact Name: (6) Personal infor Contact Email: (6) Personal inf@bigpond.com.au Client Address: ch4p4(6) Personal informati Project Name: Noosaville Project Number: 06194 CoC Number: - Not provided - Purchase Order: - Not provided - Surcharge: No surcharge applied (results by 6:30pm on due date) Sample Matrix: SOIL & WATER		Please have this information ready when contacting Labmark. Laboratory Report: E026387 Quotation Number: Letter March 05 Laboratory Address: Unit 1, 8 Leighton Pl. Asquith NSW 2077 Phone: 61 2 9476 6533 Fax: 61 2 9476 8219 Sample Receipt Contact: Ros Schacht Email: ros.schacht@labmark.com.au Reporting Contact: Jyothi Lal Email: jyothi.lal@labmark.com.au NATA Accreditation: 13542 TGA GMP License: 185-336 (Sydney) APVMA License: 6105 (Sydney) AQIS Approval: NO356 (Sydney) AQIS Entry Permit: 200409998 (Sydney)	
Date Sampled (earliest date): 26/04/2006 Date Samples Received: 28/04/2006 Date Sample Receipt Notice issued: 28/04/2006 Date Preliminary Report Due: 05/05/2006			

Sample Condition:

COC received with samples. Report number and lab ID's defined on COC.
Samples received in good order.
Samples received with cooling media: Ice bricks.
Samples received chilled.
Security seals intact.
Sample container & sample integrity suitable.

Comments:

Holding Times:

Date received allows for sufficient time to meet Technical Holding Times.

Preservation:

Chemical preservation of samples satisfactory for requested analytes.

Important Notes:

Sample disposal of environmental samples shall be 31 days (water) and 3 months (soil, HN03 preserved samples) after laboratory receipt, unless otherwise requested in writing by the client. Samples requested to be held in non-refrigerated storage shall incur \$5.00/ sample/ 3 months. Additional refrigerated storage shall incur \$20/ sample/ 3 months. Combination prices apply only if requested. Transfer of report ownership from LabMark to the client shall occur once full and final payment has been settled and verified. All report copies may be retracted where full payment does not occur within the agreed settlement period.

Analysis comments:

Subcontracted Analyses:

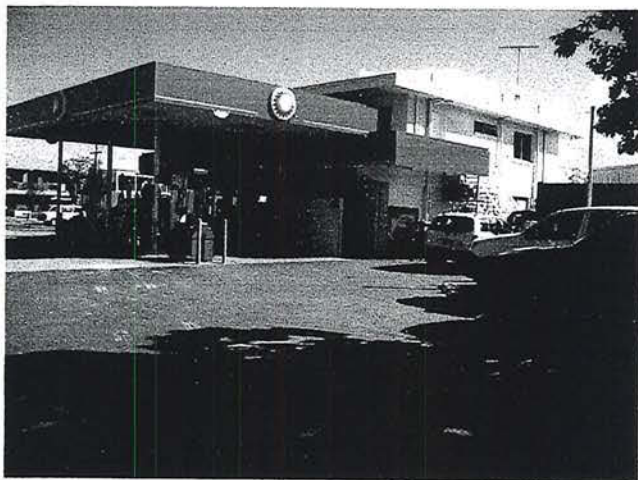
Thank you for choosing Labmark to analyse your project samples.
Additional information on www.labmark.com.au

ANNEX E
PHOTO LOG

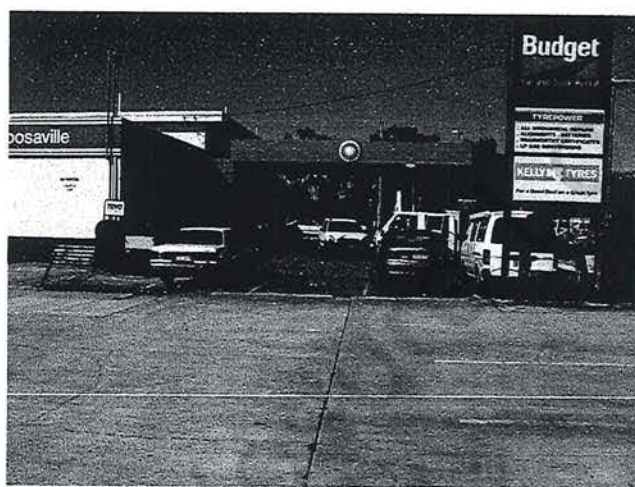
Published on DES Disclosure Log
RTI Act 2009

LeVert

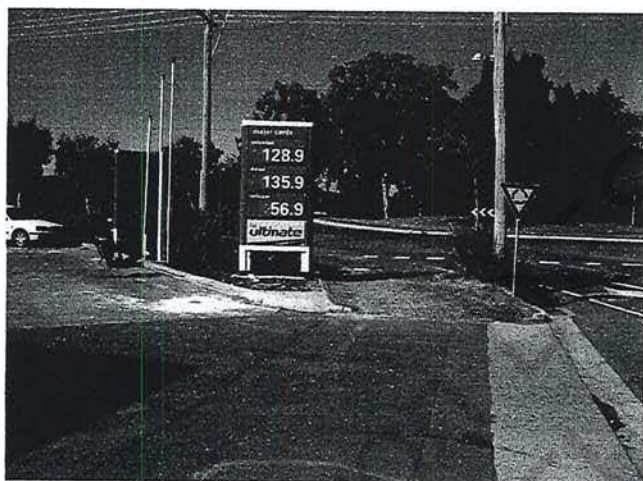
BP NOOSAVILLE, MARY STREET and WEYBA ROAD, SITE INVESTIGATION PHOTO RECORD.



1. General view of site from Weyba Road.



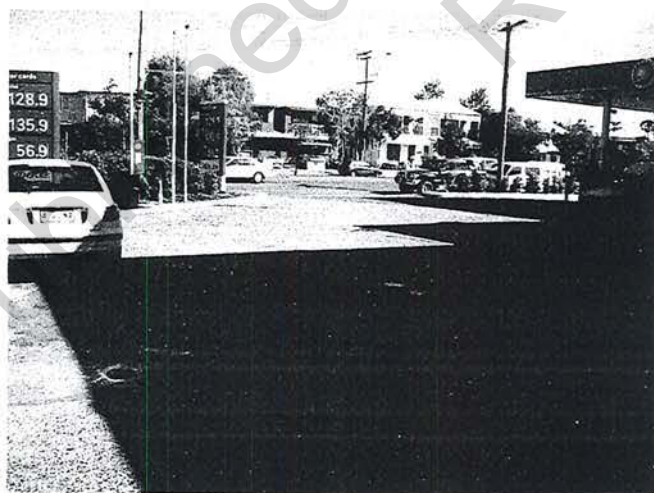
2. General site view looking north east.



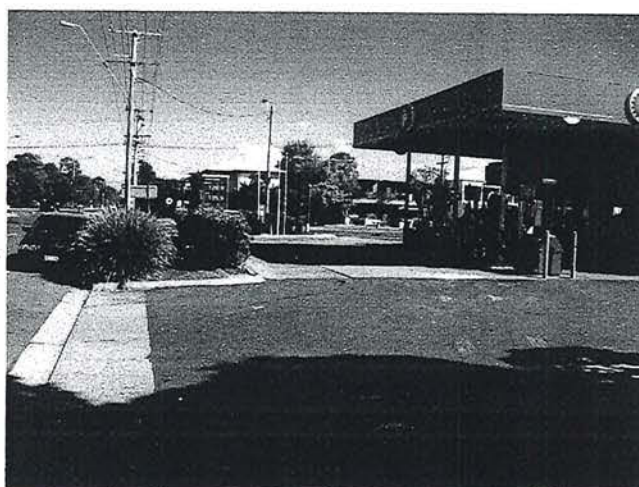
3. South east corner area of maximum impact.



4. Energex excavation south east corner.



5. Location of soil bore SB-9.



6. Looking south along Weyba Road.

ANNEX F
EPA CORRESPONDENCE, TANK INTEGRITY TEST

Published on DES Disclosure Log
RTI Act 2009

LeVert



**Queensland
Government**

Enquiries Jacinta Griffin
Telephone 3225 1086
Your reference
Our reference BNE27284

Environmental Protection Agency
Incorporating the
Queensland Parks and Wildlife Service

28 March 2006

BP Service Station Noosaville
PO Box 699
Gympie Qld 4570

Attention: sch4p4(6) Personal information

Dear sch4p4(6) Personal information

Re: Preliminary Site Investigation at BP service station located on Lot 1 on RP131598, at 54 Mary St, Noosaville.

The Environmental Protection Agency (EPA) conducted a preliminary site investigation (PSI) on 20/2/06, in response to a complaint regarding hydrocarbon odours from an open pit on the footpath adjacent to the BP service station. The PSI consisted of an assessment of potential sources of contamination and the sampling of two locations. The two sample locations were on the footpath, adjacent to the BP service station (refer attached soil samples TP001, TP002 and TP003 and water sample WS001 – WS006) and on the BP site, in the garden bed next to the vent pipes (refer attached TP004, TP005 and TP006). The levels of hydrocarbon contaminants identified have been tabled in Tables 1 and 2 attached. It should be noted that the concentration of hydrocarbon identified in the soil and groundwater are of concern to the EPA.

On the basis of this assessment the BP service station, namely Lot 1 on RP131598, has been identified as the most probable source of the hydrocarbon contamination identified. Laboratory analysis of the samples described the hydrocarbon as a mixed product or a light fuel mixed with diesel and/or oil.

The EPA requests that a contaminated site investigation (CSI) be conducted in accordance with the "*Draft Guidelines for the Assessment and Management of Contaminated Soils in Queensland*" and be undertaken by a suitably qualified person in accordance with section 385 of the *Environmental Protection Act 1994*. The CSI should include, but not be limited to the following:

- Delineation of the extent of hydrocarbon contamination in soil and groundwater;
- Provide a description of the measures proposed to be undertaken, to control any contamination source;
- A remediation strategy to address the offsite impacts from the activity.

Whilst the EPA cannot ignore or pardon contraventions of the legislation, the EPA is focussed on achieving environmental outcomes. In exercising its discretion not to take further enforcement action at this time, the EPA looks forward to your prompt attention to ensuring this issue is resolved. Please advise the EPA by 19 May 2006 the proposed measures you intend to take. Should the EPA obtain evidence indicating the issue is more serious than first thought, the EPA reserves its right to take further enforcement action under the provisions of the Act.

If you require further clarification on this matter please contact Jacinta Griffin on 3225 1086.

Yours sincerely

sch4p4(6) Personal information

Mark Paton
Chief Scientific Advisor
Contaminated Land Unit



MassTech Australia PTY LTD
ABN 49 080 728 641
Suite 1, 96 Camberwell Road,
Hawthorn East, Victoria, 3123

Melbourne
Telephone: (03) 9813 5122
Facsimile: (03) 9813 5144

Sydney
Telephone: (02) 9673 6222

Website: www.masstech.com.au

UPSS Precision Test Report

25th October 2005

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

Test Date: 17th, 18th & 24th October 2005
Reason for Test: Due Diligence
Customer Contact: Craydex, p4(6) Personal informa

Executive Summary

All tanks and lines have passed the tests.

There are no recommendations. It has been shown that all tank systems meet the USEPA requirements for leak detection using precision testing methods.



Aim

To investigate the integrity of the UPSSs as a due diligence exercise.

Method

The tanks and all their associated lines (i.e. vent, dip, fill and product lines) were subjected to the MassTech tank test. Individual tests were also performed on the product lines.

Summary of Tank Results as Tested

Test Round 1			
Tank	Test	Result	Rate
ULP Tank 1 (30 kl) at 21193 litres or 68.6 % fill (& 15 mm H ₂ O) 18 Oct 2005 Cert. No. 64251	Wet Static Test	PASS	
	Wet Pressure Test	pass (i)	0.34 lt/hr
	Ullage Test	PASS	
PULP Tank 2 (34.8 kl) at 22750 litres or 63.5 % fill (& 0 mm H ₂ O) 18 Oct 2005 Cert. No. 64252	Wet Static Test	pass (i)	0.37 lt/hr
	Wet Pressure Test	pass (i)	0.38 lt/hr
	Ullage Test	PASS	
ULP Tank 3 (17.8 kl) at 10737 litres or 58.6 % fill (& 0 mm H ₂ O) 18 Oct 2005 Cert. No. 64253	Wet Static Test		
	Wet Pressure Test	*PASS	
	Ullage Test	PASS	
ULP Tank 4 (9 kl) at 9063 litres or 97.8 % fill (& 0 mm H ₂ O) 17 Oct 2005 Cert. No. 64233	Wet Static Test	pass (e)	0.25 lt/hr
	Wet Pressure Test	pass (i)	0.09 lt/hr
	Ullage Test	PASS	
Diesel Tank 6 (11.7 kl) at 7930 litres or 65.8 % fill (& 0 mm H ₂ O) 17 Oct 2005 Cert. No. 64234	Wet Static Test	PASS	
	Wet Pressure Test	PASS	
	Ullage Test	PASS	

Nomenclature for tables above

- A 6.5 times ullage fail is the nitrogen decay equivalent to a liquid leak under 10kPa at the USEPA threshold of 0.38 lt/hr
- 0.38 lt/hr is the PASS/FAIL criteria for a USEPA precision test.
- (i) indicates a liquid ingress was detected during the test at the noted rate
- (e) indicates a liquid egress was detected during the test at the noted rate
- INC indicates an inconclusive result was obtained

Summary of Line Results as Tested

Line Test Round 1			
Product Lines	Date	Line	Valve
Regular Unleaded Tank (1,3) to Pump (5,6)	24-Oct-05	PASS	PASS
Regular Unleaded Tank (1,3) to Pump (8,9)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 1 to Pump (1,2)	24-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (1,2)	24-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (10,11)	17-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (5,6)	24-Oct-05	PASS	PASS
Premium Unleaded Tank 2 to Pump (8,9)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 3 to Pump (10,11)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (1,2)	24-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (10,11)	17-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (5,6)	24-Oct-05	PASS	PASS
Regular Unleaded Tank 4 to Pump (8,9)	17-Oct-05	PASS	PASS
Diesel Tank 6 to Pump (7)	24-Oct-05	PASS	PASS
Other Lines			
Other Lines	Date	Line	Valve
Premium Unleaded Tank 2 Dip	18-Oct-05	PASS	NA
Premium Unleaded Tank 2 Fill	18-Oct-05	PASS	NA
Regular Unleaded Tank 3 Dip	18-Oct-05	PASS	NA
Regular Unleaded Tank 3 Fill	18-Oct-05	PASS	NA
Regular Unleaded Tank 4 Dip	17-Oct-05	PASS	NA
Regular Unleaded Tank 4 Fill	17-Oct-05	PASS	NA

Line Test Reporting Legend	PASS	pass	weep	drip	fail	FAIL
Detected Leak Rate (ml/hour) @250kPa	90	115	140	165	190	
						USEPA threshold

Other Relevant Observations

- All visible parts of the systems, sealed by the technician, were shown to be tight using soapy water.
- Depth to ground water was measured at 1500 mm below grade in a monitoring well.
- There are two vents connected to ULP Tank 3.

Comments/Discussions

All tanks and lines have passed the tests.

An overall wet result was declared for ULP Tank 3 (due to a data quality issue with the initial mass readings), producing a clear pass result.

Some liquid movement was detected for the wet tests for Tanks 1, 2 and 4 however in each case the movement is in a pattern consistent with that related to the associated suction line systems and is therefore not deemed to be significant.

The dip and fill points associated with tanks 2, 3 and 4 do not have internal drop tube breather perforations and as such were not tested as part of the ullage. They were each tested individually against the static head of liquid in the tanks and all passed these tests.

Recommendations

There are no recommendations. It has been shown that all tank systems meet the USEPA requirements for leak detection using precision testing methods.

Addendum

Date of Test: 17th, 18th & 24th October 2005
Licensed MassTech Tester: Jason Weber
Report Prepared by: Tom Billings
Report ID: Noosaville CA2043 Diagnostic Report to 24-Oct-05.doc

Glossary of Acronyms used

MTA MassTech Australia Pty Ltd
HC Hydrocarbons
PSH Phase Separated Hydrocarbons
UPP Brand specific double wall high density polyethylene piping
UPSSs Underground Petroleum Storage Systems
USEPA United States of America Environmental Protection Agency

The underground pipe and tank configurations contained in this report are deduced from information gathered at the site by MassTech Australia and by information given to MassTech Australia by the client.

Leighton O'Brien Pty Ltd is the Australian licensee of the MassTech test. The MassTech test is owned and operated by MassTech International Limited and is independently certified as meeting the USEPA standard evaluation for tank tightness testing methods.

MassTech Australia services are provided on the terms and conditions set out in the conditions of sale document. The MassTech service is warranted to the invoiced value of testing services performed as covered in section 68a of the Trade Practices Act.

Details of Pressure Line Test

Regular Unleaded Tank (1,3) to Pump (5,6)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	9:17:08	155.376	
Tested	wet	9:18:08	155.221	20.4
		9:19:37	204.477	
Date	24-Oct-05	9:20:37	204.423	4.6
Unit SN	200202	9:22:54	253.099	
Cert. No.	64311	9:23:54	252.986	6.3

Regular Unleaded Tank (1,3) to Pump (8,9)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:48:48	153.948	
Tested	wet	11:49:48	153.713	30.0
		11:53:39	202.236	
Date	17-Oct-05	11:54:40	202.063	11.5
Unit SN	200080	11:55:55	254.003	
Cert. No.	64229	11:56:55	253.951	2.6

Regular Unleaded Tank 1 to Pump (1,2)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:40:12	155.919	
Tested	wet	10:41:12	155.803	13.8
		10:42:42	209.060	
Date	24-Oct-05	10:43:42	208.867	11.5
Unit SN	200202	10:45:40	253.593	
Cert. No.	64311	10:46:40	253.059	22.3

Premium Unleaded Tank 2 Dip				
Line	PASS	time	kPa	%loss/hr
Valve	NA	15:33:02	109.879	
Tested	dry	15:34:02	109.880	-0.7
		15:35:02	109.881	
Date	18-Oct-05	15:36:02	109.882	-0.7
Unit SN	200080	15:37:02	109.883	
Cert. No.	64244	15:38:02	109.884	-0.7

Premium Unleaded Tank 2 Fill				
Line	PASS	time	kPa	%loss/hr
Valve	NA	15:16:46	109.740	
Tested	dry	15:17:46	109.742	-1.1
		15:18:46	109.744	
Date	18-Oct-05	15:19:46	109.745	-1.1
Unit SN	200080	15:20:46	109.747	
Cert. No.	64244	15:21:46	109.748	-1.1

Premium Unleaded Tank 2 to Pump (1,2)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:05:20	155.128	
Tested	wet	11:06:19	155.079	4.5
		11:07:48	207.767	
Date	24-Oct-05	11:08:48	207.584	11.0
Unit SN	200080	11:10:27	252.521	
Cert. No.	64312	11:11:27	252.414	4.2

Premium Unleaded Tank 2 to Pump (10,11)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:33:41	151.247	
Tested	wet	10:34:41	151.218	4.6
		10:35:53	201.557	
Date	17-Oct-05	10:36:53	201.363	11.6
Unit SN	200080	10:37:56	255.102	
Cert. No.	64229	10:38:56	254.847	11.2

Premium Unleaded Tank 2 to Pump (5,6)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	9:44:22	173.531	
Tested	wet	9:45:22	173.395	14.8
		9:46:34	202.302	
Date	24-Oct-05	9:47:34	202.210	6.9
Unit SN	200080	9:48:52	252.381	
Cert. No.	64312	9:49:52	252.378	1.9

Premium Unleaded Tank 2 to Pump (8,9)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:12:39	157.549	
Tested	wet	11:13:39	157.538	2.2
		11:15:16	213.562	
Date	17-Oct-05	11:16:16	213.402	9.2
Unit SN	200080	11:19:19	252.306	
Cert. No.	64229	11:20:19	252.103	8.7

Regular Unleaded Tank 3 Dip				
Line	PASS	time	kPa	%loss/hr
Valve	NA	11:47:07	109.318	
Tested	dry	11:48:07	109.317	0.9
		11:49:07	109.316	
Date	18-Oct-05	11:50:07	109.315	0.9
Unit SN	200080	11:51:07	109.313	
Cert. No.	64245	11:52:07	109.312	0.9

Regular Unleaded Tank 3 Fill				
Line	PASS	time	kPa	%loss/hr
Valve	NA	12:03:26	109.016	
Tested	dry	12:04:26	109.016	-0.7
		12:05:26	109.017	
Date	18-Oct-05	12:06:26	109.018	-0.7
Unit SN	200080	12:07:26	109.019	
Cert. No.	64245	12:08:26	109.020	-0.7

Regular Unleaded Tank 3 to Pump (10,11)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:09:25	156.974	
Tested	wet	10:10:25	156.946	5.1
		10:12:02	210.972	
Date	17-Oct-05	10:13:02	210.730	15.4
Unit SN	200202	10:14:41	252.014	
Cert. No.	64230	10:15:42	251.797	9.7

Regular Unleaded Tank 4 Dip				
Line	PASS	time	kPa	%loss/hr
Valve	NA	15:55:11	114.619	
Tested	dry	15:56:10	114.615	-4.4
		15:57:11	114.612	
Date	17-Oct-05	15:58:10	114.612	0.0
Unit SN	200080	15:59:11	114.608	
Cert. No.	64228	16:00:10	114.605	-1.8

Regular Unleaded Tank 4 Fill				
Line	PASS	time	kPa	%loss/hr
Valve	NA	16:12:29	114.514	
Tested	dry	16:13:29	114.516	-0.9
		16:14:29	114.521	
Date	17-Oct-05	16:15:29	114.520	0.4
Unit SN	200080	16:16:29	114.513	
Cert. No.	64228	16:17:29	114.513	0.0

Regular Unleaded Tank 4 to Pump (1,2)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:41:44	150.313	
Tested	wet	10:42:44	150.249	10.0
		10:44:14	202.442	
Date	24-Oct-05	10:45:14	202.244	12.5
Unit SN	200080	10:47:12	252.759	
Cert. No.	64312	10:48:12	252.187	23.9

Regular Unleaded Tank 4 to Pump (10,11)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	10:10:43	148.652	
Tested	wet	10:11:43	148.430	30.4
		10:13:20	204.937	
Date	17-Oct-05	10:14:20	204.564	23.8
Unit SN	200080	10:15:59	251.558	
Cert. No.	64229	10:16:59	251.033	22.2

Regular Unleaded Tank 4 to Pump (5,6)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	9:18:40	157.585	
Tested	wet	9:19:40	157.649	-0.7
		9:21:09	203.747	
Date	24-Oct-05	9:22:09	203.625	10.0
Unit SN	200080	9:25:33	253.946	
Cert. No.	64312	9:26:33	253.803	6.8

Regular Unleaded Tank 4 to Pump (8,9)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:11:22	155.590	
Tested	wet	11:12:22	155.564	2.9
		11:13:58	204.163	
Date	17-Oct-05	11:14:58	204.010	10.4
Unit SN	200202	11:18:12	252.595	
Cert. No.	64230	11:19:12	252.301	12.3

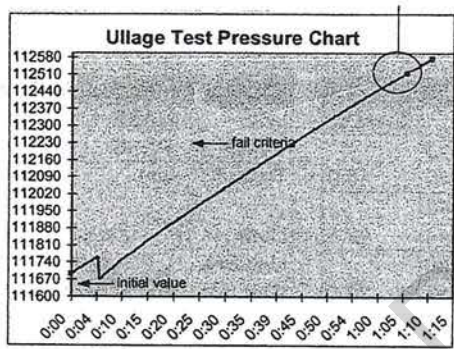
Diesel Tank 6 to Pump (7)				
Line	PASS	time	kPa	%loss/hr
Valve	PASS	11:51:59	158.107	
Tested	wet	11:52:58	158.089	1.9
		11:54:18	201.213	
Date	24-Oct-05	11:55:18	200.976	14.2
Unit SN	200080	11:56:35	258.094	
Cert. No.	64312	11:57:35	257.625	17.9

MassTech Tank Test Report

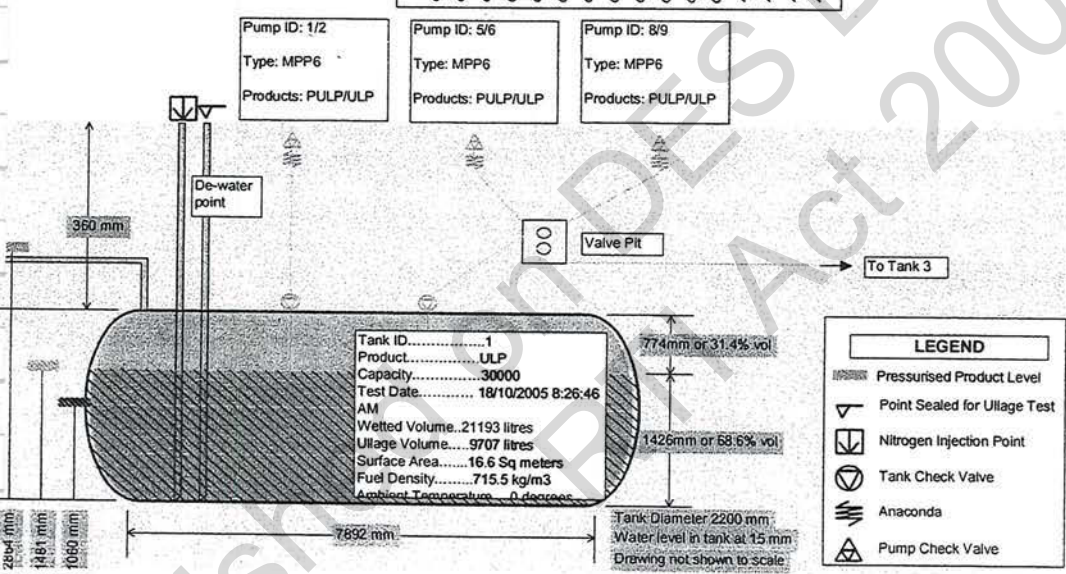
Wet (static)	PASS
Wet (pressure)	pass (i)
Dry	PASS

Facility Details
Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

ULP Tank 1



Mass Test	Time	Units
Mass 1	8:26:46 AM	9.69984
Mass 2	8:30:32 AM	9.69985
Mass 3	9:19:43 AM	9.69999
Mass 4	9:24:14 AM	9.70000
Mass 5	9:27:18 AM	9.70001
Mass 6	11:25:42 AM	9.70035
Mass 7	11:28:40 AM	9.70036
Mass 8	11:31:52 AM	9.70038
Ullage Test	Time	Pascals
Initial Value	10:03:07	111694
Test 1 Value	11:08:57	112518
Test 2 Value	11:13:57	112577
	dP/dT (Pa/5min)	59
	Pass limit (Pa/5min)	30.8



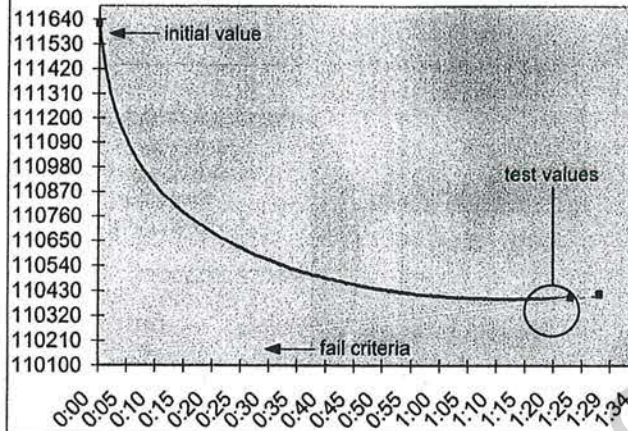
MassTech Tank Test Report

Wet (static) pass (i)
Wet (pressure) pass (i)
Dry PASS

Facility Details
Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

PULP Tank 2

Ullage Test Pressure Chart



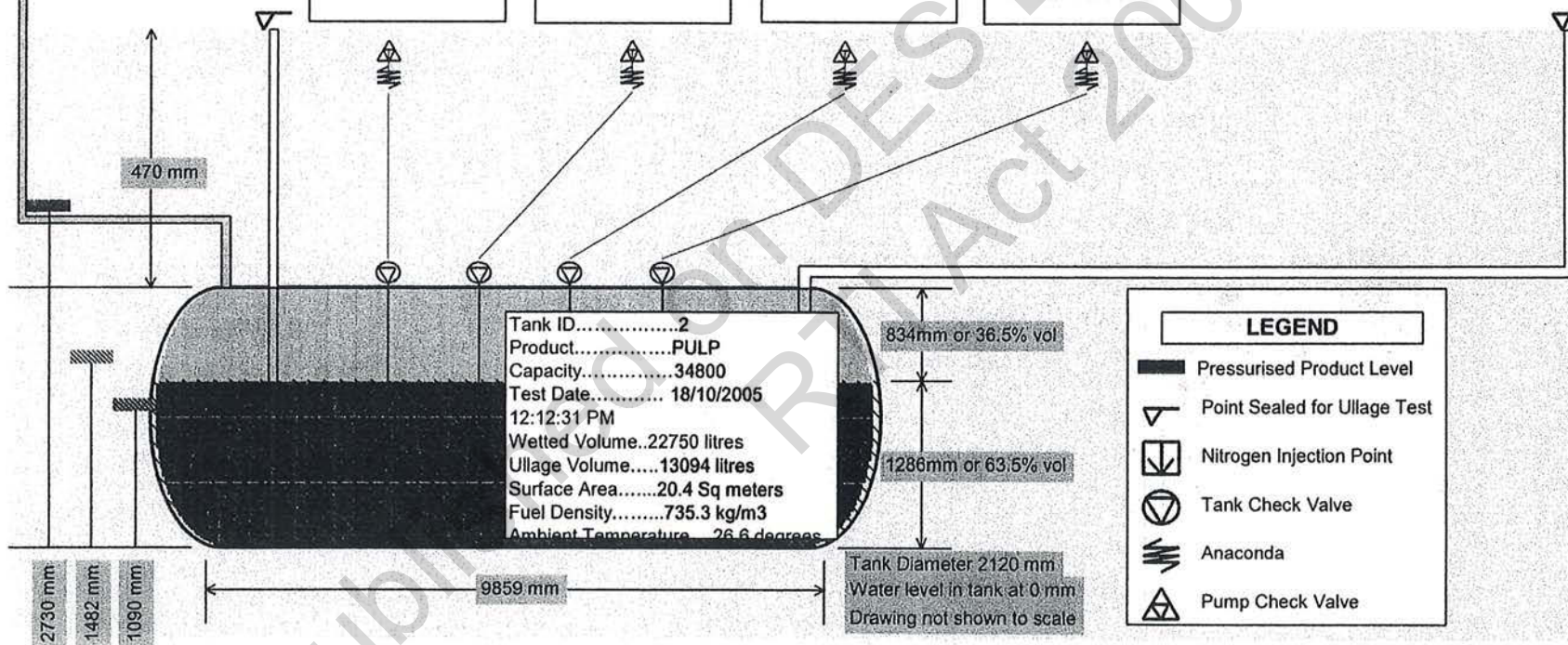
Mass Test	Time	Units
Mass 1	12:17:10 PM	8.95199
Mass 2	12:19:30 PM	8.95200
Mass 3	1:00:51 PM	8.95297
Mass 4	1:03:06 PM	8.95298
Mass 5	3:01:04 PM	8.95567
Mass 6	3:03:29 PM	8.95568
Ullage Test	Time	Pascals
Initial Value	13:17:03	111620
Test 1 Value	14:40:13	110401
Test 2 Value	14:45:12	110415
	dP/dT (Pa/5min)	14
	Pass limit (Pa/5min)	15.2

Pump ID: 1/2
Type: MPP6
Products: PULP/ULP

Pump ID: 5/6
Type: MPP6
Products: PULP/ULP

Pump ID: 8/9
Type: MPP6
Products: PULP/ULP

Pump ID: 10/11
Type: MPP6
Products: PULP/ULP



MassTech Tank Test Report

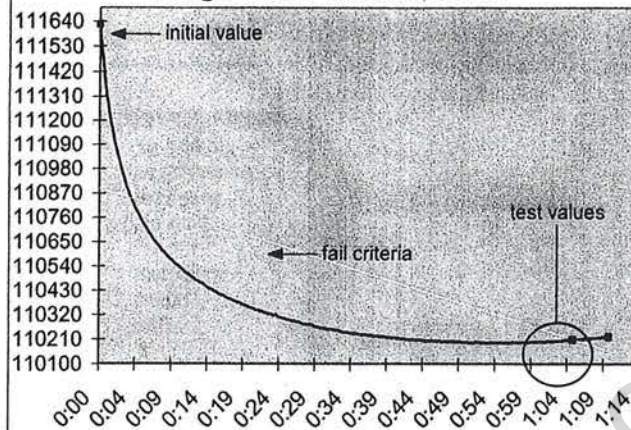
Wet (static) PASS
 Wet (pressure) PASS
 Dry PASS

Facility Details

Ampol Noosaville
 Cnr Mary Street & Weyba Road
 Noosaville QLD

ULP Tank 3

Ullage Test Pressure Chart

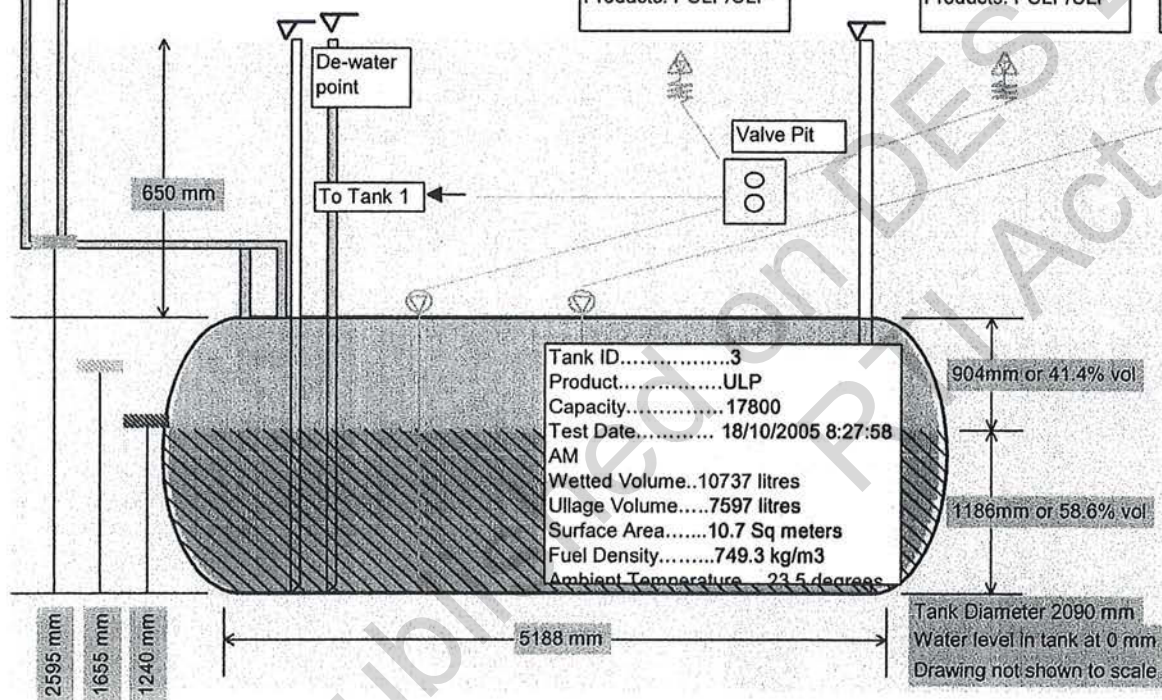


Mass Test	Time	Units
Mass 1	8:27:58 AM	8.39501
Mass 2	8:31:45 AM	8.39502
Mass 3	9:20:54 AM	8.39646
Mass 4	9:25:27 AM	8.39647
Mass 5	9:28:31 AM	8.39648
Mass 6	11:26:55 AM	8.39548
Mass 7	11:29:53 AM	8.39549
Mass 8	11:33:04 AM	8.39550
Ullage Test	Time	Pascals
Initial Value	10:04:27	111626
Test 1 Value	11:10:16	110208
Test 2 Value	11:15:16	110221
	dP/dT (Pa/5min)	13
	Pass limit (Pa/5min)	-52.0

Pump ID: 5/6
 Type: MPP6
 Products: PULP/ULP

Pump ID: 8/9
 Type: MPP6
 Products: PULP/ULP

Pump ID: 10/11
 Type: MPP6
 Products: PULP/ULP



LEGEND	
	Pressurised Product Level
	Point Sealed for Ullage Test
	Nitrogen Injection Point
	Tank Check Valve
	Anaconda
	Pump Check Valve

massTec Tank Test Report

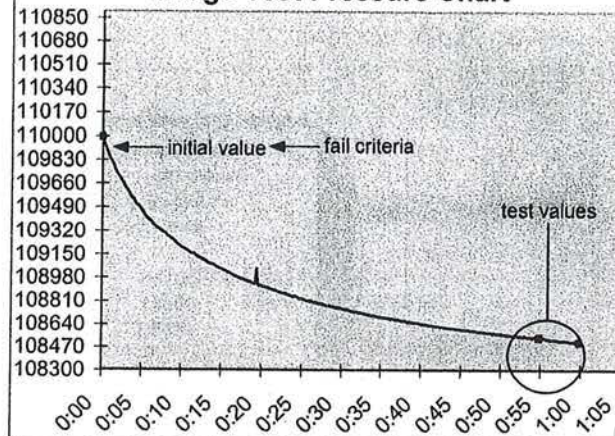
Wet (static) / pass (e) 
 Wet (pressure) / pass (i) 
 Dry / PASS 

Facility Details

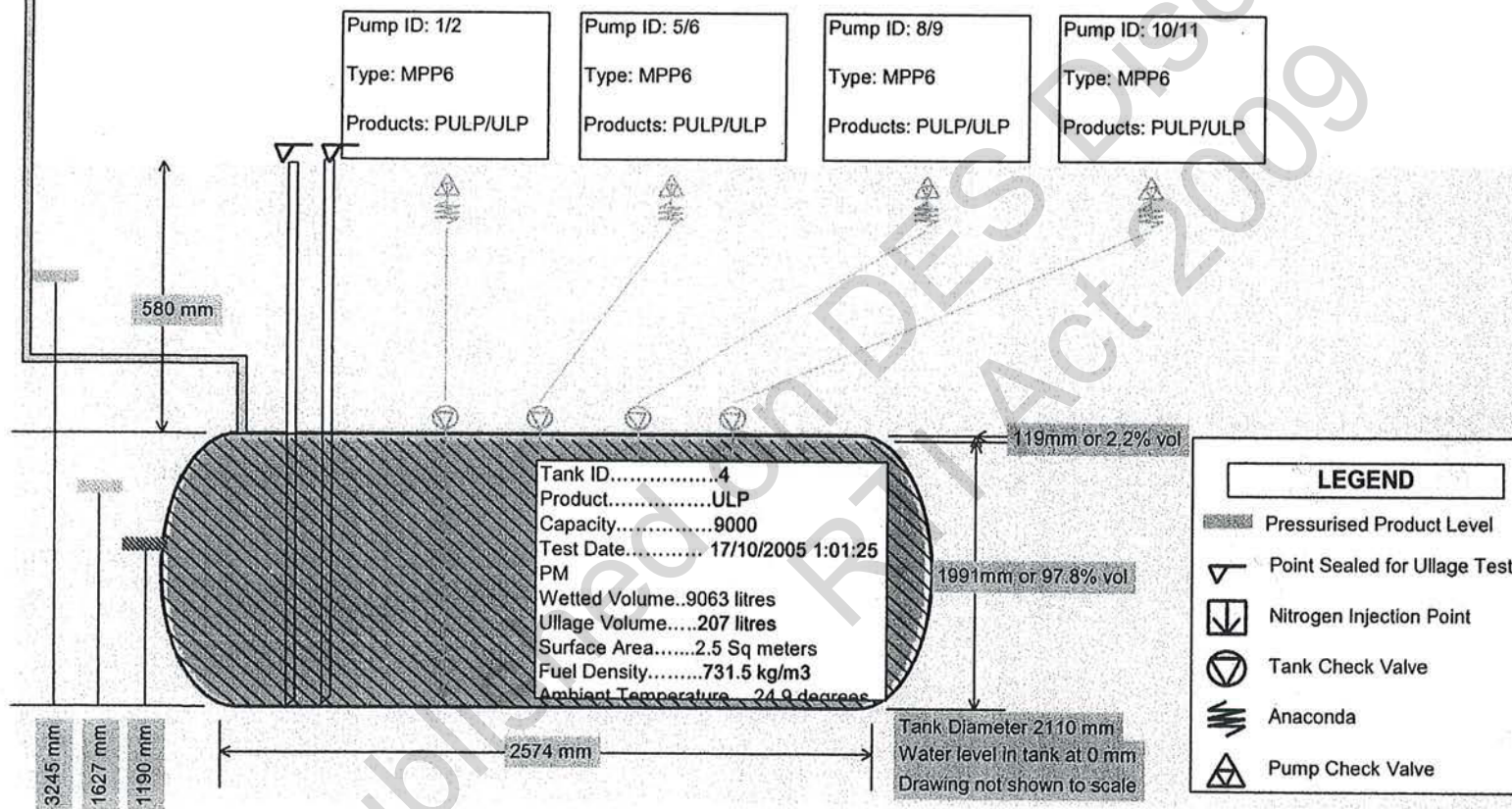
Ampol Noosaville
 Cnr Mary Street & Weyba Road
 Noosaville QLD

ULP Tank 4

Ullage Test Pressure Chart



Mass Test	Time	Units
Mass 1	1:01:25 PM	13.97492
Mass 2	1:04:55 PM	13.97494
Mass 3	2:02:56 PM	13.97291
Mass 4	2:06:31 PM	13.97292
Mass 5	2:09:59 PM	13.97294
Mass 6	3:29:57 PM	13.97399
Mass 7	3:33:17 PM	13.97401
Mass 8	3:39:08 PM	13.97403
Ullage Test	Time	Pascals
Initial Value	14:21:11	109990
Test 1 Value	15:16:01	108533
Test 2 Value	15:21:01	108501
	dP/dT (Pa/5min)	-32
	Pass limit (Pa/5min)	-208.8



MassTech Tank Test Report

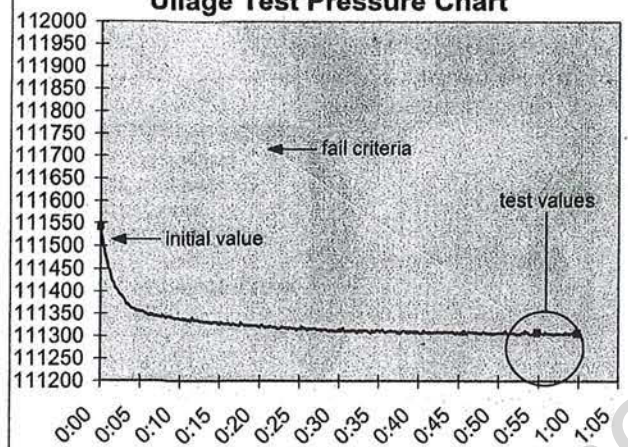
Wet (static)	PASS	
Wet (pressure)	PASS	
Dry	PASS	

Facility Details

Ampol Noosaville
Cnr Mary Street & Weyba Road
Noosaville QLD

Diesel Tank 6

Ullage Test Pressure Chart



Mass Test	Time	Units
Mass 1	1:00:15 PM	11.37454
Mass 2	1:03:45 PM	11.37455
Mass 3	2:01:46 PM	11.37451
Mass 4	2:05:22 PM	11.37452
Mass 5	2:08:49 PM	11.37453
Mass 6	3:28:47 PM	11.37477
Mass 7	3:32:07 PM	11.37479
Mass 8	3:37:58 PM	11.37480
Ullage Test	Time	Pascals
Initial Value	14:19:53	111541
Test 1 Value	15:14:43	111308
Test 2 Value	15:19:43	111306
	dP/dT (Pa/5min)	-2
	Pass limit (Pa/5min)	-60.7

Pump ID: 7
Type: Eline
Products: Diesel

