CTS No. [CTS No.]

Department of Environment and Heritage Protection
BRIEFING NOTE

TO: **Dave Cook**

SUBJECT: **Groundwater contamination East Bundaberg**

TIMEFRAME
- Ongoing

BACKGROUND
- On 23/12/13 Caltex notified the pollution hotline that they had recently installed a number of Groundwater Monitoring Wells at the Bundaberg Service Station Site located at 2 Collins St, Bundaberg, Qld (Lot 64 on RP65117). The notification included the following information:
  - Testing of these wells has shown evidence of a fuel LNAPL within 2-3 wells, with an approximate age in the order of about 5 years. Further testing is currently being carried on samples taken from the wells on this site and the results of this testing should be available to us in January 2014. We also note that the Statistical Inventory Analysis (SIRA) results for this site do not show any "fails" over the 3 years, which suggests the hydrocarbon is unlikely the result of a current issue.
  - Caltex are aware that a neighbouring fuel depot (not owned by Caltex) experienced a significant spill several years ago. This depot is located upgradient of the Caltex site and is considered to be a potential source of the contamination detected at the Caltex site. Our consultant has also identified a number of groundwater monitoring wells along Colins Street between this depot and the Caltex site, and notes on the well lids indicate these wells may contain groundwater impacts. Caltex has been in contact with Bundaberg Council to request further information on the wells located on Colins Street.
  - In the meantime, Caltex has also arranged for the product to be pumped from the wells on the Caltex site using a vacuum truck. This work has been scheduled for early January 2014 and will be undertaken by our environmental consultant Golder Associates.
  - As Caltex believes the contamination is likely to be sourced from an adjacent site, we are unsure of how notification applies to our site for this type of occurrence. As a precautionary approach, at this stage we consider notification appropriate for this site and ask EHP to take this as a formal notification.
- The identified LNAPL measured up to 0.984m in thickness.
- Groundwater assessment criteria (GAC) were exceeded for benzene, toluene, xylenes and naphthalene (BTEXN) and total recoverable hydrocarbons (TRH).
- The 'adjacent site' referenced in the Caltex notification is a former Mobil Oil Australia Pty Ltd (Mobil) site now operated by Wessel's Petroleum Pty Ltd, located Lot 1 on RP126016 and Lot 57 on RP229184.
- The department contacted Mobil to discuss Caltex's concerns regarding ongoing contamination from the former Mobil site and requested Mobil provide a list of the available reports from environmental investigations conducted at the Bundaberg site and a summary of their contractual obligations. Mobil subsequently responded with the following information:
  - Mobil's environmental obligations are outlined in Special Condition 12. (see attachment 1) Notably, Mobil agreed to retain liability for any contamination of the site which exceeded the Site Specific Threshold Limit for use of the site as a petrol filling station or fuel storage depot (SC 12.3(e)). However, Mobil would only be required to remediate the site, if compelled to do so by a statutory authority or regulation. (SC12.3(h)).
  - Mobil retained liability for any off-site contamination which occurred prior to the completion of the contract (SC12.12).
  - The following list of reports was provided and the department requested those in **Bold** text.

PT1 DL RELEASE - EHP

Author	**Cleared by**	**Cleared by**	**Recommended:**
Name: Brock Newbery Position: Snr Env Officer, ESR Southern Tel No: 4121 1878 Date:	Name: Position: Tel No: Date:	Name: Position: [DDG] Tel No: Date:	Name: Tel No: Date:

	Title	Document Date
1	REMEDIATION REPORT - PHASE 2 ENVIRONMENTAL SITE ASSESSMENT, MOBIL BUNDABERG WESSELS DEPOT (SN8169), 5-7 WHITTRED ST, BUNDABERG QLD	1/08/2004
2	REMEDIATION REPORT - PHASE 1 ENVIRONMENTAL SITE ASSESSMENT, MOBIL BUNDABERG WESSELS DEPOT (SN8169), 5-7 WHITTRED ST, BUNDABERG QLD	1/09/2004
3	**REMEDIATION REPORT - POST PHASE 2 ENVIRONMENTAL SITE ASSESSMENT NOVEMBER 2004 / MOBIL BUNDABERG WESSELS DEPOT (SN8169), 5-7 WHITTRED ST, BUNDABERG QLD, JULY-AUGUST 2005**	**16/09/2005**
4	REMEDIATION REPORT - TANK EXCAVATION ASSESSMENT REPORT - SERVICE STATION PORTION / BUNDABERG WESSELS DEPOT (QN8169/PC01) QLD	6/10/2005
5	REMEDIATION REPORT - TANK EXCAVATION ASSESSMENT REPORT, FORMER MOBIL BUNDABERG WESSELS DEPOT (SN8169), SS PORTION, 5-7 WHITTRED ST, BUNDABERG QLD	6/10/2005
6	REMEDIATION REPORT - TANK EXCAVATION ASSESSMENT REPORT, FORMER MOBIL BUNDABERG WESSELS DEPOT (SN8169), 5-7 WHITTRED ST, BUNDABERG QLD	5/09/2006
7	**REMEDIATION REPORT - ANNUAL GROUNDWATER MONITORING EVENT, FORMER MOBIL BUNDABERG WESSELS DEPOT (SN8169), 5-7 WHITTRED ST, BUNDABERG QLD**	**28/12/2006**
8	REMEDIATION REPORT - POST PHASE 2 ENVIRONMENTAL SITE ASSESSMENT, MOBIL BUNDABERG WESSELS DEPOT (SN8169), 5-7 WHITTRED ST, BUNDABERG QLD, JULY-AUGUST 2005	28/12/2006
9	REMEDIATION REPORT - REMEDIATION PILOT TRIALS AND REMEDIATION SYSTEM CONCEPTUAL DESIGN, MOBIL BUNDABERG WESSELS DEPOT (SN8169)	2/03/2007
10	REMEDIATION REPORT - POST PHASE 2 ENVIRONMENTAL SITE ASSESSMENT / BUNDABERG (QN8169) QLD	19/08/2008
11	**REMEDIATION REPORT - GROUNDWATER MULTIPHASE EXTRACTION AND AIR TREATMENT EVENT (2ND TO 4TH MARCH 2010) - LETTER REPORT / BUNDABERG WESSELS DEPOT (QN8169/PC01) NSW**	**23/03/2010**
12	**REMEDIATION REPORT - ANNUAL GROUNDWATER MONITORING EVENT / BUNDABERG WESSELS DEPOT (QN8169 / PC01) NSW**	**22/12/2010**
13	PC01_Bundaberg_GME_10-09-2012_M2	10/09/2012
14	PC01_Bundaberg_MPE (Reissued)_29-10-2012_M1	29/10/2012
15	PC01_Bundaberg_GME_9Apr13_(M3)	10/04/2013
16	PC01_Bundaberg_MPE_25Sep2013_M6	25/09/2013
17	PC01_Bundaberg_PSH_Fingerprinting_8Oct2013_M5	15/10/2013
18	PC01_Bundaberg_ESA_25Oct2013_M4	25/10/2013
19	PC01_Bundaberg_MPE_29Oct2013_M8	1/11/2013
20	PC01_Bundaberg_MPE_21Nov2013_M9	21/11/2013
21	**PC01_Bundaberg_MPE_06-Dec-2013_M10**	**6/12/2013**
22	**PC01_Bundaberg_GME_20Dec2013_M7**	**20/12/2013**

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- A review of the reports revealed the following:
  - Groundwater data demonstrates the occurrence of a shallow perched aquifer and a deeper regional aquifer.
  - The inferred groundwater flow direction of the regional aquifer is to the southwest (towards Burnett River, located 600m west of the Site) at a velocity of 0.007 to 29.2 m/year.
  - Thirty-seven groundwater bores are registered within an approximate 1km radius of the site.
  - Hydrocarbon contaminated soils and groundwater (dissolved and phase separated hydrocarbons (PSH)) have been identified on and off the former Mobil site.
  - The earliest identification of soil and groundwater contamination on the site is 1991 and all subsequent investigations have identified hydrocarbon contamination.
  - In December 2005, 2010 and 2013 PSH was present in regional groundwater monitoring wells at thicknesses up to 6.762m.
  - Dissolved concentrations of total petroleum hydrocarbon (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene and lead above the nominated investigation levels (ILs) were detected in groundwater indicating the presence of a dissolved petroleum hydrocarbon plume across the area of investigation.
  - Detected hydrocarbon contamination is attributed to multiple identified spill events onsite and also potential migration from the neighbouring Caltex site.
  - A risk assessment identifies a number of potentially complete exposure pathways such as groundwater users in the area, site workers and contractors working in the soil profile and aquatic ecosystems of the Burnett River.

Author	**Cleared by**	**Cleared by**	**Recommended:**
Name: Brock Newbery Position: Snr Env Officer, ESR Southern Tel No: 4121 1878 Date:	Name: Position: Tel No: Date:	Name: Position: [DDG] Tel No: Date:	Name: Tel No: Date:

- A number of product recovery events have occurred with variable degrees of success.
- The most recent groundwater monitoring event (November 2013) confirms that measurable PSH layer, dissolved hydrocarbons, BTEX and Naphthalene remains at the site, although somewhat reduced from earlier observations.
-

CURRENT ISSUES

- Caltex made an official notification to the department of the identified contamination.
- The department or the local government (Bundaberg Regional Council) as a devolved entity does not have any current permitting interactions with either site i.e. there is no environmental authorities for, or required by, the sites.

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Name: Brock Newbery Position: Snr Env Officer, ESR Southern Tel No: 4121 1878 Date:	Name: Position: Tel No: Date:	Name: Position: [DDG] Tel No: Date:	Name: Tel No: Date:

From: Pollution Hotline [PollutionHotline@ehp.qld.gov.au]
Sent: Friday, 20 December 2013 2:53 PM
To: Brain Tim (EHP)
CC: ESR - Wide Bay; Harris Joanne; Kliendienst Kim
Subject: FW: Notification of monitoring well impact - Bundaberg Service Station

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Tim

Do you want below notification entered into Ecotrack?

Regards

Walter Schwegler
Pollution Hotline
1300 130 372

From: Damien Davidson [mailto:dsdavid@caltex.com.au]
Sent: Friday, 20 December 2013 12:59 PM
To: Pollution Hotline
Subject: Notification of monitoring well impact - Bundaberg Service Station

Hi,
Caltex has recently installed a number of Groundwater Monitoring Wells at the Bundaberg Service Station Site located at 2 Collins St, Bundaberg, Qld.

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As Caltex believes the contamination is likely to be sourced from an adjacent site, we are unsure of how notification applies to our site for this type of occurrence. As a precautionary approach, at this stage we consider notification appropriate for this site and ask EHP to take this as a formal notification.

Should EHP wish to discuss the matter further or have any questions, would you please contact me

Kind regards,

RTI DL RELEASE - EHP

Damien Davidson
Senior Environmental Specialist (QLD, NT)
CALTEX AUSTRALIA PETROLEUM PTY LTD
2 Market St, Sydney NSW 2000 | Postal: GPO Box 3916, Sydney NSW 2001
T: (02) 9250 5724 | M: 0478 310 289 | F: (02) 9250 5742
E: dsdavid@caltex.com.au | www.caltex.com.au
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*** IMPORTANT INFORMATION ***

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RTI DL RELEASE - EHP

From: Newbery Brock [Brock.Newbery@ehp.qld.gov.au]
Sent: Wednesday, 26 March 2014 3:10 PM
To: COOK David
CC: MYERS Mark
Subject: Groundwater contamination East-Bundaberg

Hi David,

As discussed yesterday, I have put together a brief of the Caltex / Mobil groundwater situation in East-Bundaberg. I have put it and associated reports in a folder on the shared T drive at the following location:

T:_City\Dave Cook

When you have had an opportunity to familiarise yourself with the situation it would be great if we could have a chat about the departments role from here.

Kind regards

Brock Newbery
Senior Environmental Officer (Wide Bay Burnett)
Southern Region (West)
Environmental Services and Regulation
Department of Environment and Heritage Protection

Telephone: (07) 4121 1878 **Facsimile:** (07) 4121 1650
Office Address: 102 Lennox St, Maryborough Q4650
Postal Address: PO Box 145, Maryborough Q4650
Email: brock.newbery@ehp.qld.gov.au
Electronic document submission: widebay.esr@ehp.qld.gov.au

www.ehp.qld.gov.au

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RTI DL RELEASE - EHP

From: NEWBERY Brock [Brock.Newbery@ehp.qld.gov.au]
Sent: Monday, 12 May 2014 10:57 AM
To: COOK David
Subject: RE: Groundwater contamination East-Bundaberg

Hi David,

I was wondering whether anyone in your team has had an opportunity to look at the information that we had previously discussed.

Regards

Brock Newbery
Senior Environmental Officer (Wide Bay Burnett)
Southern Region (West)
Environmental Services and Regulation
Department of Environment and Heritage Protection

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From: Cook David
Sent: Wednesday, 26 March 2014 3:17 PM
To: Newbery Brock
Cc: Myers Mark
Subject: RE: Groundwater contamination East-Bundaberg

Hi Brock,

Will have someone look at it for you.

What timeframe are you looking at?

Regards

Dave

David Cook
Manager, Waste and Land Contamination Assessments and Project Support Team
Environmental Performance and Co-ordination Branch
Environmental Services & Regulation Division

T: (07) 3330 5583 ‖ F: (07) 3330 5634
E: david.cook@ehp.qld.gov.au

RTI DL RELEASE - EHP

A: Level 9, 400 George Street, Brisbane
M: GPO Box 2454, BRISBANE QLD 4001

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RTI DL RELEASE - EHP

From: NEWBERY Brock [Brock.Newbery@ehp.qld.gov.au]
Sent: Monday, 12 May 2014 11:45 AM
To: COOK David
Subject: RE: Groundwater contamination East-Bundaberg

Thanks David

Brock Newbery
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ehp-email-signature

From: COOK David
Sent: Monday, 12 May 2014 11:44 AM
To: NEWBERY Brock
Subject: RE: Groundwater contamination East-Bundaberg

Hi Brock,

Sorry I am not sure what happened.

I have sent this to Tony Bradshaw from my team.

Regards

David Cook
Manager, Waste and Land Contamination Assessments and Project Support Team
Environmental Performance and Co-ordination Branch
Environmental Services & Regulation Division

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M: GPO Box 2454, BRISBANE QLD 4001

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RTI DL RELEASE - EHP

From: NEWBERY Brock [Brock.Newbery@ehp.qld.gov.au]
Sent: Monday, 25 August 2014 10:34 AM
To: COOK David; BRADSHAW Tony; BRAIN Tim (EHP)
Subject: Groundwater Contamination - East Bundaberg

Hi Tony and David,

I am writing to enquire if there has been any progress on doing a review of the information characterising identified groundwater contamination associated with two fuel depots in East Bundaberg.

I appreciate that the department has been undergoing change over recent months however, having first made written enquiries to the WLCA for assistance to review this material on 26/03/14 and at this stage having received no advice from the group, I would now like to gain some direction on whether I should pursue other avenues for assistance in this matter.

Kind regards

Brock Newbery
Senior Environmental Officer (Wide Bay Burnett)
Southern Region (West)
Environmental Services and Regulation
Department of Environment and Heritage Protection

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