

Rayna,

Please remove Lots 2 on RP841051 from the EMR.

Key Cont: TPH BTEX
Groundwater: nil

Studies:

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Environmental Site Assessment, Former Mobil Service Station, Bruce Highway, Benaraby, QLD, prepared by Handex Australia Pty Ltd in August 1999 (Doc No. QO1681R4.doc (Revision 0)).

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Site Validation Report, Mobil Service Station, Benaraby, Queensland, prepared by OTEK Australia Pty Ltd in July 2000 (Doc No.B99142).

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Addendum to Site Validation Report, Mobil Service Station, Benaraby, Queensland, prepared by OTEK Australia Pty Ltd in July 2000 (Doc No.B99142).

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Additional information provided by by OTEK Australia Pty Ltd in correspondence dated 20 and 23 October 2000.

Thanks

CTPI 49-Sch4 - Signature

Kim Barry

SUITABILITY STATEMENT

DATE PRINTED: 27/10/2000

OWNER

MOBIL OIL AUSTRALIA LIMITED
12 CREEK ROAD
BRISBANE QLD 4000

DATE OF ISSUE : 27/10/2000

PROPERTY DESCRIPTION

LOT : 2 PLAN : RP841051
BRUCE HIGHWAY
BENARABY QLD 4680

CALLIOPE SHIRE COUNCIL
EMR Site ID: 12386 FILE REFERENCE: BNE778

STUDIES UNDERTAKEN BY APPLICANT OR REQUESTED BY DIRECTOR

Environmental Site Assessment, former Mobil Service Station, Bruce Highway, Benaraby Queensland, prepared by Handex Australia Pty Ltd in August 1999 (Doc.No. QO1681R4.doc (Revision 0)).

Site Validation Report, Mobil Service Station, Benaraby, Queensland, prepared by OTEK Australia Pty Ltd in July 2000 (Doc.No.B99142).

Addendum to Site Validation Report, Mobil Service Station, Benaraby, Queensland, prepared by OTEK Australia Pty Ltd in July 2000 (Doc.No.B99142).

Additional information provided by OTEK Australia Pty Ltd in correspondence dated 20 and 23 October 2000.

STATEMENT OF SUITABILITY

On the basis of the information supplied to this Department, the subject site is suitable for any use.

ENVIRONMENTAL MANAGEMENT REGISTER

LOT : 2 PLAN : RP841051

There is no requirement to record this site on the Environmental Management Register or the Contaminated Land Register.

CTPI 49-Sch4 - Signature

Delegate of Administering Authority
Environmental Protection Act 1994

Released by EHP under the RTI Act 2009

ice King Bayne R. Newbury
Hardex then OTEK (interpolated report)

BNE 778
25/10/00

Site Hist.

23 yrs surv. prev unknown 4 ha site.

Surv + rural

5 houses, OAT, w'shop, house, office bld.
unknown tank no.

Ceased use '85-'86 NO FRC licence but headed
+ diesel. Anecdotal that tanks removed in '85-'86

OTEK observed depression on site map.
(see attached → note re tank search).

No fill, clay silty sand, no clw to 8m (other
than minor perched), Bayne R. 100m to E.

Hardex investigation Aug. 99

July OTEK July 2000.

OTEK did trenching
in other areas +
traced bowser +
pipework.
They maintain all
tanks located/removed.

Hardex. x40 bds + 1 MWS (0.8-7.4m depth)

TBH in tank area BH 20 TBH 1600 heavy (one only)

No Pb or other contam. Samples of wider area also taken (BOD Series)

OTEK. Bowser (E) 2m G10/14 200 clean at 3m

(bowser (W) 4.5m G10/14 360 5m G10/14 200 6m G10/14 490 (diesel bowser)
but sample shows that extent is minor i.e. within 2m radius area)

OTEK excavated tank + area by trenching + bowser area excav.

Stockpiles

Some G10/14 but max 270 → 580 depending on s/pile +

some G15/28 2100 NO BTEX NO Pb.

all final val after 3/2000 - 23 months - were clean

Validated soil backfilled

No issues of concern. Older site - no b + soils
+ excav validated OK.

Agree remove EWR

Subject: Boyne River**Date:** Mon, 23 Oct 2000 11:10:54 +1000**From:** "Shane Minty" <sminty@otek.com.au>**To:** "Kim Barry" <Kim.Barry@env.qld.gov.au>

Kim,

Here is the additional sample depth information required for Question 3:

3. In the area beneath the former diesel bowser, the samples were collected as detailed below:

Date Sampled	Validation sample/s	Validation of sample	Depth (m)
22/07/99	S-20/5.0		5.0
22/07/99	S-20a		4.5
22/07/99	S-20b		4.0 to 4.2
22/07/99	S-20c		4.0 to 4.2
22/07/99	S-20d		4.0 to 4.2
22/07/99	S-20e		4.5
22/07/99	S-20/7.0	S-20/5.0	7.0
04/08/99	S-20a2	S-20a	6.0
04/08/99	S-20b2	S-20a	6.0
28/09/99	S-20c2	S-20b2	6.2

Regards

Shane Minty

File Summary, BNE778, Bruce Hwy, Boyne River L2 RP841051

Handex Report - ESA August 1999

OTEK REPORT - Site Validation July 2000 - Addendum Report only contains soil compaction information.

- Field work 8-11/04/99 - Handex.
- 40 Bores - some to 8.0m, 1 converted to a groundwater bore.
- Site was a service station for ~23 years - prior use unknown.
- Site has 2 zonings - commercial for service station area and rural for balance
- Site contained 5 bowzers, interceptor, workshop, inground hoist, office building slab, concrete rainwater tank.
- JF Taylor undertook demolition works 16/07, 27/07/99 - removed concrete forecourt, rain water tank, building slab, interceptor, inground hoist and any piping on-site.
- Rubbish, concrete went to Benaraby landfill.
- 2 areas were sunken at the time of the OTEK investigation - E & W - likely area of former tank locations.
- Irregular shaped site~ 40 000m² though only small portion used as service station.
- Surrounding landuse
 - N - Bruce Hwy, then Caltex petrol station, a retail shop, caravan park
 - S - vacant land
 - E - Boyne River
 - W - vacant land, then Shell service station.
- Nearest surface water - Boyne River, ~100m E.
- No F & C lic available but site known to have stored LP and Diesel.
- Anecdotal - Charlie Sotiris - EHO of Calliope Shire Council - service station closed 1985-1986. UST's were removed at the time, site stored and sold diesel and LP.
- Mobil have no information of the number of tanks AST/UST.
- Vacuum Oil 1962, then Mobil.
- Service station built in 60's, prior use unknown.
- Geology
 - 0.0-1.2m silty sand
 - 1.2-1.8m loamy silty sand
 - 1.8-4.0m silty clayey sand
 - OTEK - brown loamy silty sand to 7.0m
- No laterally continuous groundwater to 8m.
- Not a proclaimed area, but 5 regular bores within 2km radius.
- From 3 bores with data, standing water level is 7.8-15.0m.
- Handex were not aware of any earlier assessments on the site.
- BW1 - dry when sampled.
- COC, SRA, Labs OK OTEK and Handex.
- Site contained:-
 - unknown number tanks
 - 5 bowzers
 - interceptor
 - 1 inground hoist
- UST's bowser workshop and office building all removed prior to OTEK and JFT involvement on-site.
- 335m³ soil excavation and stockpiled on-site.
- 20m³ from trench lines to locate UST on W side of site - s'pile A1.
- Footing of former tnk farm were located and left insitu @ 1.0-2.0m.

- 5m³ for around interceptor s'pile A2.
- 15m³ from former hoist s'pile A3.
- 10m³ from trench lines form former UST area on E side of site s'pile -4.
- 255 m³ below diesel bowser went into 3 stockpiles - A5 (180m³), A7 (50m³) and A10 (25m³).
- A7 and A-0 were the most significantly stained.
- A7, A10 then combined to form A10.
- 30 m³ under bowsers A6.
- Soil at base of diesel bowser A8 and A9.

Questions

- Excessive grid sampling by Handex
- Who supervised JFT in removing hoist etc? - DTEK
- any waste oil tanks? NO. - trenching revealed nothing
- do not reuse sample id'seg A-10/V-1 was used 3 times ✓
- A-5/M-1 in s'pile 10? ✓
- s'pile A3 has 2 locations? and no results for A-3/M-3, only A-3/M-1 ✓
- 2 x A5 s'pile - 50m³ and 180m³. ✓
- Where is A8 and A9 and what size - OK clean soil therefore not required? ✓
- Depths of samples a,b,c,d, e? ✓
- other tank locations? ✓

Kim Barry 16/10/00

All issues now addressed, recommend site suitable for any use

CTPI 49-Sch4 - Signature

24/10/00.

Subject: Boyne River

Date: Mon, 23 Oct 2000 11:10:54 +1000

From: "Shane Minty" <sminty@otek.com.au>

To: "Kim Barry" <Kim.Barry@env.qld.gov.au>

Kim,

Here is the additional sample depth information required for Question 3:

3. In the area beneath the former diesel bowser, the samples were collected as detailed below:

Date Sampled	Validation sample/s	Validation of sample	Depth (m)
22/07/99	S-20/5.0		5.0
22/07/99	S-20a		4.5
22/07/99	S-20b		4.0 to 4.2
22/07/99	S-20c		4.0 to 4.2
22/07/99	S-20d		4.0 to 4.2
22/07/99	S-20e		4.5
22/07/99	S-20/7.0	S-20/5.0	7.0
04/08/99	S-20a2	S-20a	6.0
04/08/99	S-20b2	S-20a	6.0
28/09/99	S-20c2	S-20b2	6.2

Regards

Shane Minty

Subject: Mobil Boyne River**Date:** Fri, 20 Oct 2000 16:14:49 +1000**From:** "Shane Minty" <sminty@otek.com.au>**To:** "Kim Barry" <Kim.Barry@env.qld.gov.au>

Kim,

In response to the questions you had in regards to the site validation report for Mobil Benaraby (Boyne River) the following should provide some clarification:

Question 1. Did OTEK supervise JF Taylor removing the hoists etc?

1. The one inground hoist was removed along with the column and hydraulic fluid during the closing of the site (1985 - 1986) prior to the involvement of JFT or OTEK. The concrete column casing was removed under the supervision of OTEK with the remaining concrete slab as hardfill during July 1999. There was no hydraulic fluid or other fluid observed from the casing. All other hydrocarbon sources ordinarily associated with a service station were investigated and removed if still present.

Question 2. Did the site contain waste oil tanks and if so where?

2. No information was known as to the former layout of the site, number or volumes of tanks onsite. Trenches and testpits were performed with the aim to intersect any u/g pipework leading back from the workshop to identify if present any waste oil tank/s. No pipework or waste oil tank was uncovered during this trenching leading to the assumption that if a waste oil tank existed it may have been an aboveground tank or removed at the time of site closure.

Question 3. Where areas didn't validate clean and subsequent samples were collected and analysed with suffixes a, b, c etc, please indicate the new validation sample depths.

3. In the area beneath the former diesel bowser, the samples were collected as detailed below:

Date Sampled	Validation sample/s	Validation of sample	Depth (m)
22/07/99	S-20/5.0		5.0
22/07/99	S-20a, S-20b, S-20c, S-20d and S-20e		4.0 to 4.5
22/07/99	S-20/7.0	S-20/5.0	7.0
04/08/99	S-20a2	S-20a	6.0
04/08/99	S-20b2	S-20a	6.0
28/09/99	S-20c2	S-20b2	6.2

error reach differed from side to side.

Question 4. For future reports, please do not reuse sample id's eg A-10/V-1 has been used 3 times.

4. OK, note taken, apologies in advance for Biloela too.

Question 5. Sample A-5/M-3 is located in stockpile 10, yet lab analysis is for A-5/M-1, please clarify.

5. Stockpiles were moved on each subsequent visit. In the instance of 22 July 1999, the stockpile designated as Stockpile A-5 was field screened with samples A-5/M-1 to A-5/M-4 being collected. It was identified that A-5/M-4 contained the highest volatile readings and therefore sampled as a representative sample for the stockpile. The error is in labelling of the sample in the field and chain of custody as A-5/M-1 instead of A-5/M-4 as shown in Figure 6. This resulted due to only one sample being sent for analysis from each stockpile and the same numerical value being attached to each sample name (eg A-#/M-1). As for the naming of the stockpiles, this is explained further in the response given for Question 7.

Question 6. Sample A-3/M-3 is located in stockpile 3, yet lab analysis is for A-3/M-1, please clarify.

6. Again the same error as in Question 5 occurred in the field due to labelling of the sample and chain of custody as A-3/M-1 instead of A-3/M-3 as read in Figure 6.

Question 7. There are 2 stockpile 5's and 2 stockpile 3's, please clarify.

7. The stockpiles were moved during each excavation activity to allow room for plant equipment and increase the surface area of the soil for degradation via volatilisation. In the case of Stockpile A-5 the soil excavated from beneath the former diesel bowser was first placed adjacent to the area from which it was excavated from (22/7/99). Then on a subsequent visit (28/9/99) it was shifted to the western corner of the site to allow additional soil to be excavated from beneath the diesel bowser, designated as Stockpiles A-7 (lightly stained) and A-10 (heavily stained). The remainder of the soil from this area was added to A-5. On the final excavation visit (22/10/99), Stockpiles A-7 and A-10 were placed together with additional soil excavated from beneath the diesel bowser and designated as Stockpile A-10. In the case of Stockpiles A-3 and A-6 as with A-5, these soils were initially excavated and placed adjacent to the excavations. On the subsequent visit they were shifted, mixed with fertiliser and aerated to increase degradation by volatilisation and increased biological activity.

Question 8. Comment on the likelihood of more UST's remaining on-site.

8. The former underground tank locations were identified in two areas by uncovering u/g piping from the former bowser locations. These pipelines lead back to the areas where footings were buried. All the tanks had been removed at the time of the site closure and the tank footing placed back in the excavations. In addition, trenches to a depth of 3 metres were performed in areas u/g tanks were likely to be located. It is believed that all u/g tanks were removed at the time of the site closure in 1985-1986 from these activities.

Regards,
Shane Minty
Environmental Engineer
OTEK Australia Pty Ltd
Ph: 07 3279 5266
Fax: 07 3279 5377
email: sminty@otek.com.au

Released by EHP under the RTI Act 2009

Subject: mobil beneraby

Date: Mon, 16 Oct 2000 14:51:50 +1000

From: Kim Barry <Kim.Barry@env.qld.gov.au>

Organization: Environmental Protection Agency

To: sminty@otek.com

Shane,

As discussed, a few issues require clarification before I can continue my assessment.

1. Did OTEK supervise JF Taylor removing the hoists etc?
2. Did the site contain waste oil tanks and if so where?
3. Where areas didn't validate clean and subsequent samples were collected and analysed with suffixes a, b, c etc, please indicate the new validation sample depths.
4. For future reports, please do not reuse sample id's eg A-10/V-1 has been used 3 times.
5. Sample A-5/M-3 is located in stockpile 10, yet lab analysis is for A-5/M-1, please clarify.
6. Sample A-3/M-3 is located in stockpile 3, yet lab analysis is for A-3/M-1, please clarify.
7. There are 2 stockpile 5's and 2 stockpile 3's, please clarify.
8. Comment on the likelihood of more UST's remaining on-site.

Regards,

Kim

+-----+
Kim Barry

Senior Environmental Officer

Contaminated Land Unit

Operations Division

Environmental Protection Agency

Tel: (07) 3227 8264 Fax (07) 3227 7677

E-mail: kim.barry@env.qld.gov.au

Released by EHP under the RTI Act 2009

TABLE 3: Soil Sample Analytical Results - TPH, BTEX & Lead

Sample ID	Sample Date	Depth (mBGL)	TPH C ₆₋₉	TPH C ₁₀₋₁₄	TPH C ₁₅₋₂₈	TPH C ₂₉₋₃₆	TPH C ₁₀₋₃₆	Benzene	Toluene	Ethyl Benzene	Xylene	Total BTEX	Lead
BOB7/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
DUPL6	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BOB7/2.0	11/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BOB8/1.0	11/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
DUPL7	11/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BOB8/1.5	11/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BOB9/1.0	11/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BOB9/1.5	11/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
DUPL8	11/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BOB10/1.0	11/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
DUPL9	11/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BOB10/2.0	11/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5

Soil Assessment Criteria

Qld EPA Investigation Thresholds ¹	100	100	1000	1000	-	-	-	-	-	7	300
Qld DoE Environmental Investigation Levels ²	-	-	-	-	-	1	-	-	-	-	300

Notes: All values given in mg/kg (ppm)
Duplicate sample below primary sample

Bold	Exceeds Environmental Investigation Levels
Bold	Exceeds Qld EPA Investigation Threshold

¹Qld EPA, Waste Management Branch, Contaminated Land Section, *Draft Guidance paper for TPH, BTEX, PAH's, phenols and lead Contamination*, January 1999.

²Qld DoE (known as Qld EPA), *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, May 1998.

CTPI 49-Sch4 - Signature

checked
OK

11/10/00

Table 4: Soil Analytical Results, Heavy Metals

SAMPLE NAME	SAMPLE DATE	DEPTH (m)	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	ZINC	NICKEL	MERCURY
BB12/0.3	04/09/99	0.3	<5 ✓	<1 ✓	7 ✓	<5 ✓	<5 ✓	6 ✓	<5 ✓	<0.05 ✓
BB13/0.3	04/09/99	0.3	<5 ✓	<1 ✓	8 ✓	<5 ✓	<5 ✓	12 ✓	<5 ✓	<0.05 ✓
BOB1/1.0	04/10/99	1.0	<5 ✓	<1 ✓	12 ✓	8 ✓	7 ✓	18 ✓	<5 ✓	<0.05 ✓

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SOIL ASSESSMENT CRITERIA

Qld DoE Environmental Investigation Levels ²	20	3	50	60	300	200	60	1
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¹ Duplicate samples below primary samples² Qld DoE (known as Qld EPA), Draft Guidelines for the Assessment and Mangement of Contaminated Land in Queensland, May 1998.

All values given in mg/kg (ppm), unless otherwise stated

TABLE 3: Soil Sample Analytical Results - TPH, BTEX & Lead

Sample ID	Sample Date	Depth (mBGL)	TPH C ₆₋₉	TPH C ₁₀₋₁₄	TPH C ₁₅₋₂₈	TPH C ₂₉₋₃₆	TPH C ₁₀₋₃₆	Benzene	Toluene	Ethyl Benzene	Xylene	Total BTEX	Lead
BB18/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB19/1.9	9/04/99	1.9	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BB19/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB20/1.5	9/04/99	1.5	<5	<10	760	1600	2360	<0.5	<1.0	<1.0	<3.0	<5.5	21
DUPL4	9/04/99	1.5	36	320	2400	3500	6220	<0.5	<1.0	<1.0	<3.0	<5.5	16
BB20/3.0	9/04/99	3.0	<5	<10	120	310	430	<0.5	<1.0	<1.0	<3.0	<5.5	10
BB21/1.8	9/04/99	1.8	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	15
BB21/4.0	9/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB22/1.8	9/04/99	1.8	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB22/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BB23/1.8	10/04/99	1.8	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BB23/3.0	10/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BB24/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	18
BB24/3.0	10/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB25/1.8	10/04/99	1.8	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB25/3.0	10/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB26/1.9	10/04/99	1.9	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BB26/3.0	10/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB27/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5

checked OK
CTPI 49-Sch4 - Signature
11/10/00

Soil Assessment Criteria

Qld EPA Investigation Thresholds ¹	100	100	1000	1000	-	-	-	-	-	7	300
Qld DoE Environmental Investigation Levels ²	-	-	-	-	-	1	-	-	-	-	300

Notes: All values given in mg/kg (ppm)

Duplicate sample below primary sample

Bold Exceeds Environmental Investigation Levels**Bold** Exceeds Qld EPA Investigation Threshold¹Qld EPA, Waste Management Branch, Contaminated Land Section, Draft Guidance paper for TPH, BTEX, PAH's, phenols and lead Contamination, January 1999.²Qld DoE (known as Qld EPA), Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland, May 1998.

TABLE 3: Soil Sample Analytical Results - TPH, BTEX & Lead

Sample ID	Sample Date	Depth (mBGL)	TPH C ₆₋₉	TPH C ₁₀₋₁₄	TPH C ₁₅₋₂₈	TPH C ₂₉₋₃₆	TPH C ₁₀₋₃₆	Benzene	Toluene	Ethyl Benzene	Xylene	Total BTEX	Lead
BB27/3.0	10/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB28/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB28/3.0	10/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	10
BB29/1.5	10/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
DUPL5	10/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB29/4.0	10/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BOB1/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	11
BOB1/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BOB2/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BOB2/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BOB3/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BOB3/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BOB4/1.5	10/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BPB4/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BOB5/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BOB5/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BOB6/1.0	10/04/99	1.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BOB6/2.0	10/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8

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11/10/00

Soil Assessment Criteria

Qld EPA Investigation Thresholds ¹	100	100	1000	1000	-	-	-	-	-	7	300
Qld DoE Environmental Investigation Levels ²	-	-	-	-	-	1	-	-	-	-	300

Notes: All values given in mg/kg (ppm)

Duplicate sample below primary sample

Bold Exceeds Environmental Investigation Levels**Bold** Exceeds Qld EPA Investigation Threshold¹Qld EPA, Waste Management Branch, Contaminated Land Section, *Draft Guidance paper for TPH, BTEX, PAH's, phenols and lead Contamination*, January 1999.²Qld DoE (known as Qld EPA), *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, May 1998.

TABLE 3: Soil Sample Analytical Results - TPH, BTEX & Lead

Sample ID	Sample Date	Depth (mBGL)	TPH C ₆₋₉	TPH C ₁₀₋₁₄	TPH C ₁₅₋₂₈	TPH C ₂₉₋₃₆	TPH C ₁₀₋₃₆	Benzene	Toluene	Ethyl Benzene	Xylene	Total BTEX	Lead
BB9/3.0	8/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
DUPL2	8/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB10/1.5	9/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB10/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BB11/1.5	9/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB11/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB12/2.0	9/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB12/4.0	9/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	10
BB13/2.5	9/04/99	2.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
DUPL3	9/04/99	2.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB13/4.0	9/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	10
BB14/1.5	9/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB14/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB15/1.5	9/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB15/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB16/1.5	9/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB16/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BB17/1.8	9/04/99	1.8	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB17/3.0	9/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB18/1.8	9/04/99	1.8	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5

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Soil Assessment Criteria

Qld EPA Investigation Thresholds ¹	100	100	1000	1000	-	-	-	-	-	7	300
Qld DoE Environmental Investigation Levels ²	-	-	-	-	-	1	-	-	-	-	300

Notes: All values given in mg/kg (ppm)
Duplicate sample below primary sample

Bold Exceeds Environmental Investigation Levels

Bold Exceeds Qld EPA Investigation Threshold

¹Qld EPA, Waste Management Branch, Contaminated Land Section, *Draft Guidance paper for TPH, BTEX, PAH's, phenols and lead Contamination*, January 1999.

²Qld DoE (known as Qld EPA), *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, May 1998.

TABLE 2
ANALYTICAL SUMMARY - SOIL SAMPLES (BTEX, TPH & Lead)
MOBIL SERVICE STATION
BRUCE HIGHWAY
BENARABY, QUEENSLAND

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Sample ID & Depth (m)	Date	BTEX					TPH					Pb
		Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	C ₆ -C ₉ (mg/kg)	C ₁₀ -C ₁₄ (mg/kg)	C ₁₅ -C ₂₈ (mg/kg)	C ₂₉ -C ₃₆ (mg/kg)	Total TPH (mg/kg)	Lead (mg/kg)
S-1/1.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-1/3.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-2/1.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-2/3.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	10
S-3/1.0	21/07/99	nd	nd	nd	nd	nd	nd	25	540	nd	565	nd
S-3/3.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7
S-4/1.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-4/3.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-5/1.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-5/3.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-6/1.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6
S-7/1.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	12
S-8/1.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-9/3.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-10/3.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8
S-11/2.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6
S-12/0.1	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-13/2.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-14/2.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-14a	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	110	110	16
S-14b	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-14c	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-14d	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
EPA Environmental Investigation Level		1	-	-	-	7*	100*	100*	1000*	1000*	1000*	300
Practical Quantitation Limit		0.5	1	1	3	-	5	10	50	50	-	5
Laboratory		E1010					E1230	E1221				E5910

Notes:

- Sample ID: S-# denotes a discrete soil sample obtained from the soil surface of an excavation, A-#/M-# and A-#/V-# denotes a discrete soil sample obtained from a stockpile, and QS-# denotes a quality assurance duplicate;
- Shading denotes concentrations in excess of EPA guidelines;
- "nd" denotes concentrations not detected;
- "-" denotes analysis not requested;
- EPA Criteria as stated in Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May, 1998); and
- *EPA Criteria as stated in Guidelines for the Assessment of Contaminated Land in Queensland (CHEM Unit, January 1992).

TABLE 2 (Continued)
ANALYTICAL SUMMARY - SOIL SAMPLES (BTEX, TPH & Lead)
MOBIL SERVICE STATION
BRUCE HIGHWAY
BENARABY, QUEENSLAND

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Sample ID & Depth (m)	Date	BTEX					TPH					Pb Lead (mg/kg)
		Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	C ₆ -C ₉ (mg/kg)	C ₁₀ -C ₁₄ (mg/kg)	C ₁₅ -C ₂₈ (mg/kg)	C ₂₉ -C ₃₆ (mg/kg)	Total TPH (mg/kg)	
S-15/3.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-15a	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-15b	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6
S-15c	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-15d	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6
S-16/3.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-17/3.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5
S-17a	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-17b	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-17c	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-17d	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-17e	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8
S-18/1.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-18/2.5	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7
S-19/2.5	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-20/5.0	22/07/99	nd	nd	nd	nd	nd	nd	200	370	nd	570	5
S-20/7.0	04/08/99	nd	nd	nd	nd	nd	nd	41	77	nd	118	nd
S-20a	22/07/99	nd	nd	nd	nd	nd	nd	360	940	nd	1300	nd
S-20a2	04/08/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-20b2	04/08/99	nd	nd	nd	nd	nd	nd	490	980	nd	1470	nd
S-20c2	28/09/99	-	-	-	-	-	nd	nd	nd	nd	nd	-
S-20b	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-20c	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
EPA Environmental Investigation Level		1	-	-	-	7*	100*	100*	1000*	1000*	1000*	300
Practical Quantitation Limit		0.5	1	1	3	-	5	10	50	50	-	5
Laboratory		E1010					E1230	E1221				E5910

Notes:

- Sample ID: S-# denotes a discrete soil sample obtained from the soil surface of an excavation, A-#/M-# and A-#/V-# denotes a discrete soil sample obtained from a stockpile, and QS-# denotes a quality assurance duplicate;
- Shading denotes concentrations in excess of EPA guidelines;
- "nd" denotes concentrations not detected;
- "-" denotes analysis not requested;
- EPA Criteria as stated in Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May, 1998); and
- *EPA Criteria as stated in Guidelines for the Assessment of Contaminated Land in Queensland (CHEM Unit, January 1992).

TABLE 4
ANALYTICAL SUMMARY - SOIL SAMPLES (PAH)
MOBIL SERVICE STATION
BRUCE HIGHWAY
BENARABY, QUEENSLAND

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Sample ID & Depth (m)	Date	Napthalene (mg/kg)	Acenaphthylene (mg/kg)	Acenaphthene (mg/kg)	Fluorine (mg/kg)	Phenanthrene (mg/kg)	Anthracene (mg/kg)	Fluoranthene (mg/kg)	Pyrene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Chrysene (mg/kg)	Benzo (b) fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Dibenzo (ah) anthracene (mg/kg)	Benzo (ghi) Perylene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Total PAH (mg/kg)
S-14/2.5	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-15/3.0	21/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
EPA HIL (Residential)		-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	20
EPA HIL (Commercial/Industrial)		-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	100
Practical Quantitation Limits		0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
Laboratory Methodology		E1110																-

Notes:

- Sample ID: S-# denotes a discrete soil sample obtained from the soil surface of an excavation;
- "nd" denotes concentrations not detected;
- *EPA Health-based Investigation Levels for standard residential land with garden accessible soil as stated in the Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May 1998); and
- **EPA Health-based Investigation Levels for commercial/industrial land which includes shops and offices as well as factories as stated in the Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May 1998).

TABLE 3
ANALYTICAL SUMMARY - SOIL SAMPLES (METALS)
MOBIL SERVICE STATION
BRUCE HIGHWAY
BENARABY, QUEENSLAND

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Sample ID	Date Sampled	Arsenic As (mg/kg)	Cadmium Cd (mg/kg)	Chromium Cr (mg/kg)	Copper Cu (mg/kg)	Nickel Ni (mg/kg)	Lead Pb (mg/kg)	Zinc Zn (mg/kg)	Mercury Hg (mg/kg)
S-12/0.1	21/07/99	nd	nd	17	11	5	nd	26	nd
S-14/2.5	21/07/99	nd	nd	29	21	10	nd	35	nd
S-15/3.0	21/07/99	nd	nd	25	16	7	nd	30	nd
EPA Environmental Investigation Level		20	3	50	60	60	300	200	1
EPA Human Health Based Level		100	20	120,000	1000	600	300	7000	15
Practical Quantitation Limit		5	1	5	5	5	5	5	0.05
Laboratory Methodology		E5910							E5950

Notes:

- Sample ID: S-# denotes a discrete soil sample obtained from the soil surface of an excavation;
- "nd" denotes concentrations not detected;
- EPA Criteria as stated in Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May, 1998); and
- EPA Human Health Based Criteria as stated in Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May 1998) for 'Standard' residential areas with garden/accessible soil, this category includes children's day-care centres, preschools and primary schools.

TABLE 2 (Continued)
ANALYTICAL SUMMARY - SOIL SAMPLES (BTEX, TPH & Lead)
MOBIL SERVICE STATION
BRUCE HIGHWAY
BENARABY, QUEENSLAND

CTPI 49-Sch4 - Signature

Sample ID & Depth (m)	Date	BTEX					TPH					Pb
		Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	C ₈ -C ₉ (mg/kg)	C ₁₀ -C ₁₄ (mg/kg)	C ₁₅ -C ₂₈ (mg/kg)	C ₂₉ -C ₃₆ (mg/kg)	Total TPH (mg/kg)	Lead (mg/kg)
A-1/M-1	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
A-2/M-1	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
A-3/M-1	22/07/99	nd	nd	nd	nd	nd	nd	nd	530	820	1350	39
A-3/V-1	28/09/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6
A-3/V-1	22/10/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6
A-4/M-1	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
A-5/M-1	22/07/99	nd	nd	nd	nd	nd	nd	1200	2100	nd	3300	nd
A-5/V-1	22/10/99	nd	nd	nd	nd	nd	nd	65	340	nd	405	9
A-5/V-2	22/10/99	nd	nd	nd	nd	nd	nd	46	130	nd	176	6
A-5/V-3	22/10/99	nd	nd	nd	nd	nd	nd	33	361	nd	394	9
A-5/V-3	18/11/99	nd	nd	nd	nd	nd	nd	67	460	nd	527	12
A-5/V-4	22/10/99	nd	nd	nd	nd	nd	nd	270	1100	nd	1370	10
A-5/V-4	18/11/99	nd	nd	nd	nd	nd	nd	100	640	nd	740	9
A-5/V-7	28/09/99	nd	nd	nd	nd	nd	nd	130	620	nd	750	6
A-6/M-1	22/07/99	nd	nd	nd	nd	nd	nd	30	470	nd	500	20
A-6/V-1	28/09/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	32
A-7/V-1	28/09/99	nd	nd	nd	nd	nd	nd	200	540	nd	740	8
A-10/V-1	28/09/99	nd	nd	nd	nd	nd	nd	110	350	nd	460	8
A-10/V-1	22/10/99	nd	nd	nd	nd	nd	nd	580	2000	nd	2580	11
A-10/V-1	18/11/99	nd	nd	nd	nd	nd	nd	45	240	nd	285	8
A-10/V-2	18/11/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7
EPA Environmental Investigation Level		1	-	-	-	7*	100*	100*	1000*	1000*	1000*	300
Practical Quantitation Limit		0.5	1	1	3	-	5	10	50	50	-	5
Laboratory		E1010					E1230	E1221				E5910

Notes:

- Sample ID: S-# denotes a discrete soil sample obtained from the soil surface of an excavation, A-#/M-# and A-#/V-# denotes a discrete soil sample obtained from a stockpile, and QS-# denotes a quality assurance duplicate;
- Shading denotes concentrations in excess of EPA guidelines;
- "nd" denotes concentrations not detected;
- "-" denotes analysis not requested;
- EPA Criteria as stated in Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May, 1998); and
- *EPA Criteria as stated in Guidelines for the Assessment of Contaminated Land in Queensland (CHEM Unit, January 1992).

TABLE 3: Soil Sample Analytical Results - TPH, BTEX & Lead

Sample ID	Sample Date	Depth (mBGL)	TPH C ₆₋₉	TPH C ₁₀₋₁₄	TPH C ₁₅₋₂₈	TPH C ₂₉₋₃₆	TPH C ₁₀₋₃₆	Benzene	Toluene	Ethyl Benzene	Xylene	Total BTEX	Lead
BW1/2.1	8/04/99	2.1	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BW1/8.0	8/04/99	8.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB1/2.0	8/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
DUPL1	8/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB1/3.9	8/04/99	3.9	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB2/2.5	8/04/99	2.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB2/4.0	8/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BB3/2.0	8/04/99	2.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	9
BB3/4.0	8/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB4/2.7	8/04/99	2.7	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB4/4.0	8/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	8
BB5/2.6	8/04/99	2.6	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB5/4.0	8/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	7
BB6/2.7	8/04/99	2.7	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6
BB6/4.0	8/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB7/2.9	8/04/99	2.9	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB7/4.0	8/04/99	4.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB8/1.5	8/04/99	1.5	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	<5
BB8/3.0	8/04/99	3.0	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	5
BB9/1.5	8/04/99	2.7	<5	<10	<50	<50	<110	<0.5	<1.0	<1.0	<3.0	<5.5	6

checked
OK
CTPI 49-Sch4 - Signature
11/10/00

Soil Assessment Criteria

Qld EPA Investigation Thresholds ¹	100	100	1000	1000	-	-	-	-	-	7	300
Qld DoE Environmental Investigation Levels ²	-	-	-	-	-	1	-	-	-	-	300

Notes: All values given in mg/kg (ppm)
Duplicate sample below primary sample

Bold Exceeds Environmental Investigation Levels
Bold Exceeds Qld EPA Investigation Threshold

¹Qld EPA, Waste Management Branch, Contaminated Land Section, Draft Guidance paper for TPH, BTEX, PAH's, phenols and lead Contamination, January 1999.

²Qld DoE (known as Qld EPA), Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland, May 1998.

TABLE 2 (Continued)
ANALYTICAL SUMMARY - SOIL SAMPLES (BTEX, TPH & Lead)
MOBIL SERVICE STATION
BRUCE HIGHWAY
BENARABY, QUEENSLAND

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checked OK
12/10/00

Sample ID & Depth (m)	Date	BTEX					TPH					Pb
		Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	C ₆ -C ₉ (mg/kg)	C ₁₀ -C ₁₄ (mg/kg)	C ₁₅ -C ₂₈ (mg/kg)	C ₂₉ -C ₃₆ (mg/kg)	Total TPH (mg/kg)	Lead (mg/kg)
S-20d	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-20e	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-21/5.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-22/2.0	22/07/99	nd	nd	nd	nd	nd	nd	200	1000	nd	1200	25
S-22/3.0	04/08/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-23/1.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-24/1.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-25/1.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-26/1.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	77
S-27/3.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-28/3.0	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-29/1.5	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-30/1.5	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
S-31/1.5	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	17
QS-1	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
QS-2a	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5
QS-2b	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8
QS-3a	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
QS-3b	22/07/99	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8
QS-4	28/09/99	nd	nd	nd	nd	nd	nd	130	660	nd	790	10
QS-5	22/10/99	nd	nd	nd	nd	nd	nd	110	440	nd	550	8
QS-6	18/11/99	nd	nd	nd	nd	nd	nd	64	430	nd	494	8
EPA Environmental Investigation Level		1	-	-	-	7*	100*	100*	1000*	1000*	1000*	300
Practical Quantitation Limit		0.5	1	1	3	-	5	10	50	50	-	5
Laboratory		E1010					E1230	E1221				E5910

Notes:

- Sample ID: S-# denotes a discrete soil sample obtained from the soil surface of an excavation, A-#/M-# and A-#/V-# denotes a discrete soil sample obtained from a stockpile, and QS-# denotes a quality assurance duplicate;
- Shading denotes concentrations in excess of EPA guidelines;
- "nd" denotes concentrations not detected;
- "-" denotes analysis not requested;
- EPA Criteria as stated in Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (May, 1998); and
- *EPA Criteria as stated in Guidelines for the Assessment of Contaminated Land in Queensland (CHEM Unit, January 1992).

Statutory Declaration – Investigator and Preparer

Site Validation, Lot 2 on RP 841051, Bruce Highway, Benaraby

In relation to Sections 118Q, 118ZC, 171 and 172 of the Queensland Environmental Protection Act 1994

I, **Belinda Ingpen** the Investigator and Preparer

of OTEK Australia Pty Ltd,

in the State of Queensland,
do solemnly and sincerely
declare (in relation to the **Site
Validation Report** conducted at
the **former Mobil Service
Station** located on the **Bruce
Highway, Benaraby,
Queensland**)

that,

1. I was the investigator and site validation report preparer of the report described above;
2. A true statement of my qualifications, membership of prescribed organisation and experience relevant to the site investigation has been previously submitted to the EPA;
3. I have not knowingly included any false, misleading or incomplete information in the report;
4. I have not knowingly failed to reveal any relevant information or document to the administering authority, and
5. Certify that –
 - The field investigation activities were performed by Shane Minty;
 - The report addresses the relevant matters for the investigation and is factually correct; and
 - The opinions expressed in it are honest and reasonably held.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act 1867 - 1988.

CTPI 49-Sch4 - Signature

Signature

BELINDA J INGPEN Name

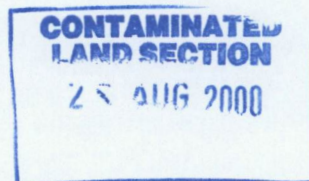
Taken and Declared before me, at SAISSANIE

This TWENTY-FOURTH day of AUGUST . 2000

CTPI 49-Sch4 - Signature

A JUSTICE OF THE PEACE

Released by EHP under the RTI Act 2009



05 OCT 2000

STATUTORY DECLARATION

(INVESTIGATOR AND REPORT PREPARER)

Address of Site Investigated: Former Mobil Service Station
Bruce Highway,
Benaraby, Queensland

Real Property Description: Lot 2 on Registered Plan B41051
County of Clinton, Parish of Boyne

Report Title: Environmental Site Assessment
Former Mobil Service Station
Bruce Highway,
Benaraby, Qld
(Site No. QO1681)

I, Jason J Lagowski on behalf of Handex Australia Pty Ltd, in the State of Victoria, do solemnly and sincerely declare that:

- I was the investigator and report preparer of the report described above;
- I am a current member of the Environment Institute of Australia and my qualifications and experience as outlined in my curriculum vitae are relevant to this investigation;
- I have not knowingly included any false, misleading or incomplete information in the report referenced above;
- I have not knowingly failed to reveal any relevant information or documentation pertaining to the site to the administering authority.

I certify that:

- The report addresses the relevant matters for the validation and is factually correct; and
- The opinions expressed in the above referenced report are honestly and reasonably held.

And I make this declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*.

Signature CTPI 49-Sch4 - Signature

Name

JASON LAGOWSKI

Taken and Declared before me at

this

day of 3rd October 2000

Witness (Justice of the Peace/Commissioner for Declarations)

Name

CTPI 49-Sch4 - Signature

P. ANDERSON
9/10/2000



EMR

Lot 2 Plan RP841051 Category NOTIFIABLE ACTIVITY Record Type BP ID 12386
Hist ID 27-28491

LGA CALLIOPE SHIRE COUNCIL Region C AMA
Site Name BENARABY SERVICE STATION Notified By DATACONV
Street BRUCE HIGHWAY Entry Date 27/06/1998 Notif Rec'd
Suburb BENARABY QLD Post code 4680 Last Altered Date 30/08/2000
Owner MOBIL OIL AUSTRALIA LIMITED Ext Ref
Owner 12 CREEK ROAD
Address BRISBANE QLD

Haz Cont

Parcel C Post code 4000
Status Area 40910 m² File BNE778 Officer NIL

Offsite Disposal Date

Notifiable Activities

SERVICE STATIONS

Comments

Registered Site ID 12386

Date	User ID	Corr No	Officer Name	Finalised	How Finalised
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30/08/2000 TSOURGR

SITE VALIDATION REPORT, AND ADDENDUM, DATED 17/7/00 REC'D FROM OTEK AUSTRALIA P/L (REPORT #B99142) AS PART OF APPLICATION FOR ASSESSMENT OF A SITE INVESTIGATION REPORT. SERVICE STATION ON THE SITE WAS BUILT IN THE 60'S AND OPERATED FOR APPROX.23 YRS. PRIOR TO THE SERVO, THE LAND USE WAS UNKNOWN. CURRENTLY THE SITE IS VACANT. ADDED FILE NUMBER.

Statutory Declaration – Investigator and Preparer

Site Validation, Lot 2 on RP 841051, Bruce Highway, Benaraby

In relation to Sections 118Q, 118ZC, 171 and 172 of the Queensland Environmental Protection Act 1994

I, **Belinda Ingpen** the Investigator and Preparer

of OTEK Australia Pty Ltd,

in the State of Queensland,
do solemnly and sincerely
declare (in relation to the **Site
Validation Report** conducted at
the **former Mobil Service
Station** located on the **Bruce
Highway, Benaraby,
Queensland**)

that,

1. I was the investigator and report preparer of the report described above;
2. A true statement of my qualifications, membership of prescribed organisation and experience relevant to the site investigation has been previously submitted to the EPA;
3. I have not knowingly included any false, misleading or incomplete information in the report;
4. I have not knowingly failed to reveal any relevant information or document to the administering authority, and
5. Certify that –
 - The field investigation activities were performed by Shane Minty;
 - The report addresses the relevant matters for the investigation and is factually correct; and
 - The opinions expressed in it are honest and reasonably held.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act 1867 - 1988.

CTPI 49-Sch4 - Signature

Signature

Belinda Ingpen

Name

Taken and Declared before me, at *Brisbane*

This *21st* day of *July* 2000

CTPI 49-Sch4 - Signature

ice

ANGELO PETER BERTONI

B99142

Page 1 of 1
V1: 03/03/00
TEMP 039

JUSTICE OF THE PEACE
(QUALIFIED) NO. 70795