Rayna,

Please remove Lots 2 on RP841051 from the EMR.

Key Cont: TPH BTEX
Groundwater: nil

Studies:

\line
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)).
\line\line
Site Validation Report, Mobil Service Station, Benaraby, Queensland, prepared by OTEK Australia Pty Ltd in July 2000 (Doc No.B99142).
\line\line
Addendum to Site Validation Report, Mobil Service Station, Benaraby, Queensland, prepared by OTEK Australia Pty Ltd in July 2000 (Doc No.B99142).
\line\line
Additional information provided by by OTEK Australia Pty Ltd in correspondence dated 20 and 23 October 2000.

Thanks

Sch4p4(6) Signature

26/10/01

Kim Barry

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Environmental Protection Agency
160 Ann Street • Brisbane, Queensland • PO Box 155 • BRISBANE ALBERT STREET QLD 4002 •AUSTRALIA
Telephone (07) 3227 6870 • Facsimile (07) 3227 7677 • www.env.qld.gov.au/environment/business/contaminated

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.

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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.

Sch4p4(6) Signature

Delegate of Administering Authority
Environmental Protection Act 1994

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BNE 778
25/10/00

...ice Hwy Boyne Rd Benarby
Hardex then OTEK (incorporated report)

Site Hist.
23 yrs servo. prior unknown 4 ha site.
servo + rural
5 bowsers, OAT, w'shop, houst, office bld.
unknown tank no.
Ceased use '85-'86 No F+C licence but leaded
+ diesel. Anecdotal that tanks removed in '85-86
OTEK observed depression in site inspec.
(see attached → note re tank search).
No fill, clay silty sand, no GW to 8m (other
than minor perched), Boyne R. 100 m to E.
Hardex investigation Aug. 99
~~July~~ OTEK July 2000.

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

Hardex. x40 BHs + 1 MWs (1.8 → 4m depth)
TPH in tank area BH 20 TPH 1600 heavy (one only)
No Pb or other contam. Samples of wider area also clean (BOB Series)
OTEK bowser(E) 2m $C_{10/14}$ 200 clean at 3m
bowser(W) 4.5m $C_{10/14}$ 360 5m $C_{10/14}$ 280 6m $C_{10/14}$ 490 (diesel bowser)
val samples show that extent is minor ie within 2m radius max)
OTEK excavated tank ~~pits~~ areas by trenching + bowser area excav.
Stockpiles
Some $C_{10/14}$ but max 270 → 580 depending on s'pile +
some $C_{15/28}$ 2100 no BTEX no Pb.
all final val after bioremn ~ 2-3 months - were clean
Validated soil backfilled

∴ No issues of concern. Older site no B + soils
+ excav validated OK.
∴ Agree remove EWR

Sch4p4(6) Signature 25/10/00

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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

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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 bowsers, 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 000m^2 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 bowsers
  interceptor
  1 inground hoist
- UST's bowser workshop and office building all removed prior to OTEK and JFT involvement on-site.
- 335m^3 soil excavation and stockpiled on-site.
- 20m^3 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.

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- $5m^3$ for around interceptor s'pile A2.
- $15m^3$ from former hoist s'pile A3.
- $10m^3$ from trench lines form former UST area on E side of site s'pile -4.
- 255 m^3 below diesel bowser went into 3 stockpiles - A5 ($180m^3$), A7 ($50m^3$) and A10 ($25m^3$).
- A7 and A-0 were the most significantly stained.
- A7, A10 then combined to form A10.
- 30 m^3 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? - O.K
- 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 - $50m^3$ and $180m^3$. ✓
- 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 bits now addressed, recommend site suitable for any use

Sch4p4(6) Signature 24/10/00.

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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

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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

excav reach differed from side to side.

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

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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 perfomed 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

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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
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Contaminated Land Unit
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