



Department of
Environment and Conservation (NSW)

Your reference : CVB:MOB609/1756(307393_1)
Our reference : HOF60266
Contact : Andrew Mitchell (02) 9995 5620

Ms Charmian Barton
Partner
Cutler Hughes & Harris
GPO Box 3336
SYDNEY NSW 2001

10 NOV 2005

Dear Ms Barton

**Mobil/Quix service station at 161 Hume Highway, Lansvale
EPA Agreement to Voluntary Remediation Proposal**

I refer to your letter dated 14 September 2005 with a Voluntary Remediation Proposal (VRP) submitted under s.26 of the Contaminated Land Management Act (CLM Act) for the above site.

We have reviewed the VRP and supporting documentation including the Remedial Action Plan (RAP) dated July 2003, the RAP Addendum dated March 2005 and the site auditor's review and comments on the documentation. In our opinion they are appropriate for remediation of this site. Therefore, we have issued our agreement to your proposal in accordance with the CLM Act. A copy of agreement number 26081 is attached.

I note that this remediation project has been captured by part 3A of the Environmental Planning and Assessment Act and that some delays to the project timeline will be encountered while obtaining planning approval. Therefore we approve of an extension of time of four months for the remediation system installation and commissioning (Phase 2 task P12). This makes the new deadline 30 April 2006. The remediation system must be fully installed by this date and commissioning must have commenced.

Please keep us informed of any other issues and notify us in writing if Mobil would like to make any changes to the proposal, including variation of the milestones listed in section 4 of the Performance Schedule.

You may contact Andrew Mitchell on (02) 9995 5620 with any questions regarding this matter.

Yours sincerely

CAROLYN STRANGE
Director Contaminated Sites

Encl: Agreement to Voluntary Remediation Proposal
cc: Mr John Fisicaro, Fisicaro & Co Solicitors for Modern Motels Pty Ltd

**AGREEMENT NOT TO ISSUE ORDER
DURING COMPLIANCE WITH A VOLUNTARY PROPOSAL**

(Section 26 of the Contaminated Land Management Act 1997)

Agreement No.: 26081

Agreement Date: 10 NOV 2005

Area No.: 3009

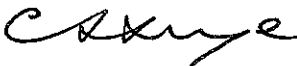
This agreement relates to the attached proposal, which comprises three Parts: Part 1 – Preliminary Details; Part 2 – Undertakings; and Part 3 – Performance Schedule.

Proponent: Mobil Oil Australia Pty Ltd

Site: 161 Hume Highway, Lansvale NSW. Lot 204 in DP 732440

Proposal Date: 6 September 2005

1. The EPA is satisfied that the terms of the proposal are appropriate.
2. The EPA notes for the purposes of section 26 of the *Contaminated Land Management Act 1997* (CLM Act) that the proponent has undertaken in writing to the EPA not to recover contributions under Part 3, Division 6 of the CLM Act in respect of implementation of the proposal.
3. The EPA agrees, in accordance with the provisions of Part 3 of the CLM Act, that it will not issue a remediation order against the proponent if and for so long as the proposal is complied with.
4. The EPA may issue a remediation order against the proponent in accordance with the CLM Act if the EPA is not satisfied that the proposal is being or has been complied with.
5. The EPA is not prevented by this agreement from making a remediation order against persons (whether or not they were originally parties to the proposal and including public authorities) other than the proponent.
6. The EPA is not prevented by this agreement from exercising its powers under the *Protection of the Environment Operations Act 1997* in relation to activities conducted in association with or under the proposal.
7. Each component of the proposal, as described in the proposal is to be completed by the date specified in the proposal. Failure to satisfactorily complete any component by the due date for that component may be taken as a failure to carry out the terms of the proposal for the purposes of section 27 of the CLM Act.
8. This agreement takes effect on the "Agreement Date" specified above and continues in effect subject to satisfactory performance and progress with implementation of the proposal.

Signed: 

**Director Contaminated Sites
Department of Environment and Conservation (NSW)**

VOLUNTARY REMEDIATION PROPOSAL UNDER CONTAMINATED LAND MANAGEMENT ACT 1997

Part 1

Preliminary Details

1. Proponent's Details

(a) Name and contact details

Mobil Oil Australia Pty Ltd
ACN: 004 052 984

Phone: (03) 9270 3333
Postal address: 12 Riverside Quay, Southbank, VIC
Postcode: 3006

(b) Who the EPA should contact with technical enquiries about the proposal

Name: Bogusia Smolenski
Employer/Company: Mobil Oil Australia Pty Ltd
Position title: Remediation Consultant
Phone (business): (02) 9502 4844
Phone (after hours): 0418 162 538
Fax: (02) 9502 2105
Email: bsmolenski@itenviro.com.au

Proponent: Mobil Oil Australia Pty Ltd

Site: Quix Service Station, 161 Hume Hwy, Lansvale NSW

Proposal Date: September 2005

2. Site to which proposal applies

The site to which the proposal applies ("the site") is:

An active service station located at 161 Hume Highway, Lansvale, NSW. The site is operated by Strasburger Enterprises (Properties) Pty Ltd (ACN 002 913 911), trading as Quix and occupies Lot 204 in Deposited Plan 732440. The site has an area of 1894m² and is zoned 4 (c) Industrial Special under the Fairfield Local Environmental Plan 1994, Government Gazette No. 104 (12 August 1994).

A copy of the site plan is attached.

3. The contamination

Soil and groundwater at the site contain concentrations of substances exceeding nominated investigation levels. The substances of concern ("the contaminants") include:

TPH fractions (C6-C28);
BTEX;
PAHs; and
Metals including copper, zinc and mercury.

4. The investigation/remediation* proposal

The remediation proposal ("the proposal") comprises:

- a) the information set out above;
- b) the actions, works and other components set out in the following documents:

Remediation Action Plan, QUIX Service Station, 161 Hume Highway, Lansvale, NSW (NJ3565). Prepared by URS and dated 7 July 2003.

Post Phase 2 Environmental Site Assessment, Quix Service Station (NJ3565), 161 Hume Highway, Lansvale NSW. Prepared by URS and dated October 2004.

Quantitative Risk Assessment, Quix Service Station, Lansvale (NJ3565), 161 Liverpool Road, Lansvale. Prepared by URS and dated 28 January 2005.

Remediation Action Plan Addendum, Quix Service Station (Mobil Site No: NJ3565), 161 Hume Highway, Lansvale, NSW. Prepared by URS and dated 3 March 2005.

Limited Phase 1 Environmental Site Assessment, Quix Service Station (NJ3565), 161 Hume Highway, Lansvale, NSW. Prepared by URS and dated 19 April 2005.

Interim Opinion Letter – Quix Service Station, Lansvale. Prepared by Environ and dated 31 March 2005.

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Multiphase Extraction and Air Treatment Event, Quix Service Station (NJ3565), 161 Hume Highway, Lansvale, NSW. Prepared by URS and dated 25 July 2005.

Pumping Test Interpretation and Implications for System Design. Quix Service Station (NJ3565), 161 Hume Highway, Lansvale. Prepared by URS and dated 10 August 2005.

- c) the undertakings set out in Part 2 of this document; and
- d) the performance schedule set out in Part 3 of this document.

Proponent's signature: 

Date: 6 Sep 05

Full name: Matt Bergeron

Position title: Retail Sales Manager Australia

Proponent: Mobil Oil Australia Pty Ltd

Site: Quix Service Station, 161 Hume Hwy, Lansvale NSW

Proposal Date: September 2005

Part 2

Undertakings Included in Voluntary Remediation Proposal

THE PROPOSAL INCLUDES THE FOLLOWING UNDERTAKINGS:

General

1. All activities carried out in connection with the proposal including sampling and preparation of associated reports ("the activities") will be carried out in accordance with applicable provisions of *State Environmental Planning Policy 55 – Remediation of Land* and any requirements imposed under it in relation to the works.
2. All matters listed as relevant to a remediation action plan by the EPA's *Guidelines for Consultants Reporting on Contaminated Sites* (1997) will be taken into account in the carrying out of the activities.
3. All the activities will be carried out consistently with guidelines made or approved under section 105 of the CLM Act.
(See <http://www.environment.nsw.gov.au/clm/guidelines.htm>)
4. All the activities will be carried out in compliance with applicable NSW environmental legislation, and in particular:
 - i) All the activities, including:
 - (1) the processing, handling, movement and storage of materials and substances used to carry out the activities; and
 - (2) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activitieswill be carried out in a competent manner;
 - ii) All plant and equipment installed at the site or used in connection with the activities:
 - (1) will be maintained in a proper and efficient condition; and
 - (2) will be operated in a proper and efficient manner.
5. All the activities at the site will be carried out in a manner that prevents or minimises the emission of dust, odour and noise from the site.
6. Waste generated or stored at the site will be assessed, classified and managed in accordance with the EPA's *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*.
(See <http://www.environment.nsw.gov.au/waste/envguidlns/index.htm>)
7. All hazardous, industrial, Group A or controlled waste generated by the activities at the site and which is to be transported from the site will be tracked in accordance with the *Protection of the Environment (Waste) Regulation 1999* and any licence under the *Protection of the Environment Operations Act 1997* in relation to the activities.
(See <http://www.environment.nsw.gov.au/waste/wastetracking.htm>)
8. The proponent will, and acknowledges that the EPA may, make all documents and

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information relating to the activities available to the public free of charge.

9. The proponent will:

- i) prior to the implementation of the proposal provide for the EPA's approval a strategy for communicating about that implementation, particularly the actual remediation works, with members of the public who are likely to have a real interest in or be affected by that implementation and
- ii) implement the strategy as approved by the EPA.

Monitoring, Record Keeping & Reporting

10. At least until the EPA has notified the proponent that the EPA no longer considers that the contamination poses a significant risk of harm, record and retain all monitoring data and information and provide this record to the EPA at any reasonable time if so requested by the EPA and as specifically provided under the proposal.
11. The EPA will be informed in writing within 7 days of the proponent becoming aware of information or data indicating a material change in conditions at the site or in its surrounding environment which could adversely affect the prospects of successful investigation or remediation of the site or result in harm to the environment.
12. The EPA will be informed in writing within 7 days of the proponent becoming aware of any failure, either by the proponent or any other person, to comply with any component or aspect of the proposal.
13. The EPA will be informed in writing as soon as practicable of any notification by the proponent, its employees or its agents to an appropriate regulatory authority other than the EPA of any pollution incident at the site within the meaning of the *Protection of the Environment Operations Act 1997*.

(See <http://www.environment.nsw.gov.au/licensing/dutytonotify.htm>)

Performance Schedule

14. The performance schedule which is in Part 3 of this document will be adhered to.

Proponent's signature:



Date: 6 Sep 05

Full name: Matt Bergeron

Position title: Retail Sales Manager Australia

Proponent: Mobil Oil Australia Pty Ltd

Site: Quix Service Station, 161 Hume Hwy, Lansvale NSW

Proposal Date: September 2005

Part 3

Performance Schedule

1. Objectives Of The Proposal

This Voluntary Remediation Proposal supersedes the previously prepared Remediation Action Plan (7 July 2003) and the Remediation Action Plan Addendum (3 March 2005).

The proposal is to undertake the remediation in three (3) phases:

- **Phase 1:** this involves additional assessment of the aquifer conditions and subsequent design of remediation system including obtaining all relevant permits and approvals. Extraction of PSH and groundwater using a mobile extraction truck is also proposed during this phase as a temporary measure of the PSH removal. This activity will be terminated once an insitu system has been installed and commissioned.
- **Phase 2:** this involves implementing measures to prevent migration of contaminated groundwater off the site and remove separate phase hydrocarbons (PSH) from the groundwater, and delineate the impact of soil and groundwater contamination off the site (referred to in this performance schedule as the source site).
- **Phase 3:** this involves post remediation monitoring of groundwater after completion of the Phase 2 works.

Phase 1 – Investigation and Design

The main objectives of Phase 1 are to achieve the following outcomes within the timeframes specified in the proposal:

- O1.Undertake detailed design of the remediation system, additional investigation necessary for the design and obtain all necessary permits/approvals.

Phase 2 - Remediation

The main objectives of Phase 2 are to achieve the following outcomes within the timeframes specified in the proposal:

- O2.Implement measures to prevent the migration of contaminated groundwater from the source site.
- O3.Remove separate phase contaminants from the groundwater at the source site, to extent practicable.
- O4.Delineate the impact of soil and groundwater contamination to the north east of the site.

Phase 3 – Post Remediation Monitoring

The main objectives of Phase 3 are to achieve the following outcomes within the timeframes specified in the proposal:

- O5.Implement groundwater monitoring program to monitor groundwater quality, flow patterns and contaminant degradation process across the site and off site.
- O6.Implement measures to enhance further degradation of contaminants in groundwater, if required.

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2. Principal Features Of The Proposal

Phase 1 – Investigation and Design

The principal features of Phase 1 include, but are not limited to:

a. Capital works

- P1. Installation of 2 x 100mm diameter recovery/monitoring wells (RW01 and RW02-see attached Figure 1) in the vicinity of the UST area where PSH plume has been identified, to facilitate an aquifer pumping test and recovery of PSH and groundwater, as part of the future recovery system at the site.
- P2. Undertake aquifer pumping test to verify aquifer conditions to aid in the design of the remediation system including the number and construction details of the recovery wells, their locations and extraction rates required for PSH recovery and plume migration control.

b. Remediation System Design

The proposed remediation system will be designed with the aim of removing PSH from the site (to extent practicable) and preventing off-site migration of contaminants.

This will involve the following stages:

P3. Preliminary Design, including:

- i. Overview of the proposed system design and capacities required for each of the system components;
- ii. Development of proposed system schematic (layout, footprint, etc);
- iii. Preliminary system design review.

P4. Detailed Design, including:

- iv. Site visit to evaluate available infrastructure, system locations, discharge points, etc;
- v. Detailed design outlining system operating parameters, treatment options, operational schedule;
- vi. Design of all system instrumentation, controls and interlocks; and
- vii. Review of system for compliance with Mobil's procedures and protocols.

P5. Preparation of a site management plan including contingency plan, and a system operation and monitoring manual for the designed remediation system.

P6. Obtaining effluent discharge permit with Sydney Water and negotiating discharge conditions and monitoring requirements.

c. PSH Recovery (MPVE)

P7. Continue regular PSH and groundwater extraction using a mobile extraction truck (MPVE) until an insitu remediation system has been installed and commissioned. The extraction will occur from:

- (i) monitoring well MW2 near the UST area;
- (ii) monitoring well MW6 near the fuel dispensers;
- (iii) monitoring wells MW9 downgradient from the UST area; and
- (iv) monitoring well MW15 near the UST area and fuel dispensers.

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d. Post MPVE Groundwater Monitoring Event (GME)

- P8. A groundwater monitoring event at the site and off-site (including all monitoring wells on-site and off-site) after completion of the extraction event to monitor groundwater and PSH plume behaviour, and to assess the effect of the extraction event. Monitoring of VOCs will also be undertaken in all accessible utility pits at and adjacent to the site during the groundwater monitoring event.

Phase 2 – Remediation Works

The proposed remediation works will essentially include installation, commissioning and operation of an insitu PSH and groundwater recovery system.

The principal features of Phase 2 include, but are not limited to:

a. Capital works

- P9. Installation of additional 2 x 100mm diameter recovery/monitoring wells (RW03 and RW04-see attached Figure 1) in the vicinity of the UST area where PSH plume has been identified, to facilitate a recovery of PSH and groundwater, as part of the proposed recovery system at the site.
- P10. Installation of 5 x 50mm diameter monitoring/injection wells (PW1-PW5-see attached Figure 1) in the north-east of the site where heavy end hydrocarbon impact (diesel-like source) has been identified, to facilitate an enhanced bioremediation of this impact, as part of the proposed recovery system at the site.
- P11. Subject to the conditions encountered in monitoring/injection wells PW2-PW4, a well may be installed on the opposite side of Chadderton Street, to the northeast of the site.
- P12. Construction and installation of the system that was designed in Phase 1.

b. Remediation

- P13. Commissioning and operation of the system with the aim of controlling offsite migration of contaminated groundwater and recovering PSH to extent practicable.
- P14. Continue pumping out PSH and groundwater from recovery wells RW01, RW02, RW03 and RW04 in the UST area, in the southern part of the site until such time that it can be demonstrated that all recoverable PSH has been removed within capabilities of the remediation system (eg. recovery rates and apparent PSH thickness in monitoring/recovery wells have reached asymptotic levels) and off-site migration of contaminated groundwater is not occurring (supported by groundwater monitoring and sampling results showing no impact in off-site monitoring wells). A time frame for this task is provided in a Table in Section 4 below.
- P15. Continue delivery of oxygen to monitoring wells PW1 through PW5, LMW13, LMW14 and LMW17, in the northeastern part of the site until such time that it can be demonstrated that oxygen levels and natural attenuation parameters are supportive of natural degradation of hydrocarbon contaminants in this part of the site (supported by groundwater monitoring and sampling results demonstrating stable and/or shrinking plume).

c. Monitoring

- P16. Continue regular monitoring of the remediation system and PSH/groundwater level in monitoring wells across the site to monitor the progress of PSH recovery and to maintain

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system performance. Monitoring will be undertaken on a weekly basis for the first month and fortnightly or as required for the subsequent months.

P17. Quarterly VOC monitoring within utility pits at the site and adjacent to the site.

P18. Quarterly review of pumping data, separate phase petroleum hydrocarbon recovery and monitoring data to determine the need to adjust/modify the pumping scheme to maximise the recovery of separate phase hydrocarbon and minimise any migration of impacted groundwater off the source site. The review will also include a progressive critical assessment of the remediation system performance towards achieving remediation goals within capabilities of the system.

P19. Quarterly groundwater monitoring and sampling at the source site (including off-site monitoring wells to the east and north east of the source site) to assess/validate the site wide remediation activities. Data from this activity will be used to demonstrate that hydraulic control of the dissolved phase hydrocarbon plume is being achieved, and to evaluate the occurrence and/or the potential for natural attenuation of dissolved hydrocarbon contaminants in groundwater.

P20. Once it has been demonstrated that all recoverable PSH has been removed from the site (as discussed above) and no off-site migration of dissolved hydrocarbon impacts has occurred, an evaluation of post remediation goals for any remaining soil and groundwater impacts will be undertaken. At this stage, the need for any active groundwater and/or soil remediation will be determined.

Phase 3 – Post Remediation Groundwater Monitoring

The principal features of Phase 3 include, but are not limited to:

a. Post Remediation Groundwater Monitoring

P21. Quarterly groundwater monitoring and sampling program at the source site (including off-site monitoring wells to the east and north east of the source site) to monitor groundwater quality and migration pattern after completion of the remediation phase. Assessment of natural attenuation will also be completed as part of the proposed groundwater monitoring program. Subject to the results of the first year program, the frequency of groundwater monitoring will be revised and reduced in the second year, if supported by the collected groundwater data.

3. Reporting Requirements And Timeframe For Submission Of Reports

Mobil will use its best endeavours to provide the following reports to the EPA, by the dates specified below:

Report	Deadline
R1. A summary of the Remediation System Design, incorporating results of the aquifer pumping test.	30 September 2005
R2. Multiphase Extraction Report in a letter format.	30 September 2005
R3. Remediation System (total fluids pumping) Installation and Commissioning Report. The report will summarise works associated with the installation of the system and	Within 3 months after remediation system commissioning.

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will provide system operational parameters at the time of commissioning including as built drawings.	
R4. Site Wide Remediation System Performance and Groundwater Monitoring Reports at quarterly intervals to include results and discussion of: • PSH recovery rates and thickness variations across the site over time and evaluation of potential asymptotic levels. • Measurements of groundwater/PSH recovery, extraction and disposal including assessment of the effluent groundwater quality being discharged from the site as part of the remediation system operation. • Monitoring of groundwater levels and groundwater quality, both on the site and off the site to demonstrate that hydraulic control of the dissolved hydrocarbon plume is being achieved. An evaluation of natural attenuation potential will also be completed as part of this data evaluation and reporting; and • Results of utility pits VOC monitoring completed at the site and adjacent to the site.	Combined monitoring reports referred to in P16, P17, P18, P19 and P20 - within 10 weeks of each sampling date. Compiled results of the testing and monitoring referred to in P16 to P20 up to 31 March 2006 (first quarter) - by 15 May 2006.
R5. • Validation Report following the completion of remediation works referred to in Phase 2. Once PSH has been recovered to extent practicable (eg. recovery rates and PSH thickness in monitoring wells have reached asymptotic level) and it has been demonstrated that the dissolved phase hydrocarbon impact has not migrated off-site (eg. no dissolved phase impact detected in off-site wells, as indicated in progress reports described above), operation of the system will cease and post remediation monitoring will commence as described in P3.	Within 12 weeks of the works being completed – 31 March 2008
R6. Post Remediation Groundwater Monitoring Report to include results and discussion of: • monitoring of groundwater levels and groundwater sampling, both on site and off site; • evaluation of groundwater flow direction; and • assessment of natural attenuation.	Compiled results of the testing and monitoring referred to in P21 - within 10 weeks of each sampling date.

Proponent: Mobil Oil Australia Pty Ltd

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4. Key Milestones For Investigation, Remediation And Other Actions

Mobil will use its best endeavours to complete all works set out in the proposal by the deadlines specified below:

Works	Deadline
Phase 1 – Investigation and Design • Installation of 2x100mm Recovery/Monitoring Wells (RW01 and RW02); • Aquifer Recovery Test; • MPVE Event; • Post MPVE GME; • Preliminary System Design; • Detailed System Design • Prepare EMP and System Operation and Maintenance Manual • Obtain Approvals/Licences	Completed (30-31 May 2005) Completed (20-21 July 2005) Completed (4 June 2005) Completed (July 2005) Completed (12 August 2005) 30 September 2005 30 November 2005 30 November 2005
Phase 2 – Remediation Works • Installation of 2x100mm Recovery/Monitoring Wells (RW03 and RW04); • Installation of Monitoring/Injection Wells (PW1-PW5) • System Installation and Commissioning • System Operation and Monitoring 1st Quarter GME 2006 2nd Quarter GME 2006 3rd Quarter GME 2006 4th Quarter GME 2006 1st Quarter GME 2007 2nd Quarter GME 2007 3rd Quarter GME 2007 4th Quarter GME 2007 • Remediation Closure	31 October 2005 31 October 2005 31 December 2005* Dec 2005 to Dec 2007 March 2006 June 2006 September 2006 December 2006 March 2007 June 2007 September 2007 December 2007 31 January 2008
Phase 3 – Post Remediation Groundwater Monitoring • Quarterly Post Remediation Groundwater Monitoring	January 2008 - December 2009

** Deadline extended to 30 April 2006
by agreement with DEL.*

*CKH/ye
Dcons
10/11/05*

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