

COPY

Our Reference : Agreement No. 26061
Site No. 3183
File No. HO1825

ENVIRONMENT PROTECTION AUTHORITY (EPA)

**VOLUNTARY REMEDIATION PROPOSAL:
EPA AGREEMENT**

SECTION 26 CONTAMINATED LAND MANAGEMENT ACT 1997

Service: By Registered Mail to Place of Business

To: Orica Australia Pty Limited (ABN 99 004 117 828)
PO Box 80
MAYFIELD NSW 2304

(referred to in this agreement as **'the proponent'**).

Attention: General Manager- Technology and Environment

Date: 5 DEC 2005

LAND:

The land to which this voluntary proposal relates (**'the site'**) is described as:

- Lot 3, DP 234288 (15 Greenleaf Road, Kooragang Island)

in the local government area of Newcastle, New South Wales (refer **Attachment 1**).

CONTAMINATION:

Groundwater within and beyond the site is contaminated in such a way as to present a significant risk of harm (SRoH). The contaminants at the site include:

- Arsenic; and
- Nutrients (specifically total ammonia and nitrate).

(referred to in this agreement as **'the contamination'**)

BACKGROUND:

The proponent has furnished the EPA with a voluntary remediation proposal (**'the proposal'**) to remediate the site in accordance with the *Contaminated Land Management Act 1997* (**'the Act'**).

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The proposal is set out in detail in the following letters and reports:

- Remedial Action Plan – Orica, Kooragang Island (Report No. 25487-030/R008_RAP) dated December 2003, prepared by URS Australia Pty Limited (Extract contained in **Attachment 2**);
- Letter from Orica Australia Pty Limited dated 18 December 2003 and s.26 undertaking (**Attachment 3**);
- Letter from Orica Australia Pty Limited dated 19 October 2004 indicating concurrence with the terms of this agreement following the incorporation of comments made on the draft remediation agreement (**Attachment 4**);
- Letter from Orica Australia Pty Limited dated 17 March 2005 amending the Remedial Action Plan (**Attachment 5**).
- Revised Voluntary Remediation Agreement (No.26061) – Orica Kooragang Island - Schedule, dated 8 April 2005 (**Attachment 6**)

OBJECTIVES

The objectives for the remediation to which this agreement applies include, but are not limited to, the following:

- Removal of the significant risk of harm posed by the contamination to human health and the environment;
- Removal of point sources of contamination on-site;
- Improving housekeeping to prevent ongoing diffuse sources of contamination; and
- Preventing continued migration of contaminated groundwater into adjoining lands.

PRINCIPAL FEATURES OF THE PROPOSAL

Principal features of this proposal include:

- Implementation of a biannual groundwater monitoring program;
- Implementation of source control at the ammonia tank;
- Development of a risk-based site remediation criterion for arsenic;
- Desktop study and bench scale trials of permeable reactive barrier (PRB) materials and techniques, and review;
- Desktop study of the suitability of phytoremediation of arsenic contaminated soil including the assessment of suitable plants and techniques, and review;
- Assess feasibility of groundwater remediation options;
- Trials of groundwater remediation option(s);
- Excavation and disposal of arsenic contaminated soil in the vicinity of the former sludge disposal pit; and
- Monitoring and reporting of the performance of the remediation.

The timing of tasks for these principal features is summarised in the schedule as shown in **Attachment 6**.

Note that this proposal may be the first stage of a potentially multi-staged agreement. The need for subsequent stages will be assessed by the EPA following the completion of the works covered in this proposal.

REPORTING

The proponent will provide the EPA with the following reports:

- a report on the risk based remediation criteria for arsenic in groundwater (April 2005);
- reports of the bi-annual groundwater monitoring (monitoring completed in April and October 2004 and January and July, 2005);

- quarterly reports on progress of the remediation activities (due December 2004 and March, June, September and December 2005);
- a report on the excavation and disposal of arsenic contaminated soil (December 2005); and
- a report on the proposed groundwater remediation strategy (December 2005).

GENERAL

The following matters must also be undertaken as part of the voluntary agreement:

- The groundwater monitoring component of the remediation program shall incorporate the full extent of the groundwater contamination, namely those parts of the Incitec-Pivot site, Heron Road and the Newcastle Ports Corporation site, utilising the existing groundwater monitoring wells;
- The proponent must maintain an appropriate communications strategy with key stakeholders including Newcastle Ports Corporation, NSW Department of Commerce (formerly Department of Public Works and Services) (owners of Heron Road) and Incitec-Pivot Limited. These stakeholders must be kept up-to-date with the progress of the remediation program;
- At the conclusion of this stage of the remediation program the proponent must make available for inspection, by any government authority (Local or State), potential purchaser of the site (or part thereof), neighbouring resident or land owner, a report of the outcomes of the remediation free of charge;
- All site works must comply with SEPP 55 and take into account all of the relevant issues listed under "Remediation Action Plan" on page 16 of the EPA (1997) *Guidelines for Consultants Reporting on Contaminated Sites*; and
- All works undertaken and reports prepared must be consistent with guidelines made or approved by the Environment Protection Authority under s 105 of the Act (**Attachment 7**).

LIFETIME OF THE PROPOSAL (STAGE 1):

Works associated with the proposal (Stage 1) will be completed by **28 February 2006**.

EPA AGREEMENT:

The EPA is satisfied that the terms of the proposal are appropriate, and notes (for the purposes of section 26 (3) of the Act) that the proponent has undertaken in writing to the EPA not to recover contributions under Part 3 Division 6 of the Act in respect of the remediation.

The EPA agrees with the proponent that it will not issue a remediation order against the proponent with respect to any remediation of the land that falls within the proposal if the proposal is carried out in accordance with this agreement and the outcomes are achieved within the agreed timeframes.



CAROLYN STRANGE
Director Contaminated Sites
Department of Environment and Conservation (NSW)

- Attachment 1 – Site location map
- Attachment 2 – Extract of Remedial Action Plan (December 2003).
- Attachment 3 – Orica letter to EPA dated 18 December 2003 (s.26 undertaking not to recover costs).
- Attachment 4 – Orica letter dated 19 October 2004 indicating concurrence with the terms of this agreement.
- Attachment 5 – Orica letter dated 17 January 2005 - Amendment to Remedial Action Plan
- Attachment 6 – Schedule for the principal features of the remediation program.
- Attachment 7 – Guidelines made or approved under section 105 of the Act.

NOTE:

1. The EPA is not prevented by this agreement from making a remediation order against persons (including public authorities) with whom it has made no such agreement (whether or not they were originally parties to the proposal). (s.20(1)).
2. The EPA is not prevented by this agreement from making a remediation order against the proponent as an appropriate person (as defined in the Act) if, in the opinion of the EPA, the terms of the proposal are not carried out. (s.20(2)).
3. Section 58 of the Act requires the EPA to maintain a public record of certain matters. Notification of the making of this agreement will be included in the public record.
4. Section 59 of the Act requires the EPA to notify the relevant local council of the making of this agreement and when the terms of the agreement have been fulfilled. The council is required to note on any certificate issued pursuant to section 149(2) Environmental Planning and Assessment Act 1979 with respect to the land that the land is subject to a voluntary agreement until the council receives EPA notification that the terms have been fulfilled.
5. The completion of the remedial work may constitute only the first stage of a multi stage remediation of the site. If, following the completion of the remediation works under this agreement, the EPA considers that further remediation is required to remove or manage the contamination at the site, this may be the subject of a separate remediation proposal, the content of which would be agreed between the EPA and the proponent.