

Notice

Environmental Protection Act 1994

Environmental Evaluation

Notice to conduct or commission an environmental evaluation

This notice to conduct or commission an environmental evaluation is issued by the administering authority pursuant to 326B of the Environmental Protection Act 1994.

Orica Australia Pty Ltd ACN 004 117 828
Level 3, 1 Nicholson Street
EAST MELBOURNE VIC 3002

Your reference: STAT1160

Our reference: CR68468

12 July 2017

Take notice: that under the *Environmental Protection Act 1994* (the Act) a notice to conduct or commission an environmental investigation is issued to Orica Australia Pty Ltd ACN 004 117 828 (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Heritage Protection (the department).

The notice to conduct an environmental investigation is issued in respect of the activities of Orica Australia Pty Ltd on land described as Lot 138 on CTN2123 situated at Reid Road, Yarwun Industrial Estate QLD 4494 (the premises).

A. Grounds

The notice to conduct an environmental investigation is issued on the following grounds:

- Under section 326B of the Act the administering authority is satisfied on reasonable grounds that an activity or proposed activity is causing, or is likely to cause environmental harm.

The facts and circumstances forming the basis for these grounds are:

1. You are the holder of Environmental Authority (EA) EPPR00872013 which authorises chemical manufacturing (ammonium nitrate and sodium cyanide) at Lot 138 on Plan CTN2123, located at Reid Road, Yarwun Industrial Estate QLD 4494.
2. As required by conditions WT14 and WT17 of EA EPPR00872013, you submitted an annual groundwater report; and receiving environment monitoring program preliminary interpretive report (REMP Report) on 29 June 2016.
3. The annual groundwater report identified increasing levels of free cyanide (on site), and ammonia and nitrate (on site, at site boundary and off site) consistently above the trigger levels for protection of fresh/marine water ecosystems identified in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality / Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).

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4. The annual groundwater report states that one of the off-site locations has the potential to release to the receiving environment and that the risk to the receiving environment has increased.
5. The annual groundwater report included a remediation review which identified that the groundwater flow across the site boundary was effectively unchanged during 2015/2016 compared to prior to the commencement of remediation works. However, it is considered likely that the contaminant mass flux from the site is now higher than that prior to commencement of the remediation works.
6. The annual groundwater report notes that the existing treatment system has yet to achieve the total daily flows specified in the design documentation and that a flow rate greater than that specified in the design documentation may be required to affect significant capture of groundwater at the site boundary.
7. The REMP Report identified that nitrogen concentrations in the mixing zone compared to those authorised to be released from APN1/2 were increased.
8. The mixing zone is located directly downgradient of the groundwater well which has the potential to discharge to the receiving environment and has concentrations of ammonia and nitrate above the trigger levels for aquatic protection.
9. Environmental harm is defined in section 14 of the Act as follows:
 - (1) *Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.*
 - (2) *Environmental harm may be caused by an activity—*
 - (a) *whether the harm is a direct or indirect result of the activity; or*
 - (b) *whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.*
10. Environmental value is defined in section 9 of the Act as follows:
 - (a) *a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or*
 - (b) *another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.*
11. Under the *Environmental Protection (Water) Policy 2009* (Water EPP), all Queensland waters including groundwater have prescribed environmental values (EVs) and water quality objectives (WQOs) to enhance or protect environmental values.
12. EVs and WQOs for the Calliope River Basin and Boyne River Basin are listed in Schedule 1 of the Water EPP for Curtis Island, Calliope River and Boyne River Basins.
13. The Water EPP for Curtis Island, Calliope River and Boyne River Basins includes aquatic ecosystems as an EV for the Calliope River Basin (Table 1C). The administering authority is satisfied that aquatic ecosystems are likely to be impacted by high levels of ammonia and nitrate.
14. The Water EPP for Curtis Island, Calliope River and Boyne River Basins lists WPOs for the Calliope River Basin Fresh Waters (Table 2F). The lowland fresh waters/type is a moderately disturbed ecosystem. The ammonia WQO is less than 20 µg/L (0.02mg/L). Table 2F also notes that where ground waters interact with surface waters, groundwater quality should not compromise identified EVs and WQOs for those waters.

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15. As a result of the information identified in the reports, the administering authority is satisfied on reasonable grounds that activities being undertaken by you are causing or are likely to cause environmental harm.

B. Requirements

1. You must engage a suitably qualified person (SQP) to conduct a detailed site investigation (DSI) as per the National Environment Protection (Assessment of Site Contamination) Measure as amended 2013 (ASC NEPM) (NEPC, 1999); and other relevant industry and professional standards. The DSI must include but not be limited to:
 - a. The identification of potential or actual sources of contamination;
 - b. The identification of areas/locations of potential or actual contamination;
 - c. The identification of potential or actual locations that may be pathways for groundwater contamination; and
 - d. The identification of potential ecological receptors; and
 - e. A review of relevant historical information and a site inspection (or inspections) to achieve at least requirements 1 a., 1 b., and 1 c.
2. You must engage a suitably qualified person (SQP) to produce a revised Conceptual Site Model (CSM) as per the National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended 2013 (ASC NEPM) (NEPC, 1999). The CSM must include but not be limited to:
 - a. An assessment of the adequacy of the investigation works completed to date to determine if they meet the requirements of the National Environment Protection (Assessment of Site Contamination) Measure as amended 2013 (ASC NEPM) (NEPC, 1999); and
 - b. The incorporation of any relevant findings as a result of the detailed site investigation (DSI) conducted in accordance with Requirement 1; and
 - c. A review of groundwater monitoring data collected from wells within the source zone to determine the source of the increases in concentration of free cyanide, ammonia and nitrate; and
 - d. An assessment of the adequacy and appropriateness of the characterisation and delineation (using maps and figures as appropriate) completed to date of the groundwater contamination on and emanating from the site; and
 - e. The identification of the relevant environmental values;
 - f. An assessment of the risk to environmental values that includes modelling of contaminant concentrations and migration pathways in groundwater and an estimate of the rate of lateral and vertical movement of contaminants in groundwater; and
 - g. Considering a. to f. in this requirement, a map delineating the extent and distribution of the ammonia, nitrate and free cyanide groundwater plume(s).
3. Considering requirement 1 and 2 above, you must engage a suitably qualified person to prepare a contamination action plan (CAP) which includes but is not limited to:
 - a. An evaluation of current controls used to mitigate ground water contamination; and
 - b. Details of mitigation measures that are required to manage potential or actual contamination pathways; and
 - c. Details of any procedural or structural changes that require implementation to reduce the risk of further ground water contamination.
4. On or before 1 September 2017, you must submit a notification to the administering authority that demonstrates that requirement 1 has been completed.

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5. On or before 15 December 2017, you must submit a final environmental report to the administering authority that demonstrates that requirements 1 to 3 have been completed.

Definitions

A 'suitably qualified person' means a person who has professional qualifications, training, skills or experience relevant to the Environmental Evaluation requirements, and can give authoritative assessment, advice and analysis in relation to the Environmental Evaluation requirements using relative relevant protocols, standards, methods or literature.

The final environmental report must be submitted to the department on or before:

- **As per requirement 5 you must submit a final report to the department on or before 15 December 2017.**

As the recipient of this notice, you are also required to provide a statutory declaration in the form attached, to accompany the environmental report submitted to the department. The suitably qualified person (or persons), who prepares the environmental report must also provide a statutory declaration in the form attached to accompany the environmental report submitted to the department.

You can view an electronic version of the statutory declaration for a recipient using the following search term (ESR/2016/1997).¹

An electronic version of the statutory declaration for a suitably qualified person form is available using the search term (ESR/2016/2266).¹

Take notice:

1. the requirements of the notice to conduct an environmental investigation take effect immediately upon service of this notice;
2. this notice remains in force until further notice from the department; and
3. you are responsible for meeting the costs of conducting or commissioning the environmental evaluation, preparing the environmental report and providing any further information as requested by the department.

C. Reviews and appeals

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the Act.

A person who is dissatisfied with certain decisions of the department, may be able to apply to have the department review that original decision.

Generally, a request to have a decision reviewed must be made:

- within 10 business days of the decision being notified to the person;
- be supported by enough information to enable the department to decide the application for review; and
- be made using the application for review of an original decision form (EM709).

Where an application has been made for a decision to be reviewed, the applicant may also apply to the relevant court for a stay of the decision to secure the effectiveness of the review.

¹ This is the publication number. The publication number can be used as a search term to find the latest version of a publication at <www.ehp.qld.gov.au>.

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Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

A person whose interests are or would be adversely affected by a decision of the department may also be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*. For further information about reviews and appeals see the:

1. [Information sheet - internal review and appeal to the Planning and Environment Court \(EM1866\)](#).

You may have other legal rights or obligations and should seek your own legal advice.

D. Penalty

Failure to comply with a notice to conduct or commission an environmental evaluation is an offence.

1. The maximum penalty for an individual is 300 penalty units, totalling \$36,570.00.
2. The maximum penalty for a corporation is 5 times 300 penalty units, totalling \$182,850.00.

Should you have any queries in relation to this notice, please contact Luke Davison, Senior Environmental Officer of the department on telephone number (07) 4971 6512



Signature

21 July 2017

Date

Tim Brain

Manager (Compliance) – Industry and Development

Delegate of the Chief Executive

Department of Environment and Heritage Protection

Environmental Protection Act 1994

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