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Published on: 6 July 2012

Statement No: 903

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL  
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE  
*ENVIRONMENTAL PROTECTION ACT 1986*)**

**WHEATSTONE DEVELOPMENT – GAS PROCESSING, EXPORT FACILITIES AND  
INFRASTRUCTURE, SHIRE OF ASHBURTON AND ROEBOURNE**

**Proposal:**

The Proposal is to construct and operate a 25 million tonne per annum Liquefied Natural Gas (LNG) facility and associated Domestic Gas (Domgas) facility in the proposed Ashburton North Strategic Industrial Area (ANSIA) 12 kilometres south west of the town of Onslow. The Proposal includes:

- Subsea gas trunkline to bring produced hydrocarbons onshore to the LNG and Domgas plants;
- Product loading facility (PLF);
- Materials offloading facility (MOF);
- LNG and Domgas plants;
- Accommodation facilities; and
- Domgas pipeline to transport natural gas to the Dampier to Bunbury Natural Gas Pipeline.

The key components of the Proposal are further documented in schedule 1 of statement 873.

**Proponent:**

Chevron Australia Pty Ltd

**Proponent Address:**

250 St George's Terrace, PERTH WA 6000

**Assessment Number:**

1924

**Previous Assessment Number:** 1754**Report of the Environmental Protection Authority:** Report 1440**Previous Report of the Environmental Protection Authority:** 1404**Previous Statement Number:** 873

The implementation of the proposal to which the above report of the Environmental Protection Authority relates is subject to the conditions and procedures contained in Ministerial Statement No. 873, as amended by the following:

1. Change to Condition 6-4

Condition 6-4 of Ministerial Statement 873 is deleted and replaced with:

6-4 The objectives of the Dredging and Dredge Spoil Placement Environmental Monitoring and Management Plan are to ensure that turbidity-generating activities which are part of the construction of the nearshore and offshore marine facilities:

- i. achieve the environmental protection outcomes set in condition 6-1 (or any approved revised environmental protection outcome); and
- ii. are managed with the aim of achieving the management objectives set out in condition 6-2.

2. Change to Condition 6-5

Condition 6-5 of Ministerial Statement 873 is deleted and replaced with:

6-5 The Dredging and Dredge Spoil Placement Environmental Monitoring and Management Plan shall include:

- i. descriptions of monitoring sites, including key physical attributes, geographic locations and measures of the baseline condition of benthic communities to be monitored;
- ii. descriptions of the environmental variables to be monitored for determining achievement of the environmental protection outcomes set in condition 6-1(i), (iv) and (v), (or any approved revised environmental protection outcome), and the management objectives in condition 6-2;
- iii. the monitoring and data evaluation procedures to be applied so as to assess achievement of the environmental protection outcomes set in condition 6-1(i), (iv) and (v), (or any approved revised environmental protection outcome) and the management objectives in condition 6-2;
- iv. the monitoring methodologies to be applied to, unless otherwise approved in writing by the CEO:
  - a. measure relevant physical indicators (e.g. water currents, water quality conditions including turbidity, photosynthetic radiation and light attenuation coefficient, and sediment production and deposition rates) at a frequency to allow near-real time dredge and dredge overflow

management and the validation and calibration of numerical models that may be used to assist in the management of dredging activities; and

- b. measure relevant biological indicators with intervals between monitoring occasions of approximately 14 days (depending on weather conditions and the biological indicators) to inform adaptive environmental management (e.g. measures of live coral cover/coral mortality);
- v. management trigger indicators and values for relevant physical and biological indicators to be applied in a risk-based tiered approach for the management of the environmental impacts of turbidity generating activities which are part of the construction of nearshore and offshore marine facilities;
- vi. evidence demonstrating that the monitoring required to assess achievement of environmental protection outcomes set in condition 6-1, (or any approved revised environmental protection outcome) and management objectives in condition 6-2, is based on tests using appropriate effect size(s) and has statistical power values of at least 0.8 (or alternative value(s) or methods as approved by the CEO);
- vii. management actions that will be implemented in the event that the management triggers values set in condition 6-5(v) are not met;
- viii. methods and procedures that will be implemented to regularly characterise, spatially-define and report the realised Zone of Influence caused by turbidity-generating activities which are part of the nearshore and offshore marine facilities;
- ix. procedures for coral reproductive status monitoring to assist with predicting the timing and duration of coral spawning events;
- x. the following with respect to dredge spoil placement site C:
  - a. calculations of predicted incremental loss of dredge spoil under metocean conditions typical of the location (i.e. inter-cyclone periods taking account of seasonal variations) following completion of marine works; and
  - b. predictions of fate and environmental impact of dredge spoil calculated to be lost following completion of marine works;
- xi. the following, with respect to dredge spoil placement sites in State waters, having regard to condition 6-5(x):
  - a. management actions to be undertaken during dredge spoil placement activities to minimise the environmental impact of those activities and

any material incremental losses of dredge spoil which may occur following completion of dredge spoil placement at sites in State waters;

- b. monitoring to be undertaken of retention, stability and fate of dredge spoil placed at dredge spoil placement sites during and following the completion of dredge spoil placement at sites in State waters to verify the efficacy of the measures referred to in condition 6(xi)(a);
- c. contingency measures to be implemented should monitoring required by condition 6-5(xi)(b) indicate management actions referred to in condition 6(xi)(a) are not effective; and

xii. requirements for timely reporting of monitoring data, management responses and contingency measures.

### 3. Change to Condition 6-9

Condition 6-9 of Ministerial Statement 873 is deleted and replaced with:

6-9 In the event that:

- i. conditions 6-8(iii) and (iv) do not apply, and the Proponent wishes to recommence the turbidity-generating activities which are suspended under condition 6-7; or
- ii. the environmental protection outcomes set in condition 6-1 need to be revised because they no longer, or are not reasonably expected to provide the most relevant or best measure for protection of benthic primary producers,

the Proponent shall submit to the Minister a report detailing, where applicable, the following:

- iii. the results of the most recent environmental monitoring for all monitoring and reference sites;
- iv. identify those monitoring and reference sites, and the monitoring results for those sites, where:
  - a. an environmental protection outcome (or any approved revised environmental protection outcome) is not being achieved or no longer or is not reasonably expected to provide the most relevant or best measure for the protection of benthic primary producers;
  - b. there is strong evidence that non-achievement of an environmental protection outcome (or any approved revised environmental protection outcome) is reasonably expected to be recorded as part of the same event;

- v. any turbidity-generating activities which were being undertaken in the monitoring period prior to the environmental protection outcome (or an approved revised environmental protection outcome) not being achieved and until the time of suspension;
- vi. the metocean conditions as monitored in the most recent monitoring period prior to observing that the environmental protection outcome (or an approved revised environmental protection outcome) is not being achieved or no longer provides the most relevant or best measure for the protection of benthic primary producers;
- vii. the results of the most recent water quality and sediment deposition monitoring;
- viii. proposed revised environmental protection outcome(s) where:
  - a. an environmental protection outcome (or an approved revised environmental protection outcome) is not being achieved or is not reasonably expected to provide most relevant or best measure for the protection of benthic primary producers;
  - b. there is strong evidence that contravention of an environmental protection outcome (or an approved revised environmental protection outcome) is expected to be recorded as part of the same event; and/ or
  - c. for the designated reef formation(s) or site(s) inside the Zones of Moderate Impact where an environmental protection outcome (or an approved revised environmental protection outcome) is not being achieved or no longer provides the most relevant or best measure for the protection of benthic primary producers;
- ix. any other information considered relevant by the Proponent in support of the:
  - a. continuance of turbidity-generating activities, or recommencement of all turbidity-generating activities that remain suspended; or
  - b. proposed revised environmental protection outcome to provide the most relevant or best measure for the protection of benthic primary producers;
- x. if an environmental protection outcome (or any approved revised environmental protection outcome) inside a Zone of Moderate Impact is not being achieved, the Proponent shall include in the report required by condition 6-9 additional management actions proposed to be implemented so that the recommencement of turbidity-generating activities which are part of the construction of that particular nearshore or offshore marine facility:

- a. will not contribute to non-achievement of a revised environmental protection outcome proposed by the Proponent in condition 6-9(viii) for that zone where an environmental protection outcome has not been achieved, having regard to the matters provided for in condition 6-9(i); and
  - b. will ensure that all the other environmental protection outcomes set in condition 6-1 (or any approved revised environmental protection outcome) continue to be achieved outside the Zones of Moderate Impact;
- xi. if an environmental protection outcome (or any approved revised environmental protection outcome) outside the Zones of Moderate Impact (not including the Zone of High Impact) is not being achieved the Proponent shall include in the report required by condition 6-9 additional management actions proposed to be implemented so that the recommencement of turbidity-generating activities which are part of the construction of that particular nearshore or offshore marine facility:
  - a. will not contribute to further non-achievement of any other environmental protection outcomes set in condition 6-1 or any approved revised environmental protection outcome; or
  - b. will not cause non-achievement of a revised environmental protection outcome proposed by the Proponent in condition 6-9(viii) to apply at those sites where an environmental protection outcome (or any approved revised environmental protection outcome) has not been achieved or there is strong evidence that non-achievement of an environmental protection outcome (or any approved revised environmental protection outcome) is expected as part of the same event; and
  - c. will ensure the environmental protection outcomes set in condition 6-1 (or any approved revised environmental protection outcome) continue to be achieved at all other sites and designated reef formations.

#### 4. Change to Condition 6-10

Condition 6-10 of Ministerial Statement 873 is deleted and replaced with:

- 6-10 The Minister may, having regard to the report submitted by the Proponent under condition 6-9 and on the advice of the Chairman of the EPA, approve revised environmental protection outcome(s) to have effect for the purpose of condition 6-1 in which case the Proponent may then commence, continue or recommence, whichever is relevant, turbidity-generating activities which are part of construction of the particular nearshore or offshore marine facility(s) subject to the approved revised environmental protection outcome(s). The Minister may also, having regard to the report submitted by the Proponent

under condition 6-9, require the Proponent to implement all or any of the additional management actions proposed in conditions 6-9(x) and (xi) above, or other additional practicable management actions, as part of the approved Dredging and Dredge Spoil Placement Environmental Monitoring and Management Plan (condition 6-3).

5. Change to Condition 6-14

Condition 6-14 of Ministerial Statement 873 is deleted and replaced with:

*Control of turbid water overflow from dredging equipment*

6-14 If the Proponent proposes to allow turbid water overflow from dredging equipment in overflow control zones as defined in Schedule 4 in such a manner that designated reef formations in the Zone of Moderate Impact may reasonably be expected to be exposed to some turbidity associated with the turbid water overflow from dredging equipment, the Proponent shall, prepare a Turbid Water Overflow Adaptive Monitoring and Management Strategy which is to be implemented once approved by the CEO. The Turbid Water Overflow Adaptive Monitoring and Management Strategy shall include the following basic elements, unless otherwise approved by the CEO:

- i. environmental baseline data covering the range of seasonal conditions expected during turbid water overflow from dredging equipment in overflow control zones, focusing on relevant key water quality and relevant biological health indicators (e.g.) coral health indicators);
- ii. Proposal-specific tolerance limits for relevant key water quality and relevant biological health indicators (e.g. coral health indicators);
- iii. a sediment spill budget and spill budget limits relevant to the Proposal-specific tolerance limits referred to in ii above that aims to meet the management objectives in condition 6-2 and ensures that the environmental protection outcomes set in condition 6-1, or any approved revised environmental protection outcomes, are achieved;
- iv. work plans that specify the time, location and geographical coordinates of dredging that is likely to cause turbid water overflow from dredging equipment in overflow control zones, and includes relevant procedures and equipment;
- v. compliance monitoring of relevant environmental indicators and assessment of monitoring data against sediment spill budget limits, at a frequency of at least daily;
- vi. near real time control monitoring of relevant environmental indicators and evaluation against Proposal-specific environmental tolerance limits for those indicators with the objective of on-going verification of the spill budget and performance of the validated and calibrated plume hindcast model;

- vii. daily spill hindcast simulations using a plume hindcast model which has been validated and calibrated for implementation at the site, with input data including actual dredging rates and schedules, empirical data on the composition of dredged material and actual metocean conditions over the hindcast period, to assess the extent, intensity and duration of sediment plumes generated by turbid water overflow from dredging equipment in overflow control zones over hindcast periods not exceeding 3 days in arrears;
- viii.
  - a. fortnightly monitoring of coral health at each designated reef formation in the Zone of Moderate Impact and at appropriate reference sites; or
  - b. monitoring of other relevant biological health indicators;
- ix. a program to inform routine verification and update (as necessary) of the Proposal-specific tolerance limits and the spill budget;
- x. measures for timely, proactive management of dredging, or turbid water overflow from dredging equipment, in overflow control zones to prevent detectable reduction of live coral cover at any designated reef formation in the Zone of Moderate Impact and achieve the environmental protection outcomes referred to in condition 6-1, or any approved revised environmental protection outcomes; and
- xi. procedures for timely reporting of monitoring results and management actions.

#### 6. Change to Condition 6-15

Condition 6-15 of Ministerial Statement 873 is deleted and replaced with:

- 6-15 If coral health monitoring required by condition 6-14(viii)(a) indicates the lowest detectable reduction of net live coral cover at any designated reef formation in the Zone of Moderate Impact, then the Proponent shall, unless otherwise approved by the CEO, report that monitoring result to the CEO within 24 hours of the detection and immediately, and then for the remainder of marine works required for construction of marine facilities, implement management of turbid water overflow from dredging equipment in overflow control zones in accordance with condition 6-16.

#### 7. Change to Condition 6-16

Condition 6-16 of Ministerial Statement 873 is deleted and replaced with:

- 6-16 If condition 6-15 is brought into effect or if the Proponent exercises discretion at any time not to implement condition 6-14, or unless otherwise approved by the



CEO, then the turbid water overflow from dredging equipment in overflow control zones shall only be allowed:

- i. when and where it can be demonstrated, by undertaking monitoring to the satisfaction of the CEO, that designated reef formations would not be exposed to turbidity associated with the turbid water overflow from dredging equipment; or
- ii. where approved by the Minister.

8. Change to Condition 8-10

Condition 8-10 of Ministerial Statement 873 is deleted and replaced with:

8-10 The objectives of the Trunkline Installation Environmental Monitoring and Management Plan are to ensure that turbidity-generating activities associated with trunkline installation, in State waters:

- i. achieve the environmental protection outcomes set in condition 8-7 (or any approved revised environmental protection outcome); and
- ii. are managed with the aim of achieving the management objectives set out in condition 8-8.

9. Change to Condition 8-11

Condition 8-11 of Ministerial Statement 873 is deleted and replaced with:

8-11 The Trunkline Installation Environmental Monitoring and Management Plan shall include:

- i. information describing the actual trunkline route to be used consistent with the approved Trunkline Route and Infrastructure Plan;
- ii. descriptions of key trunkline installation activities, including information about where and when each activity will occur consistent with the approved Trunkline Route and Infrastructure Plan;
- iii. descriptions of monitoring sites, including key physical attributes, geographic locations and measures of the baseline condition of benthic communities to be monitored;
- iv. the monitoring methodologies to be applied, unless otherwise approved by the CEO to:
  - a. measure relevant physical indicators (e.g. water currents, water quality conditions including turbidity, photosynthetic radiation and light attenuation coefficient, and sediment production and deposition rates) at a frequency to allow near-real time dredge management and the

validation and calibration of numerical models that may be used to assist in the management of dredging activities; and

- b. measure relevant biological indicators for environmental management (e.g. live coral cover, coral mortality) at a frequency of approximately not less than each 14 days (depending on weather conditions and the biological indicators);
- v. the measures, procedures and monitoring strategy to be applied for monitoring achievement of the environmental protection outcomes set in accordance with conditions 8-7(iii) and (vi) (or any approved revised environmental protection outcome that may apply);
- vi. evidence demonstrating that the design of the monitoring strategy applied to determine achievement of environmental protection outcomes set in accordance with condition 8-7(iii) and (vi) (or any approved revised environmental protection outcome that may apply) is based on tests using appropriate effect size(s) and has statistical power value of at least 0.8 or an alternative value as determined by the CEO;
- vii. the trigger indicators, values and circumstances that shall be applied to determine whether the management objectives detailed in condition 8-8 are being achieved;
- viii. a risk-based tiered approach to management of the environmental impacts of trunkline installation activities;
- ix. management actions that will be implemented in the event that tiered management trigger levels for the various indicators being monitored are not being achieved;
- x. methods and procedures that will be implemented to regularly characterise, spatially-define and report the realised Zone of Influence caused by turbidity-generating activities associated with trunkline installation;
- xi. procedures to be implemented to minimise the environmental impact of trunkline installation vessel operations, including vessel anchoring;
- xii. coral reproductive status monitoring to assist with predicting the timing and duration of coral spawning events; and
- xiii. reporting requirements.

#### 10. Change to Condition 8-15

Condition 8-15 of Ministerial Statement 873 is deleted and replaced with:

8-15 In the event that:

- i. condition 8-14 does not apply and the Proponent wishes to recommence the turbidity-generating activities suspended under condition 8-13; or,
- ii. the current environmental protection outcomes need to be revised because they no longer or are not reasonably expected to provide the most relevant or best measure for the protection of benthic primary producers;

the Proponent shall submit a report to the Minister detailing where applicable, the following:

- iii. the results of the most recent biological indicators monitoring, for all monitoring and reference sites;
- iv. identifying those monitoring and reference sites, and the monitoring results for those sites, where:
  - a. an environmental protection outcome (or any approved revised environmental protection outcome) is not being achieved or no longer be reasonably expected to provide the most relevant or best measure for the protection of benthic primary producers;
  - b. there is strong evidence that non-achievement of an environmental protection outcome (or any approved revised environmental protection outcome) is reasonably expected to be recorded as part of the same event;
- v. the turbidity-generating activities which were being undertaken in the monitoring period prior to the environmental protection outcome not being achieved and until the time of suspension;
- vi. the metocean conditions as monitored in the most recent monitoring period (and up until the time of suspension under condition 8-13, if applicable) prior to observing that the environmental protection outcome (or any approved revised environmental protection outcome) is not being achieved or no longer provides the most relevant or best measure for the protection of benthic primary producers;
- vii. the results of the most recent water quality and sediment deposition monitoring;
- viii. proposed revised environmental protection outcome(s) for those site(s) outside the Zones of Moderate Impact where:
  - a. an environmental protection outcome is not being achieved;
  - b. there is strong evidence that exceedance of an environmental protection outcome is expected to be recorded as part of the same event; or

- c. the environmental protection outcome (or any approved revised environmental protection outcome) no longer provides the most relevant or best measure for the protection of benthic primary producers;
- ix. proposed revised environmental protection outcome(s) for the designated reef formations at Ashburton Island and Brewis Reef or site(s) inside the Zones of Moderate Impact where an environmental protection outcome (or any approved revised environmental protection outcome) is not being achieved or no longer provides the most relevant or best measure for the protection of benthic primary producers; and
- x. any other information considered relevant by the Proponent in support of the:
  - a. continuance or recommencement of all turbidity-generating activities or recommencement of all turbidity-generating activities associated with trunkline installation that remain suspended;
  - b. proposed revised environmental protection outcome to provide the most relevant or best measure for the protection of benthic primary producers;
- xi. if an environmental protection outcome (or an approved revised environmental protection outcome) inside a Zone of Moderate Impact is not being achieved the Proponent shall include in the report required by condition 8-15 additional management actions proposed so that the recommencement of turbidity-generating activities associated with trunkline installation:
  - a. will not contribute to non-achievement of a revised environmental protection outcome proposed by the Proponent in conditions 8-15(viii) and 8-15(ix), for that zone where failure to achieve an environmental protection outcome has been recorded, having regard to the matters provided for in condition 8-15; and
  - b. will ensure that all other environmental protection outcomes set in condition 8-7 continue to be achieved outside the Zones of Moderate Impact (unless a revised environmental protection outcome for a specified site(s) has been approved);
- xii. if an environmental protection outcome (or any approved revised environmental protection outcome) outside the Zones of Moderate Impact (not including the Zone of High Impact) is not being achieved, the Proponent shall include in the report required by condition 8-15 additional management actions proposed to be implemented so that the recommencement of turbidity-generating activities associated with trunkline installation:

- a. will not contribute to further non-achievement of any other environmental protection outcomes set in condition 8-7 (or any approved revised environmental protection outcome); or
- b. will not cause non-achievement of a revised environmental protection outcome proposed by the Proponent in conditions 8-15(viii) or 8-15(ix) at those sites where failure to achieve an environmental protection outcome (or any approved revised environmental protection outcome) has been recorded or there is strong evidence that non-achievement of an environmental protection outcome (or any approved revised environmental protection outcome) is expected to be recorded as part of the same event; and
- c. will ensure the environmental protection outcomes set in condition 8-7 (or any approved revised environmental protection outcome) continue to be achieved at all other sites and reef formations.

11. Change to Condition 8-16

Condition 8-16 of Ministerial Statement 873 is deleted and replaced with:

8-16 The Minister may, having regard to the report submitted by the Proponent under condition 8-15 and on the advice of the Chairman of the EPA, approve revised environmental protection outcome(s) to have effect for the purpose of condition 8-7 in which case the Proponent may then commence, continue or recommence (whichever is relevant) turbidity-generating activities associated with trunkline installation subject to the revised environmental protection outcome(s). The Minister may also, having regard to the report submitted by the Proponent under condition 8-15, require the Proponent to implement all or any of the additional management actions proposed in the report as required by condition 8-15(xi) and (xii) or other additional practicable management actions, as part of the approved Trunkline Dredging and Dredge Spoil Placement Environmental Monitoring and Management Plan (condition 8-9).

[Signed 6 July 2012]

**HON BILL MARMION MLA**  
**MINISTER FOR ENVIRONMENT; WATER**

