

## Appendix 2 – Pluto LNG Project Management Plan Key actions.

Woodside has complied with each key actions contained within any Environmental Management Plan or program required by Woodside's ministerial conditions. Key actions from each management plan or program are outlined below, evidence of compliance has also been provided.

| Key Management Action   | Source Ref/ Chap | Evidence  |
|---|------------------|---|
| <b>Marine Treated Wastewater Discharge Management Plan (including Contingency Waste water Management Plan)</b>  |                  |   |
| Nil additional management conditions.   |                  | NA  |
| <b>Dredge Impact Management Plan (Condition 6-6)</b>  |                  |   |
| <b>Coral Condition Assessments</b>  |                  |   |
| The results of the coral spawning assessment will be reported to the Woodside Construction Team Environmental Coordinator who will advise the Woodside Construction Team Project Manager. The Project Manager will inform the Dredge Environment Management Group (DEMG) and the Department for the Environment and Conservation (DEC).   | 4.6.6            | - Spawning assessments have been completed for all of the predicted spawning windows outlined in Section 4.6.6 of the DSDMP. Dredging activities have been suspended where required following consultation with the DEMG. This has been required on two occasions to date. Refer to Appendix 13 - 'Spawning Assessments and Dredging Suspension Periods - Previously Submitted Compliance Reports'. |
| Dredging will cease in areas likely to effect coral larval survival if the spawning assessment shows there will be a significant event in the next predicted spawning window. The spawning assessment will take place 2-3 weeks before the spawning window. A significant spawning event is where more than 20% or more of the individuals of a species/genus group show readiness to spawn in the next window and the corals surveyed are the dominant and subdominant ones from any site.   | Appendix H 4.5   |   |
| The coral spawning report will be used by the Woodside Construction team to effectively manage the dredging works with respect to the key ecological windows to the requirements of Schedule 4 of the Ministerial Statement.  | Appendix H 6     |   |
| An assessment in conjunction with the DEMG and on advice from the DEC will be made on whether the planned dredging activities should cease to ensure that larval survival and recruitment will not be effected by dredging.   | 4.6.6            |   |
| A baseline (coral recruitment)* survey will be undertaken no less than two weeks prior to dredging commencing and then a post dredging survey within three months of the completion of dredging and disposal. A stand alone progress report representing the pre-dredging survey results will be provided to the DEC prior to dredging commencing. A final stand alone report will compare the baseline with the post dredging survey to provide an indication of mortality rates for this size class of corals from the different sites. | Appendix G - 4.3 | - Baseline coral health monitoring was conducted prior to the commencement of dredging in order to establish baseline levels of mortality (refer to Appendix 14). These surveys also included an assessment of the abundance of small (<50mm) coral to allow assessment of impact on recruitment following dredging completion.   |

| <b>Water Quality and Sediment Condition Assessments</b>  |                 |   |
|--|-----------------|---|
| Satellite imagery from the coarse, medium and high resolution satellites will be processed by Woodside to provide broad scale, semi-quantitative information on the extent and intensity of turbidity within the survey area.  | 4.6.4           | - MODIS images have been captured approximately every second day since the commencement of dredging and processed to provide broad scale semi-quantitative turbidity information. These MODIS images are used to aid interpretation of water quality results during exceedances (refer to Condition 6-2 to 6-4). A high resolution IKONIS image was also captured prior to dredging.              |
| Sediment samples from each site will be taken prior to dredging and again after the completion of dredging. If the post dredging survey shows significant change in sediment characteristics, a further survey will be undertaken six months later to determine if the sediment characteristics have returned to pre-dredge state. | 4.6.3           | - A baseline PSD analysis survey was undertaken in early November 2007 prior to the commencement of dredging in accordance with the approved Sampling and Analysis Plan. The pre-dredging survey report is provided in Appendix 15 (includes 13/11/07 DEC approval for SAP).  |
| A report will be provided to the DEC after each (PSD)* sampling event.   | Appendix E -2.6 |   |
| A key component of the monitoring programme will be an early model verification phase in which the predictions made by the model for various sets of environmental (weather and sea state) conditions can be tested by taking real measurements in and around the plume.   | 4.9             | - Model verification is currently underway and will be reported on completion following DEMG consultation.  |
| <b>BEP Techniques</b>  |                 |   |
| The specific techniques, equipment, technology and management measures that will be implemented as part of Woodside's commitment to BEP dredging are described in Section 4.3.4 (Table 26) of the DSDMP. These measures must be implemented where possible.*   | 4.3.2           | - Nil dredging impact on coral health to date (refer to Conditions 6-2 to 6-4) is evidence that appropriate proactive measures are being taken to reduce the potential for impact on coral communities from turbidity and/or sedimentation;<br>- The BEP techniques specified in the DSDMP have been implemented where required (refer to Appendix 2 - 'BEP Dredging Techniques Implementation'). |
| The effectiveness of BEP techniques will be reported to the DEMG in the event that they are implemented. An independent dredging expert has also been appointed to the DEMG to offer further advice where applicable.  | 4.3.4           | - The effectiveness of the BEP techniques has been discussed with the DEMG where applicable. For example, in DEMG meeting 4 the effectiveness of the CSD diffuser was discussed in relation to the smaller than predicted plume rehandling of spoil was producing. Meeting minutes have been submitted to the DEC DEMG Representative previously.   |

| <b>Marine Quarantine Management Plan (Condition 8-1)</b>                       |                  |   |
|--|------------------|---|
| Quarantine key actions.  | Various          | - The key management actions relating to risk assessment and inspection/vetting of dredging equipment and/or other vessels associated with dredging are specifically addressed under Ministerial Conditions 8-2 to 8-9. Verifiable evidence is provided against these conditions and not repeated here.   |
| <b>Sea Turtle Management Plan (Condition 9-2)</b>                              |                  |   |
| Development and implementation of a construction lighting protocol.            | Table 7-<br>CS1  | Submission of Construction Lighting Protocol to DEC.  |
| Implementation of Blasting Procedures.   | Table 7-<br>CS2  | - Due to the success of mechanical dredging methods in the berth pocket and inner trunkline, only a single blast pattern has been required to date. This occurred during daylight hours on 17 October 2008 without incident. The DEMG was consulted during the required verification process for the exclusion zone. An exclusion radius of 1000m was adopted;<br>- Refer to Appendix 16 for DEMG advice related to the marine blasting completed;<br>- Refer to Appendix 16 for DEC compliance correspondence relating to the marine blasting completed. |
| Implementation of Dredging Procedures.   | Table 7-<br>CS3  | - Key actions relating to dredging works were audited by an Independent Fauna Observer (IFO) from Blue Planet Marine. The BPM close out report is provided in Appendix 12.  |
| Management of nearshore/ offshore spill response plan.                         | Table 7-<br>CS4  | Plan has been developed for implementation. The plan has not been implemented to date (no major spills).  |
| Limit access to Holden Beach (personnel and vehicles).                         | Table 7-<br>CS5  | Restricted access is covered in site inductions.  |
| Development and implementation of an operational lighting protocol.            | Table 8 -<br>OS1 | Submission of Operational Lighting Protocol to DEC. This has been approved by the DEC.  |
| <b>Cultural Heritage Management Plan</b>                                       |                  |   |
| Meet statutory obligations in relation to the management of cultural heritage. | Section 1        | Site A - Department of Indigenous Affairs confirmed compliance. Site B - independent consultant advice confirms compliance.   |

|   |           |  |
|---|-----------|--|
| Implement where practicable the recommendations made by the Indigenous groups of the area in relation to cultural heritage management.  | Section 1 | Pluto Public Environmental Review (chapters 10 and 11) outline how Woodside has implemented recommendations from the local Aboriginal groups regarding footprint design.<br>Majority of rock art on Pluto LNG Project leases' have remained untouched by Woodside. No engravings were damaged during the retrieval and relocation of rock art. |
| Minimise impacts to the cultural heritage environment.  | Section 1 |  |
| <b>Air Quality Management Plan</b>  |           |  |
| NA - Plan will be developed in 2010.  |           | NA   |
| <b>Green House Gas Abatement Program</b>  |           |  |
| Offset reservoir CO2 emissions for the life of the project using allocation from the Woodside market abatement portfolio, to meet the environmental approval abatement conditions.  | 6.1       | A contract was signed with CO2 Australia, has been proposed as the mechanism by which Pluto LNG Project will discharge offset liabilities.   |
| <b>Preliminary Decommissioning Plan</b>   |           |  |
| Preliminary Decommissioning Plan was submitted to DEC on 30 April 2008. Comment was provided by DEC on 28 October 2008. A response to these comments is still being developed. Key actions to satisfy this commitment will be identified once plan has been approved. |           | NA   |
| <b>Final Decommissioning Plan</b>   |           |  |
| Final Decommissioning Plan will be developed closer to decommissioning date. Key actions to satisfy this commitment will be identified once plan has been approved.   |           | NA   |

*\* Note: Minor additions have been made to key actions from management plans for clarification of intent.*

## Appendix 3 – Pluto LNG Project Non Compliance corrective and preventative actions.

During the implementation to Ministerial Statement 757, the Pluto Project has encountered 3 non compliances. These non compliances related to boundary breaches (with no impacts to the environment or cultural heritage) and the drainage of seawater. A summary of the non compliances are outlined in the table below:

| Non compliances/ Non conformances  | Corrective and Preventative Actions  |
|--|--|
| March 2008 – Boundary excursion of approximately 1000 m <sup>2</sup> , adjacent to the Ammonia pipeline easement. Area which was accidentally filled was previously disturbed, hence there are no environmental or heritage impacts.                                 | 1. Development and implementation of a procedure to access areas outside the disturbance footprint.  |
| October 2008 – Drainage of seawater used for compaction beyond approved footprint.   | <ol style="list-style-type: none"> <li>1. Transition of seawater to potable water. Replace seawater inventory with potable water</li> <li>2. Investigation into potential impacts (hydrogeological investigations and vegetation investigations)</li> <li>3. Creek lines have been flushed with potable water</li> </ol> |
| October 2008 – Boundary excursion of approximately 149 m <sup>2</sup> in the vicinity of Area 11 and approximately 53 m <sup>2</sup> in the vicinity of the saddle. Similarly with the previous boundary excursion, there were no environmental or heritage impacts. | 1. Update procedure to enforce survey controls prior to clearing.  |

