



# Newcastle Gas Storage Facility

**7th Quarterly Audit (CBI)  
June 2014**

AGL Energy Limited

July 2014

0169504 Final

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Prepared by:	Megan McLachlan
Position:	Project Manager
Signed:	
Date:	16 July 2014
Approved by:	Will Ellis
Position:	Partner
Signed:	
Date:	16 July 2014

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## EXECUTIVE SUMMARY

*Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform a quarterly audit (seventh) for the Newcastle Gas Storage Facility (NGSF) on behalf of AGL Energy Limited (AGL). The audit scope includes the construction of the gas storage facility site (the Project) by the subcontractor CB&I Constructors Pty Ltd (CB&I). The primary purpose of the audit was to satisfy the Department of Planning and Infrastructure (DP&I) Ministers' Conditions of Approval (MCoA) B54a, which requires a Compliance Tracking Program that includes:*

*“(a) provisions for periodic reporting of compliance status to the Director-General including at least prior to the commencement of construction of the project, prior to the commencement of operation of the project and within two years of operation commencement”.*

*The audit included a review of the implementation of the following plans:*

- Soil Management Sub Plan;*
- Surface Water Management Sub Plan;*
- Air Quality Management Sub Plan;*
- Groundwater Management Sub Plan;*
- Waste Management Sub Plan;*
- Noise and Vibration Management Sub Plan; and*
- Dangerous Goods and Hazardous Materials Handling Management Sub Plan.*

*The Contractor has established the control systems generally required for a project of this nature, and all staff interviewed demonstrated an understanding of requirements and a commitment to the application of the management systems.*

*Overall a high standard of compliance was noted to be achieved with the audit documents that were reviewed, with five non-conformances and two improvement opportunities identified for review and action by AGL and its contractors. An action table addressing all findings of the audit has been developed by CB&I with most actions now completed.*

## ABBREVIATIONS AND GLOSSARY

<b>Term</b>	<b>Description</b>
AGL	AGL Energy Limited
AQMSP	Air Quality Management Sub Plan
ASSMSP	Acid Sulphate Soil Management Sub Plan
CB&I	CB&I Constructors Pty Ltd
CEMP	Construction Environment Management Plan
CHMSP	Cultural Heritage Management Sub Plan
DGHMHMSP	Dangerous Goods & Hazardous Materials Handling Management Sub Plan
DP&I	Department of Planning and Infrastructure
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EPBC	Environment Protection and Biodiversity Conservation Act 1999
ERM	Environmental Resources Management Australia Pty Ltd
ERSP	Emergency Response Sub Plan
FERMSP	Flood Emergency Management Sub Plan
FFMSP	Flora and Fauna Management Sub Plan
GMP	Groundwater Monitoring Program
HWC	Hunter Water Corporation
GMSP	Groundwater Management Sub Plan
MCoA	Ministers Conditions of Approval
NC-1	Non-compliance Category 1
NC-2	Non-compliance Category 2
NGSF	Newcastle Gas Storage Facility (the 'Project')
NOW	New South Wales Office of Water
NVMSP	Noise and Vibration Management Sub Plan
PPA	Primary Project Area
PSC	Port Stephens Council
SDS	Safety Data Sheet
SMSP	Soil Management Sub Plan
SoC	Statement of Commitments
SWMS	Safe Work Method Statement
SWMSP	Surface Water Management Sub Plan
TMSP	Traffic Management Sub Plan
VRMSP	Vegetation Rehabilitation Management Sub Plan
WMSP	Waste Management Sub Plan

## INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform a quarterly audit (seventh) for the Newcastle Gas Storage Facility (NGSF) (the 'Project') on behalf of AGL Energy Limited (AGL).

The primary purpose of the audit was to satisfy the New South Wales (NSW) Department of Planning and Infrastructure (DP&I) Ministers' Conditions of Approval (MCoA) B54a, which requires a Compliance Tracking Program that includes:

*"(a) provisions for periodic reporting of compliance status to the Director-General including at least prior to the commencement of construction of the project, prior to the commencement of operation of the project and within two years of operation commencement".*

Section 2.3 of the Compliance Tracking Program (Rev 1 issued 22/08/2012) commits to 3 monthly audits undertaken by the Project Environmental Representative to satisfy MCoA B54(b):

*"a programme of independent environmental auditing will be carried-out in accordance with AS/NZ ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing".*

This audit is the seventh quarterly audit completed for the CB&I component of the Project which covers the period 10 April 2014 to 5 June 2014 (brought forward one month to realign audit to similar period to other sub-contractor audits).

### 1.1

#### PROJECT DESCRIPTION

AGL Energy Limited (AGL) is developing the Newcastle Gas Storage Facility in Tomago New South Wales to meet AGL's peak gas market requirements over winter and to provide additional security of gas supply during supply disruption events. New South Wales currently has no reliable gas storage capacity.

Construction of the Newcastle Gas Storage Facility by CB&I Constructors Pty Ltd (CB&I) includes the gas storage facility site, access road and utility corridor and gas pipeline access corridor (the Project). Additional works by other contractors include construction of the gas pipeline to connect the existing Jemena Gate Station at Hexham with the gas storage facility and construction of the main power supply. Separate audits and associated reports are produced for each of the sub-contractors.

## 1.2 *AUDIT OBJECTIVE*

The primary objectives for the seventh quarterly compliance audit include the following:

- to verify the implementation of the following plans:
  - Soil Management Sub Plan;
  - Surface Water Management Sub Plan;
  - Air Quality Management Sub Plan;
  - Groundwater Management Sub Plan;
  - Waste Management Sub Plan;
  - Noise and Vibration Management Sub Plan; and
  - Dangerous Goods and Hazardous Materials Handling and Management Sub Plan.
- review the status of the previous ERM quarterly audit findings;
- to identify the areas for potential improvement for environmental management; and
- provide advice as to whether any amendments to sub plans are required.

This audit represents a snapshot of performance on the days of the audit.

## 1.3 *AUDIT SCOPE*

The audit scope is limited to the activities that have been undertaken at the site during the audit period and includes the following:

- forming of the LNG Tank bund wall, foundation works, holding pond construction and underground services work in the Primary Project Area (PPA).

## 1.4 *AUDIT CRITERIA*

The audit covered the following specifications and standards, with a particular focus on activities associated with the current stages of construction. The documents relevant to this audit included:

- DP&I, Ministers Conditions of Approval MP10\_0133 issued 10 May 2012;
- Modification of Minister's Approval MP10\_0133 issued 5 February 2013;
- Statement of Commitments from the Preferred Project Report CR 6023\_1-\_v3 issued September 2011;
- the following sub plans of the Construction Environment Management Plan (Rev 1 issued 3/10/2012);
  - Soil Management Sub Plan (CB&I Doc Number 170596-EN-PL-00007), Rev 1 issued 8 November 2012;
  - Surface Water Management Sub Plan (CB&I Doc Number 170596-EN-PL-00003), Rev 1 issued 5 April 2013;
  - Air Quality Management Sub Plan (CB&I Doc Number 170596-EN-PL-00002), Rev 1 issued 8 November 2013;
  - Groundwater Management Sub Plan (CB&I Doc Number 170596-EN-PL-00002), Rev 0 issued 24 August 2012;
  - Waste Management Sub Plan (CB&I Doc Number 170596-EN-PL-00012), Rev 0 issued 24 August 2012;
  - Noise and Vibration Management Sub Plan (CB&I Doc Number 170596-EN-PL-00009), Rev 2 issued 19 November 2013; and
  - Dangerous Goods and Hazardous Materials Handling and Management Sub Plan (CB&I Doc Number 170596-EN-PL-00013), Rev 0 issued 24 August 2012.
- Environmental Representative Site Inspection Reports for period 10 April 2014 to 5 June 2014.

## 1.5

### *LIMITATIONS OF THIS REPORT*

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### 2.1 METHODOLOGY AND PROCESS

The audit comprised a site inspection, interviews with key personnel and review of records and other related documentation on 5 June 2014. The audit process included the following primary components:

- development of a Terms of Reference developed which included:
  - audit scope and objectives;
  - date and location of audit;
  - members of audit team;
  - list of people audited; and
  - list of reference documents and audit criteria.
- opening meeting was held on 5 June 2014 at the site office to confirm audit objectives and scope. Attendees included:
  - Megan McLachlan (ERM Auditor);
  - Craig Rivera (CB&I Environmental Manager); and
  - Aaron Clifton (AGL Environmental Manager).
- a site inspection was undertaken on 5 June 2014;
- any identified gaps/issues were documented and followed up with site personnel and additional information was requested as required;
- a closeout meeting was held on 5 June 2014 to discuss initial findings and recommendations. Attendees included:
  - Megan McLachlan (ERM Auditor);
  - Craig Rivera (CB&I Environmental Manager); and
  - Aaron Clifton (AGL Environmental Manager).
- preparation of draft audit report;
- response and action plan developed by CB&I and AGL (refer *Annex H*); and
- preparation of final audit report.

Findings resulting from an assessment of audit evidence were divided into four categories as follows:

- **Conformance (C):** Adequate and appropriate implementation against audit requirements.
- **Non-conformance Category 1 ( NC-1):** Failure to meet the requirements of the audit criteria in terms of legislative requirements, failure to achieve the management performance outcomes identified in documentation, or ineffective environmental management of the activity that represent an *immediate risk* to the environment or reputation of the company.
- **Non-conformance Category 2 (NC-2):** Failure to achieve the management performance outcomes identified in documentation, or ineffective environmental management of the development that does not represent an immediate risk to the environment. These will generally be associated with documentation, records or administrative requirements.
- **Improvement Opportunity (IO):** A finding which does not strictly relate to the scope of the audit and which could lead to performance improvement.
- **Not Applicable (NA):** requirement was not applicable to project operations during the audit as requirement or control was not applicable to the activities underway at the time.

### 3 *AUDIT FINDINGS*

#### 3.1 *PREVIOUS AUDIT FOLLOW-UP*

The 6<sup>th</sup> quarterly audit completed 10 May 2014 assessing the implementation of the Soil Management Sub Plan, Surface Water Management Sub Plan, Air Quality Management Sub Plan, Groundwater Management Sub Plan, Waste Management Sub Plan, Noise and Vibration Management Sub Plan raised four non-conformances and one improvement opportunity.

#### 3.2 *ASSESSMENT OF CEMP SUB PLAN IMPLEMENTATION*

A compliance check of the MCoA and SoC conditions (field component) was completed against the commitments made in the targeted sub plans for the site. Non-conformances and improvement opportunities for each sub plan reviewed are summarised in *Table 3.2*.

A full review and audit findings for implementation of each Sub Plan are under the following Annexures:

- Soil Management Sub Plan *Annex A*
- Surface Water Management Sub Plan *Annex B*
- Air Quality Management Sub Plan *Annex C*
- Groundwater Sub Plan *Annex D*
- Waste Management Sub Plan *Annex E*
- Noise and Vibration Management Sub Plan *Annex F*
- Dangerous Goods and Hazard Materials Handling Management Sub Plan *Annex G*

**Table 3.1 Summary of Non Conformances and Improvement Opportunities**

Item No	Assessment Requirement	Comment	Audit Classification
<i>DP&amp;I, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</i>			
B15	<p>During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:</p> <p>(a) all relevant Australian Standards; and</p> <p>(b) DECC's Environment Protection Manual Technical Bulletin - Bunding and Spill Management.</p> <p>In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.</p>	<p>Noted during audit site inspection storage of Class 8 shipping container located near workshop area also contained carton of Class 2 (gases). Segregation of Class 2 and 8 needs to be at least 3m in a well-ventilated area. Consider moving Class 2 gases out of shipping container storing Class 8 substances. Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes.</p>	NC-1
B20	<p>Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997 during construction of the project.</p>	<p>A diesel spill was noted at the generator located near the gas storage tank. Indications are that it was likely a number of spills had occurred in the area over a period of time. Due to the design of the tank, the refuelling procedure had to be changed to allow for the refuelling to occur without the high level switch cutting off repeatedly. A breather cap was also removed to expedite refuelling which was located on other side of tank therefore any leaks/spills from this area were not noted during refuelling. This tank has now been removed from site; however, a tank based on a similar design is still on site. Consider the removal of this tank and installation of a tank fit for purpose to prevent spills from overfilling. If not practicable to remove tank from site, consider adding walk around tank during and after refuelling to work method statement to check for leaks/spills.</p>	NC-1
<i>Statement of Commitments</i>			
2	<p>Ensure concrete mixers and pump trucks are washed on bunded hardstand areas so that no waste enters the environment.</p>	<p>Concrete washouts occur as per approval modification. Site inspections at the beginning of the audit period noted the liner had been torn which was replaced but has since been torn again. Consider replacing thin plastic liner with HDPE liner or similar material to prevent tearing during normal concrete washout activities.</p>	NC-1

Item No	Assessment Requirement	Comment	Audit Classification
35	Develop hydrostatic test management measures in consultation with HWC and NSW Office of Water (NOW).	Review of the plan for dewatering of the Gas Holder Tank indicates water will be tested for metals prior to release to the stormwater retention pond. Releases from the stormwater retention pond require further testing prior to release. Consider obtaining approval for testing water from the gas holder tank and then releasing directly to pit which releases to Old Punt Rd discharge point. This would prevent delays in receiving test results for the stormwater retention pond and prevent any contamination of the hydrostatic test water through surface water runoff.	IO
62	Maintain runoff, erosion and sediment control structures according to appropriate standards.	Noted during site inspection, scouring of batter on road leading to laydown area along northern boundary. Some sediment is beginning to flow over silt fence. Consider the diversion of water from this area and clean out of sediment from behind the silt fence.	NC-1
67	Store and transport hazardous materials according to their material safety data sheet (MSDS).	Refer to MCoA B15	NC-1
87	Ensure that the banks of watercourses are not disturbed during construction.	Works within one water course on Old Punt Rd completed past audit periods. Further stabilisation using sandbags as per SoC 59 completed. Area now stabilised with vegetation regrowth. Sand bags to be removed as beginning to degrade and may wash sediment into water course.	IO

## CONCLUSION

A quarterly audit to review the implementation of the following management plans was completed:

- Soil Management Sub Plan;
- Surface Water Management Sub Plan;
- Air Quality Management Sub Plan;
- Groundwater Management Sub Plan;
- Waste Management Sub Plan;
- Noise and Vibration Management Sub Plan; and
- Dangerous Goods and Hazard Materials Handling Management Sub Plan.

Overall, substantial conformance was achieved with the audit documents that were reviewed with the exception of five non-conformances and two improvement opportunities. An action response table has been developed addressing all audit findings and is included in *Annex H*. Most actions have since been completed.

Annex A

## Audit Table - Soil Management Sub Plan



Table A1 Compliance Assessment - Implementation of the Soil Management Sub Plan

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Regulatory Requirements - EPL 20130</b>					
<p>Licensed activities must be carried out in a competent manner. This includes:</p> <p>a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p> <p>b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	O1.1	<p>Site Inspections</p> <p>ER Site Inspection Reports</p> <p>CB&amp;I Daily and Weekly Site Inspection reports</p>	<p>Minor quantities of hydrocarbons and other DGs stored inside bunded shipping containers - shipping containers are marked and SDSs included inside containers. Small volumes of fuel stored in impervious containers near work sites.</p> <p>All chemicals brought onto site require form filled out and submitted to CB&amp;I for review.</p> <p>Waste stored in designated bins. Contaminated soil (hydrocarbon) stored in drums and transported off site under waste tracking system - entered into Materials Tracking Register.</p>	C	
<p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <p>a) must be maintained in a proper and efficient condition; and</p> <p>b) must be operated in a proper and efficient manner.</p>	O2.1	Daily vehicle inspection logs	<p>All vehicles checked during daily pre-start.</p> <p>Maintenance records maintained</p>	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>DoPI, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997 during construction of the project.	B20	Site Inspections ER Site Inspection Reports CB&I Daily and Weekly Site Inspection reports Monitoring records Incident report 30 May 2014 Task Observation Reports - refuelling 5 May 2014 and 29 April 2014	Dewatering of work areas after rainfall to groundwater - water tested as per SWMSP.  A diesel spill was reported at the generator located near the gas storage tank. Indications are that it was likely a number of spills had occurred in the area over a period of time. Due to the design of the tank, the refuelling procedure had to be changed to allow for the refuelling to occur without the high level switch cutting off repeatedly. A breather cap was also removed to expedite refuelling which was located on other side of tank therefore any leaks/spills from this area were not noted during refuelling. This tank has now been removed from site; however, a tank based on a similar design is still on site.	NC-1	Consider the removal of fuel tank located near gas holder tank and installation of a tank fit for purpose to prevent spills from overflowing. If not practicable to remove tank from site, consider adding walk around tank during and after refuelling to work method statement to check for leaks/spills.
Erosion and Sediment controls consistent with Managing Urban Stormwater: Soils and Construction Manual (Landcom, 2004, or its latest version) shall be installed prior to the commencement of soil disturbing works and shall be maintained until such time as the disturbed areas have been rehabilitated.	B21	Site Inspections ER Site Inspection Reports CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Silt fences installed along site boundary - inspected daily and maintained as required.  Erosion and Sediment Control Inspection and Maintenance Checklist updated to include sediment capacity, performance of measures and conditions of measures. Checklist updated in SWMSP.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
The Proponent shall carry out rehabilitation of disturbed areas progressively, and as soon as reasonably practicable following disturbance.	B22	Site Inspections ER Site Inspection Reports CB&I Daily and Weekly Site Inspection reports	Old Punt Rd works completed with road edges stabilised. Main Access Rd rehabilitated. All other areas still under construction.	C	
<b>Statement of Commitments from the Preferred Project Report CR 6023_1-_v3 issued September 2011</b>					
Include a spill response plan in the emergency response plan and ensure that there is adequate spill response equipment stored onsite. Personnel will be trained on the emergency response plan and correct use of the spill response equipment.	SoC 1	Appendix B13 - Emergency Response Plan Tool box records Training Records	Spill response plan included in ERP and in Table 8-13 of SMSP.  CB&I have prepared and delivered training module 29-30 May 2014	C	
Ensure concrete mixers and pump trucks are washed on bunded hardstand areas so that no waste enters the environment.	SoC 2	Site Inspections ER Site Inspection Reports Modification to CoA	Modification of Minister's Approval MP10_0133 issued 5 February 2013 allowing washout outside of bunded hardstand areas until concrete hardstand areas are installed on the site.  Site inspections at beginning of the audit period note the liner has been torn and then replaced. Audit inspection indicates liner is torn again and again needs replacing.	NC-1	Consider the replacement of thin black plastic with HDPE or similar to prevent need to replace liner frequently
Store potential acid sulfate soils capable of producing leachate within lined bunds.	SoC 3	Site Inspections ER Site Inspection Reports	Treated PASS stored in plastic lined bunded area. Material classifies as solid waste and removed off site. Area decommissioned. No trenching works in ASS/PASS areas conducted during audit period.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Provide workforce inductions and training to ensure personnel have knowledge of the correct use of refuelling systems and chemical handling procedures.	SoC 5	Induction slide pack	Induction includes refuelling and chemical handling requirements for the site.	C	
Restrict vehicle movements to sealed or dedicated areas and roadways, as far as practical.	SoC 6	Site Inspections ER Site Inspection Reports	Movements are along Main Access Road or Gas Pipeline Track. Movements on PPA also confined to delineated areas.	C	
Ensure drainage around vehicle and equipment servicing areas, workshops and chemical storage areas is directed to sumps.	SoC 7	Site Inspections ER Site Inspections	Vehicles and equipment not currently serviced on site.	NA	
Use licensed contractors to collect, transport and dispose of hazardous materials such as waste solvents, paints, mercury absorption medium and hydrocarbons to a licensed off-site facility in accordance with EPA guidelines.	SoC 8	Site Inspections ER Site Inspection Reports Materials Tracking Register	EPLs of waste contractors obtained. Waste tracking requirements met with check of disposal facilities EPLs completed. Materials and consignment numbers tracked in register. Disposal location randomly checked for one load.	C	
Remove wastewater and sewage from site by an EPA licensed operator for treatment at an EPA-approved wastewater treatment facility.	SoC 9	Site Inspections Materials Tracking Register	Checks completed and EPLs obtained for wastewater removal.  Oily water removed by AES Pty Ltd and disposed to Environmental Treatment Solutions Pty Ltd. EPLs checked for oily waste transporters and disposal location.	C	
Regularly inspect hazardous material containment facilities to ensure their integrity.	SoC 10	CB&I Daily and Weekly Site Inspection reports	Checks completed and recorded by CB&I on the daily and weekly site inspection checklists.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Perform an assessment (in accordance with the SEPP 55 and NEPM 1999) to confirm the contaminant type, concentrations and extent of contamination in the event of unearthing historically contaminated soil. Action will then be undertaken in accordance with relevant EPA requirements and land use criteria to either remediate the impacted area or remove the contaminants.	SoC 12	Interview - Environment Manager	No contaminated soil material has been unearthed during audit period.	NA	
Include inductions to construction personnel that outline measures on how to deal with suspected contaminated soil.	SoC 14	Interview - Environment Manager Induction slide pack	Requirement to contact supervisor in case of uncovering contaminated soil outlined in induction.  Unexpected find and information on how to identify contaminated soil has been added to the environmental induction (Rev 6)	C	
A construction Surface Water Management Plan that describes erosion and sediment control will be prepared in accordance with NSW DECC Managing Urban Stormwater: Soils and Construction - Volume 2A Installation of Services 2008 (DECC, 2008) and Managing Urban Stormwater: Soils and Construction (The Blue Book) (Landcom, 2004). All erosion control and drainage works will be designed in accordance with Urban and Sediment Control Guidelines (DLWC, 1992).	SoC 15	Appendix C to the SWMP	SWMSP developed in accordance with guidance documents. Controls and guidance on installation included in Appendix C of plan.  Installation of controls as per guidance documents including drains along cuts on Main Access Road. Main Access Road handed back to AGL.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Inspecting and monitoring hazardous material containment facilities to ensure their integrity.	SoC 23	CB&I Daily and Weekly Site Inspection reports	Checks completed and recorded by CB&I	C	Duplicate with SoC 10
Inspecting and maintaining erosion and sedimentation control structures.	SoC 24	Site Inspections ER Site Inspection Reports CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Erosion and Sediment Control Inspection and Maintenance Checklist completed which includes sediment capacity, performance of measures and conditions of measures.	C	
Inspecting and monitoring of works to ensure soil erosion or contamination is not occurring.	SoC 25	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Erosion and Sediment Control Inspection and Maintenance Checklist completed which includes sediment capacity, performance of measures and conditions of measures.	C	
Restrict construction traffic movement to formed access tracks to avoid excess disturbance to soil and creation of bare areas where practicable.	SoC 46	Site Inspections ER Site Inspection Reports	Movements are along Main Access Road or Gas Pipeline Track. Movements on PPA also confined to delineated areas.	C	Duplicate with SoC6
Select construction equipment to minimise the disturbance to soils.	SoC 47	Site Inspections ER Site Inspection Reports	Majority of machines have rubber tyres with track vehicles only used when works require.	C	
Minimise duration of subsoil (including stockpiles) exposure to weather.	SoC 48	Site Inspections ER Site Inspection Reports	Subsoil replaced in final locations as soon as practicable.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Secure disturbed bare soils by re-spreading topsoil, revegetating or applying a geo-fabric (or similar), as soon as practicable after reinstatement of earthworks.	SoC 49	Site Inspections ER Site Inspection Reports	Rehabilitation works completed along northern side of Main Access track. Old Punt Rd stabilised. All other areas remain active	C	
Revegetate exposed soils as soon as possible to reduce potential for sediment-laden runoff.	SoC 50	Site Inspections ER Site Inspection Reports	Rehabilitation works completed along northern side of Main Access track. Old Punt Rd stabilised. All other areas remain active	C	
Provide wind-breaks (or equivalent control measures) around exposed areas and stockpiles to prevent wind erosion.	SoC 51	Site Inspections ER Site Inspection Reports	Not applicable as material is sandy with no dust noted coming off stockpiles during site inspections - includes windy days	NA	
Place soil stockpiles upslope of excavations and not in drainage lines.	SoC 52	Site Inspections ER Site Inspection Reports	Excavations primarily in Primary Project Area which is relatively flat. No material noted in drainage lines during audit period.	C	
Construct roadside swales to capture runoff from the Primary Project Area access roads during construction.	SoC 53	Site Inspections ER Site Inspection Reports	Roadside swales installed along Main Access Road.	C	
Design drains to minimise water velocities.	SoC 54	Site Inspections ER Site Inspection Reports	Drain width is maximised. Rock checks placed along lengths on southern side of road. Mulch and jute mesh where required	C	
Install velocity reduction devices, such as sandbags, in drains and sloped drains to reduce erosion.	SoC 55	Site Inspections ER Site Inspection Reports	Sandbags and rock checks have been placed in drains where required - ongoing maintenance of controls.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Install sediment capture devices, such as silt fences and bunding, down-slope of exposed soils and soil stockpiles.	SoC 56	Site Inspections ER Site Inspection Reports	Silt fences installed along site boundaries.	C	
Construct suitably lined sediment control ponds down-slope of construction work areas upfront. These will subsequently be developed into permanent wetlands during the operations stage.	SoC 57	Site Inspections ER Site Inspection Reports	Sediment control pond installed in Primary Project Area. Water tested prior to discharge.	C	
Treat construction tracks to minimise surface degradation, e.g., compaction or topping with gravel.	SoC 58	Site Inspections ER Site Inspection Reports	Main Access Road and Gas Pipeline Track both sealed with crushed gravel material.	C	
Stabilise the banks of any disturbed watercourses adjacent to Old Punt Road using measures such as rock rip-rap, diversion berms, sediment fences, jute matting and reseeding.	SoC 59	Appendix C (Section 4.2)	Works adjacent to Old Punt Rd completed. Sediment controls installed with ongoing maintenance required.	C	
Divert runoff upstream of disturbed areas to existing drainage lines to prevent the risk of increasing erosion and requiring further sediment control measures.	SoC 60	Site Inspections ER Site Inspection Reports	Diversion drains installed as per SMSP with exception of car park area along western boundary. Sandbags installed instead and rock placed in area to prevent erosion.	C	
Undertake daily inspections of all runoff, erosion and sediment control structures during the construction period.	SoC 61	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Checks completed daily (split into work areas with all areas covered over the week). All areas inspected after rainfall events.	C	



Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Maintain runoff, erosion and sediment control structures according to appropriate standards.	SoC 62	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	CB&I checklists reports on effectiveness of controls Site inspections indicate maintenance works are on-going. Scouring of batter on road leading to laydown area along northern boundary. Some sediment is beginning to flow over silt fence.	NC-1	Consider the diversion of water from this area and clean out of sediment from behind the silt fence.
Ensure silt fences are in a vertical position and securely fixed and remove sediment or residue behind sediment control barriers.	SoC 63	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	CB&I checklists report on general condition of structures	C	
Monitor earthwork areas regularly for signs of erosion.	SoC 64	CB&I Daily and Weekly Site Inspection reports	Checks for erosion completed and recorded	C	
Install and commission at the operations phase, runoff, erosion and sediment control measures as soon as practical.	SoC 65	Site Inspections	Project still in construction phase	NA	
<b>Additional Management Plan Commitments</b>					
<i>Training and Awareness</i>					
All project personnel will undergo a general project induction prior to commencing work with CB&I. This will include a soil component to reinforce the importance of management and the measures that will be implemented to protect soil.	Section 3.2	Induction slide pack	States controls to minimise erosion have been installed ASS considered low risk however explained regular checks are required during excavation. Material must be contained in bunded areas	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>Project inductions will include:</p> <ul style="list-style-type: none"> <li>• Basic erosion and sediment control principles;</li> <li>• Acid Sulfate Soils</li> <li>• Contaminated soil; and</li> <li>• Spill response.</li> </ul>			<p>Any soil contamination to be reported to supervisor.</p> <p>Spill response discussed a number of slides throughout presentation including safety.</p>		
<p>Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in soil management. Examples of training topics include:</p> <ul style="list-style-type: none"> <li>• Sediment basin construction;</li> <li>• Sediment basin maintenance;</li> <li>• Working near or in drainage lines and creeks;</li> <li>• Emergency response measures in high rainfall events;</li> <li>• Spill response;</li> <li>• Erosion and Sediment Controls;</li> <li>• Stockpile location criteria; and</li> <li>• Identification of potentially contaminated soil and fill material.</li> </ul>	Section 3.2	Toolbox talks register	<p>Toolbox topics during audit period included hydrocarbon spill response and housekeeping. Training module on how to use spill kits also completed.</p> <p>Sediment basins constructed.</p> <p>Stockpiles in final locations until works completed.</p> <p>Identification of potentially contaminated soil completed.</p>	C	Refer to SoC14 (duplicated)

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b><i>Monitoring and Review</i></b>					
Daily visual inspections of the construction site will be undertaken by the EV and construction personnel to identify actual or potential soil management issues.	Section 5.1	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Checks completed daily (split into work areas with all areas covered over the week). All areas inspected after rainfall events.	C	
Documented weekly environmental inspections that include monitoring of erosion and sediment control devices control devices, including sediment fences and dams will also be undertaken by the EV and forwarded to the EM for review	Section 5.1	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Erosion and Sediment Control Inspection and Maintenance Checklist completed which includes sediment capacity, performance of measures and conditions of measures.	C	
Inspections of erosion and sediment control devices will be undertaken as follows: <ul style="list-style-type: none"> <li>• Weekly; or</li> <li>• Following a rainfall event of 10 mm or greater or unless there has been significant preceding rainfall; and</li> <li>• Within 24 hours of cessation of a rainfall event causing runoff to occur from the site premises.</li> </ul>	Section 5.1	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Erosion and Sediment Control Inspection and Maintenance Checklist completed which includes sediment capacity, performance of measures and conditions of measures.	C	
The Environmental Review Group (ERG) and ER will inspect the site regularly.	Section 5.1	ER Site Inspection Reports	ER site inspections completed weekly during clearing phase of works. Initial stages of construction fortnightly inspections completed. Moved to monthly beginning of 2014.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Six monthly internal audits for compliance against the CoA, SoC and other relevant licences and approvals will include an audit of the worksite and subcontractors to assess compliance with this Sub Plan and site EWMS, including all environmental management aspects related to soil.	Section 5.2	Six Monthly Compliance Reports	Compliance reports completed and sent to DP&I.	C	
Regular environmental compliance audits against the EWMS (Task Observation as described in Section 5.4.3 of the CEMP) will also incorporate any issues relating to soil.	Section 5.2	CEMP Interview - Environment Manager Task Observation Record sheets	EWMSs are reviewed, marked up and comments given to the sub-contractors. 170596-EN-P25 Task Observation Procedure created and implemented.	C	
Provide workforce inductions and training to ensure personnel have knowledge of legislation regarding movement of soils (i.e. importing and exporting soils from site). Engage qualified consultants to assess materials proposed to be imported to or exported from site, and provide re-use/disposal options.	AGL	Induction slide pack Interview - Environment Manager	Topic added into the environmental induction regarding importing and exporting soil to and from site.	C	

Annex B

## Audit Table - Surface Water Management Sub Plan

**Table B1 Compliance Assessment -Implementation of the Surface Water Management Sub Plan**

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>DoPI, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within seven days of becoming aware of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.	A15	Incident notifications Incident Register	Incident notification procedure reflects correct protocol.  No reportable incidents during audit period	C	
<p>During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:</p> <p>(a) all relevant Australian Standards; and</p> <p>(b) DECC's Environment Protection Manual Technical Bulletin - Bunding and Spill Management.</p> <p>In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.</p>	B15	Site Inspections ER Site Inspection Reports DG Notification Form	<p>Minor amounts of fuel and oils currently kept on site. Contained in DG cabinets or banded shipping containers.</p> <p>Site inspections indicate small fuel cans are stored on self-contained bunds or inside dedicated self banded shipping container.</p> <p>Noted during audit site inspection storage of Class 8 shipping container located near workshop area also contained carton of Class 2 (gases). Segregation of Class 2 and 8 needs to be at least 3m in a well-ventilated area. Consider moving Class 2 gases out of shipping container storing Class 8 substances.</p>	NC-1	Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes.

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site during construction, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	B41	Delivery dockets - Hanson's Site Inspections	Site does not accept waste.  No apparent contamination visible in material emplaced on roads  Gravel material used for onsite roads - spot check of delivery dockets completed.	C	
<b>Statement of Commitments from the Preferred Project Report CR 6023_1-_v3 issued September 2011</b>					
Minimise water use.	33	Site Inspections	Bulk of water use for dust suppression. Where possible, water from dewatering operations is used for dust suppression. Dust suppression water will be sourced from stormwater pond once installed.  Toilets have half flush, taps in toilets have timer cut offs installed.	C	
Source water from existing water supply infrastructure. Until the permanent water supply is available, it is currently proposed that this will be supplied to construction sites by either water tankers or from a standpipe such as a HWC metered standpipe along Old Punt Road.	34	Site Inspections	Water supplied to site via tankers sourcing water from HWC metered standpipe on Old Punt Rd. Potable water pipeline installed - to be hydro tested before commissioning.	C	
Develop hydrostatic test management measures in consultation with HWC and NSW Office of Water (NOW). The management measures will address:  Hydrostatic test water supply. This is likely to be potable water from existing HWC water supply infrastructure, untreated water from HWC Pump Station 20 bores, groundwater locally abstracted from	35	Site Inspections, SWMSP.  Hydrostatic Test Water Management Plan	Plan includes Section 2.4 and Table 8-12 outlining commitments and basic procedure. Water for hydrostatic testing to be potable water - added to latest version of plan.  Original plan was developed in consultation with NOW and HWC.	IO	Consider obtaining approval for testing water from the gas holder tank and then releasing directly to pit which releases to Old Punt Rd discharge point. This

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>new bores or a combination of these.</p> <p>Assessment of potential changes to groundwater levels if groundwater is abstracted from existing HWC and new AGL bores.</p>			<p>NOW and HWC consulted for the hydrostatic test management measures proposed in the SWMSP.</p> <p>Review of the plan for dewatering of the Gas Holder Tank indicates water will be tested for metals prior to release to the stormwater retention pond. Releases from the stormwater retention pond require further testing prior to release.</p>		<p>would prevent delays in receiving test results for the stormwater retention pond and prevent any contamination of the hydrostatic test water through surface water runoff.</p>
<p>Transport amenities wastewater offsite by a licensed operator to a licensed disposal facility.</p>	36	<p>Site Inspections</p> <p>Materials Tracking Register</p> <p>Interview - Environment Manager</p>	<p>Review of materials tracking register indicates amenities wastewater transported by Affordable Sanitation Services - service dockets are left at site office. Disposal location is appropriately licenced (EPL downloaded from EPA website).</p> <p>Written confirmation of disposal location from transporter obtained.</p>	C	
<p>Test and treat water generated by dewatering of trenches or excavations if required, and infiltrate back into the groundwater table at designated infiltration areas, or alternatively transport offsite to a licensed disposal facility.</p>	37	<p>Site Inspections</p> <p>Interview - Environment Manager</p> <p>Water quality results</p>	<p>SWMSP refers to Table 8-10 - water to be infiltrated back into groundwater table if clean enough to do so. If water is suspected of being contaminated it will be tested and disposed of or used accordingly.</p> <p>170596-EN-P22-Holding Pond Discharge Procedure completed and implemented 8 August 2013 to clarify monitoring requirements.</p>	C	



Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Divert runoff from outside the work area to existing drainage lines to prevent the formation of new surface flow paths.	38	Site Inspections Soil Management Sub Plan - Figures 10-2 and 10-3	Installation of diversion drains underway along eastern portion of Main Access Road. This water is diverted to culverts located on site.	C	
Install culverts under new roads to maintain existing surface drainage flows.	39	Site Inspections ER Site Inspection Reports	Construction of culverts along Main Access Road underway - road works completed.	C	
Restrict vehicle movements to formed access roads and sealed roads to avoid surface compaction where practicable.	40	Site Inspections ER Site Inspection Reports	Movements are along Main Access Road or Gas Pipeline Track. Movements on PPA also confined to delineated areas.	C	
Monitor the potential for flooding by observing weather reports and river levels during potential flood events.	41	Site Inspections Wards Meeting Room Daracon noticeboard Prestart records	Adverse weather forecasts are discussed in pre start meetings (prestart records) with weather reports posted on meeting room wall or noticeboards where relevant.  No potential for site flooding during audit period.	C	
Store equipment securely when not in use to prevent it being washed away in a flood.	42	Site Inspections ER Site Inspection Reports	Site inspections indicate tools and other equipment are packed into storage containers when not in use - theft prevention additional driver.  Site noted to be neat and tidy during site inspections.	C	
Avoid unnecessary clearing of vegetation and excavation works.	43	Site Inspections ER Site Inspection Reports	Vegetation cleared along delineated boundaries. Trees along boundary line retained. No clearing was completed during the audit period.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
The gas storage facility will have a minimum floor level equivalent to the 100-year ARI flood level (approximately 4.6 m AHD) plus a freeboard of 0.5 m (i.e., at least 5.1 m AHD). The preliminary design for the facility has a finished floor level of 6.3 m AHD.	44	Site Inspections ER Site Inspection Reports	Design is compliant with this condition - construction currently underway with further confirmation of compliance once earthworks completed.	C	
Ensure that the banks of watercourses are not disturbed during construction.	87	Site Inspections ER Site Inspection Reports	Works within one water course on Old Punt Rd past audit periods. Further stabilisation using sandbags as per SoC 59. Area now stabilised with vegetation regrowth. Sand bags to be removed as beginning to degrade.	IO	Sand bags to be removed as beginning to degrade.
Minimise groundwater use	91	Site Inspections ER Site Inspection Reports	Minor volumes of groundwater from dewatering activities used for dust suppression (6.6kL) during previous audit periods. Bulk of water sourced from potable water supply. No use of groundwater this audit period.	C	
<b>Additional Management Plan Commitments</b>					
<i>Monitoring and Review</i>					
Monitoring will be undertaken both upstream and downstream of the Project site, and the results obtained can be used to assess construction impacts on the environmental values of the waterways, creeks and other vegetation (SW1, SW2 and Holding Pond outlet) and any other sediment ponds created for the construction period).	Section 5.1	Coffey Groundwater and Surface Water Monitoring Report - Jan to March 2013	Monitoring completed at SW1 and SW2 during the audit period.  Holding pond constructed.  Baseline sampling being completed at SW3 and SW4 (Old Punt Rd)	C	
Monitoring of water quality in the sediment basins will be conducted prior to any releases to stormwater.	Section 5.1	Site Inspections Surface Water Sampling Results	Sediment basin constructed - water tested prior to release. Surface water ponded around LNG Tank	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
			construction area tested prior to release to groundwater.		
Monitoring of surface water will occur regularly (at least quarterly) throughout the construction phase of the project by AGL	Section 5.2.2	Coffey Groundwater and Surface Water Monitoring Reports	Surface water tested monthly first 12 months - has now decreased to quarterly.	C	
During the first 12 months of construction monitoring of surface water quality will be conducted monthly by AGL. The construction monitoring program will involve monitoring at SW1 and SW2 and also include new on-site locations where there is surface water ponding or surface water collection prior to off-site disposal or groundwater infiltration.	Section 5.2.2	Coffey Groundwater and Surface Water Monitoring Reports  Surface Water Sampling Results 5/04/2013	Surface water tested monthly first 12 months - has now decreased to quarterly.  Sediment pond water to be tested monthly for first 12 months after construction completed (approx. November 2013).  Surface water ponded around LNG Tank construction area tested prior to release to groundwater.	C	
Monitoring of hydrotest water will also be carried out by AGL prior to off-site disposal.	Section 5.2.2	Site Inspection  Interview - Environment Manager	Hydrotesting to commence after this audit period.  Requirement to monitor flow volume and flow rate stipulated in plan.	NA	
After 12 months the construction monitoring program will be reviewed to determine whether analytical suites and frequencies will be increased or decreased, based on an assessment of results obtained up to that point. Monitoring of surface water quality by AGL will continue throughout the construction phase at a frequency of at least quarterly.	Section 5.2.2	Site Inspection  Interview - Environment Manager	Surface water tested monthly first 12 months - has now decreased to quarterly.  Holding pond water to be tested monthly until December 2014.	NA	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>For each sampling event, field water quality measurements will be recorded including field pH, electrical conductivity (EC), redox potential, turbidity, temperature and dissolved oxygen. Samples will be sent to a NATA accredited laboratory, for analysis of:</p> <ul style="list-style-type: none"> <li>• General parameters - total suspended solids (TSS), turbidity, total dissolved solids (TDS) and EC;</li> <li>• Major cations - calcium, magnesium, potassium and sodium;</li> <li>• Major anions - alkalinity, chloride, sulphate and fluoride;</li> <li>• Dissolved and total metals - arsenic, cadmium, chromium, copper, lead, nickel, zinc and iron;</li> <li>• Total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene and xylenes (BTEX);</li> <li>• Nutrients - total nitrogen, total kjeldahl nitrogen (TKN), nitrate, nitrite and total phosphorus.</li> </ul> <p>Sampling and analysis of a volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) suite will also be undertaken at the start and end of the construction program.</p>	Section 5.2.2	<p>Coffey Groundwater and Surface Water Monitoring Report</p> <p>Surface Water Sampling Results</p>	Analytes tested as per commitment - full suite of VOCs and SVOCs (BTEX and TPH tested monthly) added to sampling programme.	C	
<p>Surface Water monitoring results will be evaluated against natural background concentrations (the primary comparison) determined during baseline monitoring, and where analytes are not detected during baseline monitoring then the ANZECC 2000 and/or NHMRC 2004 Australian drinking water guideline values will be applied.</p>	Section 5.3	<p>Coffey Groundwater and Surface Water Monitoring Reports</p> <p>Surface Water Sampling Results</p>	Results are evaluated against trigger values derived from background sampling results, ANZECC and ADWG.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>During construction AGL will monitor surface water monthly for the first 12 months and at least quarterly thereafter. This data will be provided to CB&amp;I within 24 hours of receipt by AGL</p>	Section 5.4.2	<p>Coffey Groundwater and Surface Water Monitoring Reports</p> <p>Interview - Environment Manager</p>	<p>Surface water tested monthly first 12 months - has now decreased to quarterly.</p> <p>Reports are sent to CB&amp;I Environment Manager once reports are received by AGL.</p>	C	
<p>The following records relating to surface water management and monitoring are to be maintained by CB&amp;I:</p> <ul style="list-style-type: none"> <li>• Spill or incident reports;</li> <li>• Records of daily/weekly inspections during construction;</li> <li>• Volumes of water discharged offsite via the stormwater pump and pipeline system; and</li> <li>• Additionally, a copy of this SWMP is to be maintained on AGL's dedicated website for the NGSF project.</li> </ul>	Section 5.4.3	<p>Website</p> <p>CB&amp;I Records</p> <p>Interview - Environment Manager</p>	<p>CB&amp;I maintain relevant records</p> <p>Volume of water discharged offsite to be monitored once stormwater system constructed</p> <p>Copy of plan accessed on website 11/04/2014.</p>	C	
<p>The following records are to be maintained by AGL:</p> <ul style="list-style-type: none"> <li>• Monthly/event monitoring data and analytical reports;</li> <li>• 6-monthly surface water quality monitoring reports; and</li> <li>• Records of periodic site inspections where stormwater management is considered.</li> </ul>	Section 5.4.3	<p>Website</p> <p>CB&amp;I Records</p> <p>Interview - Environment Manager (AGL)</p>	<p>Monitoring data sent to AGL via reports (Sub contractor monitoring reports, CB&amp;I weekly and monthly reports, six monthly compliance report).</p> <p>Site inspections diarised.</p>	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>Quarterly internal audits for compliance against the CoA, SoC and other relevant licences and approvals will be undertaken (as shown in Table 5 2) and will include an audit of the worksite and subcontractors to assess compliance with this Plan and site EWMS, including all environmental management aspects related to surface water</p>	Section 5.5	<p>Audit reports</p> <p>Task observation records</p>	<p>Audits completed by CB&amp;I and ERM.</p> <p>Check of EWMS completed during site inspections by ER. CB&amp;I also complete Task Observation sheets for SWMS.</p>	C	
<b><i>Training and Awareness</i></b>					
<p>Examples of topics that will be covered during project induction and toolboxes include</p> <ul style="list-style-type: none"> <li>•Erosion and sediment controls</li> <li>•‘Clean’ and ‘dirty’ water on the Project site; and</li> <li>• Spill response.</li> </ul>	Section 3.2	Induction slide pack	<p>States controls to minimise erosion have been installed</p> <p>Spill response discussed a number of slides throughout presentation including safety.</p>	C	
<p>Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in soil and management. Examples of training topics include:</p> <ul style="list-style-type: none"> <li>• Sediment basin construction;</li> <li>• Sediment basin maintenance;</li> <li>• Working near or in drainage lines and creeks;</li> <li>• Emergency response measures in high rainfall events;</li> <li>• Spill response;</li> <li>• Erosion and Sediment Controls;</li> <li>• Stockpile location criteria; and</li> <li>• Identification of potentially contaminated soil and fill material.</li> </ul>	Section 3.2	Toolbox talks register	<p>Toolbox topics during audit period included spill response, use of spill kit training, housekeeping.</p> <p>Sediment basins constructed.</p> <p>Stockpiles in final locations until works completed.</p> <p>Identification of potentially contaminated soil included in inductions.</p>	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Monitoring and Review</b>					
Erosion and sediment control measures installed during construction will be inspected weekly and after each rainfall event that causes runoff to occur from the site to ensure the controls are working efficiently and effectively.	Section 5.1	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Erosion and Sediment Control Inspection and Maintenance Checklist completed which includes sediment capacity, performance of measures and conditions of measures.	C	
Inspections of erosion and sediment control devices will be undertaken as follows: <ul style="list-style-type: none"> <li>• Weekly; or</li> <li>• Following a rainfall event of 10 mm or greater or unless there has been significant preceding rainfall; and</li> <li>• Within 24 hours of cessation of a rainfall event causing runoff to occur from the site premises.</li> </ul>	Section 5.2	CB&I Erosion and Sediment Control Inspection and Maintenance Checklist	Erosion and Sediment Control Inspection and Maintenance Checklist completed which includes sediment capacity, performance of measures and conditions of measures.	C	
The Environmental Review Group (ERG) and ER will inspect the site regularly.	Section 5.1	ER Site Inspection Reports	ER site inspections completed monthly since beginning 2014 Previously weekly then decreased to fortnightly as critical works such as clearing completed.	C	
Regular environmental compliance audits against the EWMS (Task Observations as described in Section 5.4.3 of the CEMP) and weekly work area environmental inspections by the EV will also incorporate any issues relating to surface water.	Section 5.5	CEMP Interview - Environment Manager	EWMSs are reviewed, marked up and comments given to the sub-contractors. 170596-EN-P25-Task Observation Procedure created and implemented	C	

Annex C

## Audit Table - Air Quality Management Sub Plan



**Table C.1 Compliance Assessment – Implementation of the Air Quality Management Sub Plan**

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Regulatory Requirements - EPL 20130</b>					
All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	O2.1	Daily Environment Inspection Checklist	Prestart checks completed daily on machinery.  Daily checks on vehicle emissions completed.	C	
The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	O3.1	Site Inspections  Daily Environment Inspection Checklist	Dust cart noted in use during inspections.  Daily checklist includes monitoring for dust levels	C	
<b>DoPI, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
During construction, the Proponent shall ensure no offensive odour as defined under the Protection of the Environment Operations Act 1997 is emitted from the project site.	B35	This Plan Appendix B Site Inspections	Nil odours noted during site inspections, works not expected to generate odours.	C	
The Proponent shall employ reasonable and feasible measures to ensure that construction activities associated the project are undertaken in a manner that minimises or prevents the emission of dust.	B36	This Plan Appendix B Site Inspections  Daily Environment Inspection Checklist	Daily checklist includes monitoring for dust levels  Subsoil and topsoil movement primarily completed. Topsoil will be moved during rehabilitation activities.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Statement of Commitments from the Preferred Project Report CR 6023_1- v3 issued September 2011</b>					
The CEMP will include management strategies to mitigate work-site lighting, dust suppression and noise associated with the construction phase of the Project.	138	Appendix B Site Inspections Daily Environment Inspection Checklist	Site inspections indicate compliance during current construction activities.  Checklists include checks for noise, dust. Noise monitoring completed.	C	
Minimise vegetation clearance to reduce the areas of exposed soil.	289	Appendix B Site Inspections	Vegetation clearance limited to areas required for roads and primary project area. Clearing now completed for this phase of the Project.	C	
Water construction sites during dry windy conditions as required, including cleared areas, soil stockpiles and unsealed roads.	290	Appendix B Site Inspections Daily Environment Inspection Checklist	Daily checklist includes monitoring for dust levels.  No dust issues noted during site inspections.	C	
Undertake activities likely to generate dust during favourable meteorological conditions where practical. Earth moving activities will be modified when wind speeds exceed 30 km/h if excessive dust is generated.	291	Appendix B Interview - CB&I Environment Manager	Daily checks for excessive dust is completed and dust cart used to limit generation as required.	C	
Prevent dirt being carried onto the TAC Northern Access Road or Old Punt Road from the access road where it could form dust.	292	Appendix B Site Inspections	Main Access Road now sealed with bitumen - no further tracking issues expected.	C	
Load trucks transporting any potential dust generating material off site to below the height of the side and tail board and cover the load.	293	Appendix B Interview - CB&I Environment Manager	Soil not transported from site with exception of ASS treated soil - filled below rim of container and covered with tarp.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Enforce vehicle speed limits on unsealed roads to reduce dust generation.	294	Appendix B Site Inspections	Speed limit signage placed on site (10km/h) and along Main Access Rd (50km/h) - sealed surface.	C	
Revegetate as soon as practical.	295	Appendix B Site Inspections.	Main Access Rd stabilised with mulch and spray grass. Batters in PPA spray grassed.	C	
Maintain trucks and construction equipment in accordance with the manufacturers' specifications and comply with all relevant regulations.	296	Appendix B Interview - CB&I Environment Manager Prestart checklists Daily Environmental Inspection Checklist	Daily checks completed on machinery which includes air emissions. Maintenance completed as required.	C	
Avoid unnecessary idling of trucks, plant and engines.	297	Appendix B Table 7-2	Noted - included in plan	C	
Plan material deliveries to avoid congestion and excessive truck queuing and truck idling.	298	Appendix B Interview - CB&I Environment Manager Site Inspections	Deliveries limited to 1-2 per day. No congestion noted during site inspections	C	
Project equipment, machinery and vehicles will meet exhaust air quality standards and will comply with state regulations. Machinery will be fitted with the appropriate emission control equipment and will be maintained and serviced frequently.	299	Appendix B Interview - CB&I Environment Manager Prestart checklists Daily Environmental Inspection Checklist	Daily checks completed on machinery which includes check for excessive air emissions. Maintenance completed as required.  Incoming vehicles - exhaust emissions checked.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Maintain vehicles appropriately to maximise their fuel efficiency.	311	Appendix B Interview - CB&I Environment Manager Prestart checklists	Vehicles maintained as per schedule - completed off site	C	
<b>Additional Management Plan Commitments</b>					
<i>Training and Awareness</i>					
All project personnel will undergo a general project induction prior to commencing work with CB&I. This will include a dust and air quality management component to reinforce the importance of air quality issues and the measures that will be implemented to protect the environment.	Section 3.2	Induction slide pack	Induction includes section on dust management	C	
Examples of topics that will be covered during project induction and toolboxes include: <ul style="list-style-type: none"> <li>covering of all loads on public roads;</li> <li>use of water sprays and carts as required during works;</li> <li>actions to take in the event that dust is unduly impacting on sensitive receivers; and</li> <li>review of dust generating activities in high wind conditions.</li> </ul>	Section 3.2	Induction slide pack Toolbox records	Induction includes need to cover loads on public roads, reducing speed limits on haul roads and the use of water carts to control dust as required.  Not discussed in tool boxes to date - risk considered low. Site inspections during audit period indicate dust well controlled.  Vehicle movements restricted to compacted areas.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Monitoring and Review</b>					
Air quality monitoring and reporting will be conducted for the duration of the Project. Daily visual inspections of the construction site will be undertaken by the EV and construction personnel to identify actual or potential air quality concerns	Section 5.1	Daily Environment Inspection Checklists	Daily checks are completed	C	
Documented weekly environmental inspections of the construction site will also be undertaken by the EV using the weekly environmental inspection checklist and forwarded to the EM for review. The weekly checklist includes a section on air quality and dust safeguards.  The Environmental Review Group (ERG) and ER will inspect the site regularly.	Section 5.1	Weekly Environment Inspection Checklists	Weekly checks are completed. Monthly ER inspections indicate dust levels controlled	C	
Regular environmental compliance audits against the EWMS will also incorporate any concerns relating to air quality.	Section 5.2	Task Observation Records	EWMS are reviewed - 170596-EN-P25-Task Observation Procedure developed. Register maintained listing reviews	C	
<b>Appendix B - Air Quality Management and Mitigation Measures (additional to CoA and SoC)</b>					
No burning or incineration of any wastes will be permitted at any time on any construction worksite.	Appendix B, Table 8.1	Site Inspections Interview - CB&I Environment Manager	All material removed off-site. Inspections indicate no evidence of material burned on site.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Areas where odour generation is a concern will be monitored by the Environmental Advisor and measures will be taken to prevent odour where feasible.	Appendix B, Table 8.1	Site Inspections Interview - CB&I Environment Manager	No odour generating activities completed onsite to date.	NA	
All site accesses will be designed to cope with the planned construction traffic volumes and duration. As a minimum all site accesses will be stabilised with gravel to minimise dust generation and tracking of sediments.	Appendix B, Table 8.2	Site Inspections Interview - CB&I Environment Manager	Traffic Management Plan outlines management of traffic volumes. Main Access Rd is sealed with bitumen. Gas Access Track no longer used - stabilised with gravel.	C	
Vehicle and machinery movements will be restricted to designated areas.	Appendix B, Table 8.2	Site Inspections	Site inspections confirm machinery use designated access roads.	C	
Stockpiles will be stabilised or covered if they are to remain in place for a period of greater than 2 weeks.	Appendix B, Table 8.3	Site Inspections	Stockpiles spray mulched or natural revegetation occurring (in case of topsoil stockpiles). Covering of stockpiles would affect seed viability.	C	
Mulch stockpiles will be limited to 1 metre in height where possible.	Appendix B, Table 8.3	Site Inspections	Mulch stockpiles storage height as per commitment. SMSP lists heights of mulch to 3m. Inconsistency removed. Changed from 1m to 3m in AQMSP to remove inconsistency.	C	
As a precaution, potential fire causing activities will be ceased during designated "Total Fire Ban" days.	Appendix B, Table 8.4	Site Inspections Daily Environmental Site Inspection Checklists	Daily check includes if total fire ban day - communicated at toolbox talks. Fire permits are required for high fire danger days. Person on fire watch required during hot works. Hot works permit always required. No flammable material within tank area where welding currently completed.	C	

Annex D

## Audit Table - Groundwater Management Sub Plan

**Table D.1 Compliance Assessment – Implementation of the Groundwater Management Sub Plan**

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
All above ground tanks containing material that is likely to cause environmental harm must be banded or have an alternative spill containment system in place.	O4.1	Page 9 of EPL Site Inspections	Site inspections confirm dangerous goods are banded on portable bund trays or contained inside banded shipping containers.  No above ground storage tanks installed on site as at date of audit.	C	
<b>DP&amp;I, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the project.	A1 4	GMSP	GMSP includes measures - this audit reviews implementation of the measures.	C	
The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within seven days of becoming aware of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.	A15	Section 5.5 of the CEMP  Appendix E of GMSP  Incident notification emails	No reportable incidents during reporting period	C	



Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:</p> <p>(a) all relevant Australian Standards; and</p> <p>(b) DECC's Environment Protection Manual Technical Bulletin – Bunding and Spill Management.</p>	B15	<p>Table 8-4</p> <p>Site Inspections</p>	<p>Minor amounts of fuel and oils currently kept on site. Contained in DG cabinets or bunded shipping containers.</p> <p>Site inspections indicate small fuel cans are stored on self-contained bunds or inside dedicated self bunded shipping container.</p> <p>Noted during audit site inspection storage of Class 8 shipping container located near workshop area also contained carton of Class 2 (gases). Segregation of Class 2 and 8 needs to be at least 3m in a well-ventilated area. Consider moving Class 2 gases out of shipping container storing Class 8 substances.</p>	NC-1	<p>Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes.</p>
<p>Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act1997 during construction of the project.</p>	B20	<p>EPL License No 20130</p> <p>GMSP</p> <p>Dewatering records</p> <p>Site Inspections</p>	<p>Dewatering of excavations – water quality tested prior to groundwater recharge.</p> <p>Water quality tested prior to discharge to surface water during audit period.</p>	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Statement of Commitments from the Preferred Project Report CR 6023_1- _v3 issued September 2011</b>					
Minimise groundwater use	91	Table 8-1 Site Inspections	Minor volumes of groundwater used during period from dewatering of excavations – used for dust suppression. Volume's recorded. No further use of groundwater for dust suppression planned for PPA.	C	
Re-inject excess groundwater pumped from trenches during construction where possible to minimise temporary changes in local groundwater levels	48	Table 8-6 Site Inspections	No groundwater removed/pumped during audit period.	C	
Replace material excavated from trenches to minimise changes to groundwater flows, as far as practical. Where possible, pipelines will be bedded on sand in the base of the trench	93	Table 8-2 Site Inspections	No trenching completed during audit period. All pipes buried in sand.	C	
Protect groundwater quality	172	GWMSPP	GWMSPP and SWMP developed and implemented. Audits against implementation completed as per CEMP.	C	
Construct hardstand and bunded areas for refuelling of construction machinery to mitigate potential risks of groundwater contamination	GWMSPP - AGL	Table 8-1 Site Inspections  Interview CB&I Environment Manager	All refuelling done on site using mobile refuelling trucks.  Task observation conducted on 29 April and 5 May 2014 for refuelling trucks.  Bulk fuel storage installed on-site November 2013 – refer to SoC 85	C	Duplicated with SoC85

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Monitor groundwater levels and quality within and at the boundaries of the gas plant site.	95	Section 5.0 Quarterly Groundwater and Surface Water Monitoring reports	Groundwater monitoring completed.	C	
Include a spill response plan in the emergency response plan and ensure that there is adequate spill response equipment stored onsite. Personnel will be trained on the emergency response plan and correct use of the spill response equipment.	1	Spill Response	No significant chemical spills or leaks reported during the audit period.  All vehicles carry spill kits with spot checks completed by CB&I staff and ER during site inspections.  Spill response training included in Tool box talks	C	
Groundwater monitoring will be undertaken in accordance with the groundwater management plan throughout the life of the Project in the primary project area assuming no changes beyond expected natural variation are observed in these bores.	98	GMSP Section 5.0 Quarterly Groundwater and Surface Water Monitoring Reports	Groundwater monitoring completed	C	
Source water from existing water supply infrastructure. Until the permanent water supply is available, it is currently proposed that this will be supplied to construction sites by either water tankers or from a standpipe such as a HWC metered standpipe along Old Punt Road.	34	Table 8-1 Site Inspections	Water supplied to site via tankers sourcing water from HWC metered standpipe on Old Punt Rd.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
A groundwater monitoring piezometer will be installed and regularly sampled for pathogens and nutrients, downstream of the holding tank for wastewater.	86 106	Table 8-1 Groundwater and Surface Water Monitoring Reports	Groundwater bore located to north (down gradient) of sewage holding tank (MW5). Analytes tested include nutrients and pathogens such as E. Coli, total or faecal coliforms to indicate sewage contamination. Recent report (Oct to Dec 2013) indicated nil contamination.	C	
Groundwater monitoring data collected from the site will be provided to HWC, EPA and NOW.	107	Section 3.0 Section 5.0	Groundwater monitoring completed monthly - minutes of meeting between NOW, HWC and PSC sighted which includes discussion on results and any exceedances.	NC-2 - previous audit finding	AGL to provide review of correspondence sending reports to EPA to confirm compliance.
Monitor and assess groundwater quality with respect to background concentrations.	108	GMSP Section 5.0 Quarterly Groundwater and Surface Water Monitoring Reports	Groundwater monitoring completed monthly and reported quarterly	C	
Conduct a review of the analytical suite of groundwater monitoring parameters following first 12 months of construction works.	109	Section 5.0 Appendix C	Construction within first 12 months at date of audit. Review completed. Monitoring moving to quarterly. List of analytes to remain unchanged	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Additional Management Plan Commitments</b>					
<b><i>Training and Awareness</i></b>					
<p>All project personnel will undergo a general project induction prior to commencing work with CB&amp;I. This will include a groundwater component to reinforce the important management issues and the measures that will be implemented to protect the groundwater.</p> <p>Project inductions will include:</p> <ul style="list-style-type: none"> <li>• spill control and reporting of spills;</li> <li>• storage of dangerous goods and hazardous chemicals; and</li> <li>• excavation dewatering</li> </ul>	Section 3.2	<p>Toolbox talk records</p> <p>Six monthly compliance report - reporting period March to August 2013</p>	<p>Spill response training included in Tool box talks approximately once per month.</p> <p>Dangerous Goods are applied to be brought onto the site by contractors with storage requirements discussed during this process.</p>	C	
<b><i>Monitoring and Review</i></b>					
Daily visual inspections of the construction site will be undertaken by the EV and construction personnel to identify actual or potential groundwater management concern.	Section 5.1	Daily Environmental Inspection Checklist	Checklists completed by CB&I environment manager - includes checks for dewatering activities, discharges, spills, storage of dangerous goods.	C	
Documented weekly environmental inspections of implemented groundwater management and mitigation measures will also be undertaken by the EV and forwarded to the EM. for review	Section 5.1	Weekly Environmental Inspection Checklist	Checklists completed by CB&I environment manager - includes checks spills, storage of dangerous goods, waste management.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
During construction the initial 12 month period will involve monthly monitoring of groundwater level and quality data to be completed by AGL. A 6-monthly interpreted report is envisaged but final requirements will depend on the specific planning approvals for surface water and groundwater monitoring.	Section 5.2.2	Quarterly Groundwater and Surface Water Monitoring Reports	Groundwater monitoring completed	C	
The construction monitoring program will be reviewed by AGL after 12 months to determine whether analytical suites and frequencies should be increased or decreased based on an assessment of results obtained up to that point. Monitoring of groundwater quality will continue throughout construction phase at a frequency of at least quarterly.	Section 5.2.2	Interview - AGL Environment Manager	Review completed with monthly monitoring to November 2013. Frequency changed to quarterly December 2013.	C	
The Environmental Review Group (ERG) and ER will inspect the site regularly.	Section 5.1	ER Site Inspection Reports ER monthly reports	ER inspections completed once per fortnight up till end of 2013. As all clearing and road works completed with all works now confined to the PPA, the frequency has moved to monthly commencing 2014.	C	
Quarterly internal audits for compliance against the CoA, SoC and other relevant licences and approvals will be undertaken and will include an audit of the worksite and subcontractors to assess compliance with this Plan and site EWMS, including all environmental management aspects related to groundwater.	Section 5.4	CB&I Internal Audit Reports AGL Internal Audit Reports	CB&I complete audits quarterly against corporate environmental requirements. ER completes audits quarterly	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<i>Appendix B - Groundwater Mitigation and Management Measures (additional to CoA and SoC)</i>					
Ensure suitable protection of AGL groundwater monitoring bores during construction. This would include marking of the locations and construction of barrier fences if required (depending on proximity of construction work).	Appendix B, Table 8.1	Site Inspection	Groundwater bores located within the construction footprint - marked with parawebbing. Bores are located just inside fence line which is away from primary works.	C	
Diversion drains shall be constructed as necessary to divert surface water drainage away from soil stockpiles, excavations or other disturbed areas. No area requiring diversion drains shall be left overnight without diversion drains unless approved by the Environment Officer (or delegate).	Appendix B, Table 8.1	Site Inspection	Diversion drains along eastern portion of Main Access Road - installed as per SMSP.  Diversion drain not installed along car park edge as per SMSP - sandbags installed to divert water and rock placed on batter slope to prevent erosion.	C	
Surface water runoff treatment ponds shall be constructed on-site prior to construction work commencing. The potential to utilise the main Holding Pond area as a final sediment basin prior to the operations phase of the Project will be further investigated. At least one monitoring bore is required on the down gradient (northern) side to ensure there are no groundwater impacts.	Appendix B, Table 8.1	Site Inspection  CB&I surface water quality results	As site is sandy, runoff rarely occurs on site. Dewatering of any construction pads/sites is directed to stormwater pit and/or stormwater retention basin. Testing as per SWMSP completed prior to release.  MW1, MW5 located to north of sediment basin. MW4 located to west of sediment basin. Additional groundwater bore installed on northern boundary of holding pond.	C	
It is recommended that groundwater inflow be observed during construction activities and dewatering pumping options revised as necessary.	Appendix B, Table 8.2	Site Inspection  Dewatering records	No groundwater pump outs occurred during this audit period.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Stormwater collected within trenches may be used for dust suppression on adjacent areas. Stormwater may be discharged across adjacent vegetated areas where grasses are sufficient to act as a natural filter.	Appendix B, Table 8.2	Site Inspections Interview - CB&I Environment Manager	Dewatering currently directed to pit for testing prior to discharge/use.	C	
Groundwater inflow and re-injection rates will be monitored during excavation works and trenching. Prior to re-injection, water quality parameters including pH will be measured.	Appendix B, Table 8.2	Site Inspections Interview - CB&I Environment Manager Dewatering records	No groundwater dewatering completed during audit period.	C	
Replace material excavated from trenches to minimise changes to groundwater flows, as far as practical. Where possible, pipelines will be bedded on sand in the base of the trench.	Appendix B, Table 8.2	Site Inspections Interview - CB&I Environment Manager	No trenching in groundwater completed during audit period	C	
Re-injection of excess groundwater pumped from trenches during construction where possible will minimise temporary changes in local groundwater levels.	Appendix B, Table 8.2	Site Inspections Interview - CB&I Environment Manager	All water pumped from excavations re-injected back to groundwater with exception of stormwater pit on PPA - minor quantities (unknown volume) used for dust suppression. No further use of groundwater for dust suppression planned for PPA.	C	
Monitor bore integrity weekly. Decommission in advance of necessary site works, or if damaged, decommission properly. Replace bores as necessary.	Appendix B, Table 8.5	Weekly Environmental Inspection Checklist Interview - CB&I Environment Manager	Added item to weekly checklist to confirm bore integrity in CB&I work areas. Added item 23 to 170596-EN-C02-Weekly Environmental Inspection Checklist to include monitoring bore condition inspection	C	



Annex E

## Audit Table – Waste Management Sub Plan

**Table E.1 Compliance Assessment – Implementation of the Waste Management Sub Plan**

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Regulatory Requirements - EPL 20130</b>					
The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	L3.1	page 7 of EPL Site Inspections	No waste received on site to date of audit.	NA	
Licensed activities must be carried out in a competent manner. This includes:  a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and  b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	O1.1	page 8 of EPL Site Inspections	Waste stored in skip bins, segregated correctly with minor contamination in the recycling noted. Toolboxes held regularly to improve recycling and segregation rates. Minor storage of dangerous goods only in DG cabinets, banded shipping containers or self banded pallets.	C	
<b>DoPI, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site during construction, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	B41	This Plan/ Appendix A	No waste received on site to date of audit.	NA	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>The Proponent shall maximise the reuse and/or recycling of construction waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.</p>	B42	<p>This Plan/ Appendix A Waste Register</p>	<p>Waste stored in skip bins, segregated correctly. Toolboxes held regularly to improve recycling and segregation rates.</p> <p>Subsoil deemed unsuitable for reuse on-site has been screened to enable reuse.</p> <p>Bulk of mulch went to Austar mine for use in rehabilitation works. Extra mulch to Lake Macquarie Council.</p> <p>Excess logs to Newcastle Earthmoving for future use.</p> <p>Scrap metal and concrete recycled.</p>	C	
<p>The Proponent shall ensure that all liquid and / or non-liquid construction waste generated by the project is assessed and classified in accordance with the Waste Classification Guidelines (DECC 2008, or any future guideline that may supersede that document) and where removed from the site is only directed to a waste location lawfully permitted to accept those materials.</p>	B43	<p>This Plan/ Appendix A</p>	<p>Waste Register maintained recording all movements. Waste generated primarily dry waste. Soil contaminated from oil spills tracked under the regulated waste system and disposed to authorised waste facility.</p>	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Statement of Commitments from the Preferred Project Report CR 6023_1-_v3 issued September 2011</b>					
Ensure concrete mixers and pump trucks are not washed on-site.	2	Appendix B Site inspections Interview - CB&I Environment Manager	Variation to CoA to enable onsite washouts with appropriate controls to be implemented by CB&I completed. Concrete mixers chute is washed into plastic lined skip bins. Mixer and pump trucks are not washed on site - taken back to depot for wash out.	C	
Use licensed contractors to collect, transport and dispose of hazardous materials such as waste solvents, paints, mercury absorption medium and hydrocarbons to a licensed off-site facility in accordance with EPA guidelines.	8	Appendix A Waste Register Regulated Waste Tracking Certificates	Checks completed and EPLs obtained for wastewater removal.  Oily water removed by AES Pty Ltd and disposed to Environmental Treatment Solutions Pty Ltd. EPLs checked for all waste transporters and disposal locations.	C	
Remove wastewater and sewage from site by an EPA licensed operator for treatment at an EPA-approved wastewater treatment facility.	9	Section 2.1.3 Appendix A Waste Register Affordable Sanitation Services - service dockets  Interview - CB&I Environment Manager	Review of materials tracking register indicates amenities wastewater transported by Affordable Sanitation Services - service dockets are left at site office. Verbal confirmation received that disposal location is appropriately licenced.  Written confirmation of disposal location from transporter obtained.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Transport amenities wastewater offsite by a licensed operator to a licensed disposal facility.	36	Table 7-1	Refer SoC 9	C	
When wastewater is tankered, the system will have a telemetered level sensor that alarms when over range; the tank will be included on the regular site inspection and reporting program.	85	Table 7-1 ER Site Inspections	Wastewater pit located in the Primary Project Area is alarmed (visual and audible). Increased frequency of pump outs to twice weekly. Included visual and audible alarm inspection on daily check list. Created 170596-EN-C09-Daily Amenities Leak Inspection Checklist. Amenities checked for running water daily after cleaners leave site. Pump system is isolated after hours to ensure continuous flow is prevented.  Additional toilets located near Gas Holder Tank noted to have visible and audible alarm installed.	C	
If any evidence of illegal dumping of wastes on the Project area is observed the dumped material will be removed immediately. If any liquid sludge or chemical waste is observed then appropriate sampling and monitoring will be implemented to determine whether any impact to groundwater has occurred.	342	Table 7-1 ER Site Inspections Interview - CB&I Environment Manager	Some dumping of waste material near entrance to site noted at beginning of project. Material removed. No further dumping noted during this audit period.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Additional Management Plan Commitments</b>					
<i>Training and Awareness</i>					
<p>All project personnel will undergo a general project induction prior to commencing work with CB&amp;I. This will include a component on waste and reuse management, to ensure personnel understand the potential impacts and proposed mitigation measures.</p> <p>Examples of topics that will be covered during project induction and toolboxes include:</p> <ul style="list-style-type: none"> <li>waste storage and segregation;</li> <li>waste reporting;</li> <li>roles of personnel in waste management and reporting;</li> <li>actions to be taken if potential contamination is encountered; and</li> <li>energy efficient work practices.</li> </ul>	Section 3.2	<p>Toolbox records</p> <p>Interview - CB&amp;I Environment Manager</p>	<p>Toolboxes completed for all topics listed with exception of waste reporting and roles of personnel in waste management and reporting as not considered necessary/relevant. Reviewed the list of topics in Section 3.2 and removed topics of waste reporting and roles of personnel in waste management and reporting from examples in Section 3.2 November 2013.</p> <p>Focus of toolboxes has been on waste storage and segregation with improvements noted during site inspections in levels of contamination in recycling.</p>	C	
<i>Monitoring and Review</i>					
Daily visual inspections of the construction site will be undertaken by the EV and construction personnel to identify any waste management issues.	Section 5.1	Daily Environmental Inspection Checklists	Checklists includes review of waste storage and management	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Documented weekly environmental inspections of the construction site will also be undertaken by the EA using the weekly environmental inspection checklist and forwarded to the EM for review.	Section 5.1	Weekly Environmental Inspection Checklists	Checklists includes waste checks	C	
The Environmental Review Group (ERG) and ER will inspect the site regularly. Any actions to be undertaken as a result of any site inspection will be recorded in the CB&I Environmental Action Register.	Section 5.1	ER Site Inspection Reports ER Monthly Reports	Inspections are completed approximately once per month.	C	
A Waste Removal Register will be maintained by the EV and subcontractors to record the management of wastes from the Project	Section 5.1.1	Waste Register	Waste register maintained	C	
Dockets / receipts / manifests will also be retained for waste tracking to record the date of waste removal, and identify the waste transport contractor and destination of the wastes from the worksite.	Section 5.1.1	Review of waste docketts	Docketts collected for all wastes removed from site.	C	
Details of wastes removed from site will be included in monthly reports to AGL.	Section 5.1.1	CB&I monthly reports	CB&I includes waste volume breakdowns in their monthly report.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>The following records relating to waste management are to be maintained:</p> <ul style="list-style-type: none"> <li>material tracking register;</li> <li>waste Dockets from landfills, recycling facilities, and waste contractors;</li> <li>letters regarding waste classifications, general resource recovery exemptions, or suitability of material to be re-used on site;</li> <li>records of daily/weekly inspections during construction;</li> </ul>	Section 5.1.3	<p>Review of records including:</p> <p>Material Tracking Register</p> <p>Waste Dockets</p> <p>Douglas Partners "Report on Waste Classification Testing", March 2013</p> <p>Daily and Weekly Environmental Inspection Checklists</p>	All records maintained as required	C	
<p>Annual waste audits will be undertaken to:</p> <ul style="list-style-type: none"> <li>identify measures to improve waste management practices; and</li> <li>identify measures to improve energy efficiency and reduce greenhouse gas emissions.</li> </ul>	Section 5.2	Interview - CB&I Environment Manager	Annual waste audit completed. Opportunities for increased recycling identified. Next audit due for period August 2013 - August 2014.	C	
Concrete, steel, timber, greenwaste and plasterboard will be stored in separate stockpiles, no more than 1m in height or in skip bins.	Appendix A, Table 7.3	Site Inspections	Material is segregated and generally stored in skip bins. Concrete is stored in stockpiles below 1m in height.	C	
Non-recyclable plastic and domestic waste will be placed into skip bins for collection by a waste contractor.	Appendix A, Table 7.3	Site Inspections	Skip bins and wheelie bins designated for solid waste are located on site.	C	



Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Recyclable plastics will be placed into a recycling skip bin for collection by a recycling contractor.	Appendix A, Table 7.3	Site Inspections	Skip bins and wheelie bins for recyclables are located on site.  Minor contamination has been previously noted in the recycling bins with toolboxes held to encourage further recycling and minimise contamination.	C	
Cardboard boxes will be placed in a paper recycling skip bin for collection by a recycling contractor.	Appendix A, Table 7.3	Site Inspections	Cardboard skip bin located in laydown area for main construction site.	C	
Cover vegetation stockpiles where material is to remain exposed for a long period of time	Appendix A, Table 7.3	Site Inspections	Mulch stockpiles are located along Gas Access Track and are uncovered. Removed requirement to cover vegetation stockpiles that remain on site for more than two weeks point 10 in Table 7-3 in November 2013.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>Waste materials will be tracked so that the appropriate management of waste can be demonstrated.</p> <p>A register containing the following information must be kept:</p> <ul style="list-style-type: none"> <li>• the material type and volume;</li> <li>• the classification of the waste;</li> <li>• where it was re-used, i.e. location on the Project site or property address if re-used off-site (if re-used);</li> <li>• where it was disposed, i.e. landfill name and address (if disposed);</li> </ul> <p>Reference number of relevant documentation, (i.e. waste dockets, waste classification letters), if applicable. Documentation regarding the classification re-use, recycling and/or disposal must be retained. This could include waste dockets from landfills, and letters from consultants.</p>	Appendix A, Table 7.6	Site Inspections Material Tracking Register	<p>Waste register reviewed - logs and mulch recycled and concrete waste removal not included.</p> <p>All information required is included in register</p>	C	
Hydrotest water will be transferred to the holding pond by CB&I.	Appendix A, Table 7.8	Interview - CB&I Environment Manager Hydrotest Water Management Plan	Hydrotest water procedure developed with water to be held in holding pond prior to final field checks and disposal to Old Punt Rd - no disposal of hydrotest water during audit period.	NA	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
AGL will be responsible for disposal of hydrotest water.	Appendix A, Table 7.8	Interview - CB&I Environment Manager	Hydrotest procedure developed by AGL -includes trigger values and disposal options.	NA	
Where hydrotest water can be reused, CB&I proposes to store it in the firewater tank for use of subsequent hydro tests of smaller scale (e.g. gas storage facility pipelines) or for dust suppression.	Appendix A, Table 7.8	Interview - CB&I Environment Manager	Hydrotest procedure developed by AGL -includes trigger values and disposal options.	NA	

Annex F

## Audit Table – Noise and Vibration Management Sub Plan

**Table F.1 Compliance Assessment – Implementation of the Noise and Vibration Management Sub Plan**

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Regulatory Requirements - EPL 20130</b>					
<p>Standard construction hours</p> <p>Unless otherwise specified by any other condition of this licence, all construction activities are:</p> <p>a) restricted to between the hours of 7:00am and 6:00pm Monday to Friday;</p> <p>b) restricted to between the hours of 8:00am and 1:00pm Saturday; and</p> <p>c) not to be undertaken on Sundays or Public Holidays.</p>	L4.1	Interview – CB&I Environment Manager	Site hours are 7 to 5pm M-F and 8-1 Saturday. Some works completed outside hours under approved OOHW protocol.	C	
<p>The licensee may undertake construction works outside the standard hours of operation specified by this license provided that the works do not adversely affect the amenity of residents in the locality.</p> <p>Note: Construction works outside the standard hours of operation should be undertaken with the aim and in such a manner that noise from those works is inaudible at nearby residential receivers.</p>	L4.2	Out of hours notifications	OOHW completed following OOHW procedure – check for noise audibility undertaken at boundary of site during works to confirm inaudible.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <p>a) must be maintained in a proper and efficient condition; and</p> <p>b) must be operated in a proper and efficient manner.</p>	O2.1	Form 17096-EN-F12	Plant and Equipment Noise Measurement report reviewed. Monitoring of equipment is completed and compared to design levels.	C	
<b>DoPI, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
<p>Any work generating high noise that has impulsive, intermittent, low frequency or tonal characteristics, including jack hammering, pile driving, rock hammering, rock breaking, saw cutting, sheet piling or vibratory rolling, shall only be undertaken:</p> <p>(a) between the hours of 8.00 am and 6.00 pm Monday to Friday; (b) between the hours of 8.00 am and 1.00 pm Saturday; and</p> <p>(c) in continuous blocks of no more than three hours, with at least one hour respite between each block of work generating high noise impact, where the location of the work is likely to impact the same receivers; except as otherwise approved by the Director-General. For the purposes of this condition "continuous" includes any period during which there is less than a one hour respite between ceasing and recommencing any of the work the subject of this condition.</p>	B28	<p>Appendix B Table 8-2</p> <p>Daily Site Environmental Inspection Checklist</p> <p>Site Inspections</p> <p>Interview – CB&amp;I Site Environment Manager</p>	<p>Vibratory works not completed recently. Previously works completed in afternoon- vibratory roller and vibro piling.</p> <p>Daily checklists includes check for activities and if noticeable at site boundary. Nil works noticeable at site boundary during auditing period.</p>	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>Construction outside of the hours specified under condition B27 or B28 may be varied for works as approved through the out-of-hours' work protocol required as part of the Construction Noise Management Plan under condition B57 of this approval. Any request to alter the hours of construction shall:</p> <p>(a) be considered on a case-by-case basis;</p> <p>(b) be accompanied by details of the nature and need for activities to be conducted during the varied construction hours and any other information necessary to reasonably determine that activities undertaken during the varied construction hours will not adversely impact on the acoustic amenity of receptors in the vicinity of the site; and</p> <p>(c) require that affected residential receivers are informed of the timing and duration of any construction activities approved under this condition at least 48 hours before that work commences.</p>	B29	Appendix B Table 8-2 Out of Hour Work Notifications	Forms completed detailing required information. Nearest potentially affected receiver Botanic Gardens - all notifications communicated to community group for notification as required. Checks completed for noise at boundary of site.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Statement of Commitments from the Preferred Project Report CR 6023_1-_v3 issued September 2011</b>					
Meet the construction and operations noise goals of the Project to minimise disturbance to sensitive receptors.	227	Section 2.0 Noise monitoring sheets	Monitoring completed – results entered into register. Night time monitoring completed near site office with noise goals exceeded and audibility of site works evident. Need to confirm noise levels are inaudible at boundary however due to poor light, monitoring at this location is not considered safe.	NC-1 (previous audit report)	Consider monitoring daytime noise levels at the site compound and at off-site locations to determine noise relationship at locations to confirm night time noise levels are not exceeded at the site boundary.
Stage Project activities (and reduce simultaneous noise emitting practices) to reduce peak noise levels.	267	Appendix B Noise monitoring sheets	Earthmoving now completed. Works emitting noise limited to dust cart, trucks delivering concrete and equipment, welding, small vehicles. Arc welding noisiest activity – scheduled during normal work hours.	C	
Incorporate attenuation (such as mufflers) into the design of Project equipment and infrastructure.	268	Equipment checklists Daily prestart forms	Vehicles are checked prior to entry on site – includes checks for silencers and mufflers. Daily pre start checks include check for excessive noise.	C	
Orient equipment away from receptors.	269	Appendix B Site Inspections	Equipment is located away from receptors – nearest resident 2.7km away.	NA	



Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Restrict noise generating construction activities to daytime hours (7.00 a.m. to 6.00 p.m. Monday to Friday and 8.00 a.m. to 1.00 p.m. Saturday). In special circumstances, if noise generating evening or night work is required, a consultation process will be undertaken to ensure noise impacts can be adequately controlled.	270	Appendix B OOHW Notifications Interview – CB&I Environment Manager	Activities completed during work hours. OOHW inaudible.	C	
Schedule high noise generating activities for less sensitive times of the day (including periodic respite breaks from noise).	271	Appendix B Interview – CB&I Environment Manager	No high noise generating activities during period of audit. Arc welding includes noise checks at boundary.	C	
Consult potential noise receptors (particularly those within 500 m of the gas pipeline works) about the nature of the noise emissions and avoidance and mitigation practices to be adopted. Complaints and feedback and will be recorded and addressed where practical.	272	Section 3.1 Table 8-1	No works within 500m of sensitive receptors during period of reporting with exception of botanical gardens. OOHW notified to community section AGL	C	
Ensure vehicles and equipment are in good working order and has effective noise reduction features.	273	Appendix B Equipment checklists Daily prestart forms	Silencers and mufflers installed on all vehicles. Daily pre start checks include check for excessive noise. Vehicles spot checked for noise levels and compared against design.	C	
Construction activities will be implemented with a focus on vibration control at source and consultation with potentially affected receptors.	277	Table 8-3	Vibratory roller and vibro compaction not completed during reporting period.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
The following measures will be implemented (where practical) to manage impacts of construction vibration and ensure Project goals are met: Use alternative, lower-impact equipment or methods where practicable.	279	Appendix B Site Environment Inspection Checklists	Check of vibration at boundary indicates no off site impacts.	C	
Operate high vibration equipment as far away from receptors as possible. Rock-breakers will not be used within 20 m of residences.	280	Table 8-3 Daily Environment Inspection Checklists	Nearest receptor 500m away (Botanical Gardens). No rock breakers required for this stage of works. Check of vibration at boundary indicates no off site impacts.	C	
Schedule vibration-causing equipment to be used at the least sensitive time of day (times of day to be determined in consultation with local stakeholders, including councils).	281	Appendix B Site Inspections Daily Environment Inspection Checklists	No vibratory activities completed during audit period. Vibratory roller used previously with site inspections indicating impacts localised. No sensitive receptors impacted.	NA	
Keep equipment well maintained.	282	Appendix B Daily Prestart checklists	Vehicle checklist completed daily prestart. Records maintained.	C	
Reduce instances of simultaneous vibration activities.	283	Appendix B Site Inspections Daily Environment Inspection Checklists	No vibratory activities completed during audit period.	NA	
Isolate high vibration equipment on resilient mounds.	284	Appendix B	No high vibration equipment used during audit period	NA	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Consult potential receptors about the nature of construction vibration and avoidance and mitigation practices to be adopted (particularly those within 500 m of the pipeline works, including the receptor R5 (217 Old Maitland Road)). Community feedback and complaints will be recorded and addressed where practical.	285	Appendix B	No vibratory works completed within 500m of sensitive receptors during audit period	NA	
Monitor noise emissions during construction and operations to ensure equipment is meeting noise certification and criteria requirements and detect any faulty or damaged equipment.	286	Section 5.0 Noise monitoring register	Noise monitoring completed as per NVMSP	C	
Monitor vibration levels during construction to ensure vibration criteria are being met.	287	Section 5.0 Daily Environmental Inspection Checklists	Daily checks for vibration at site boundary completed.	C	
Monitor responding to community complaints in line with EPA license conditions	288	Table 8-1 Interview - CB&I Environment Manager	No complaints received during audit period	NA	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Additional Management Plan Commitments</b>					
<i>Training and Awareness</i>					
All project personnel will undergo a general project induction prior to commencing work with CB&I. This will include a noise and vibration management component to reinforce the importance of noise and vibration issues and the measures that will be implemented to protect the environment.	Section 3.2	Induction slide pack	Induction highlights nearest receptors and identifies noise and vibration as potential issues.	C	
Examples of topics that will be covered during project induction and toolboxes include: <ul style="list-style-type: none"> <li>• Normal work hours;</li> <li>• What activities can and can't take place outside of these working hours;</li> <li>• Location of noise sensitive areas;</li> <li>• The employment of reasonable and feasible noise mitigation measures; and</li> <li>• Roles and responsibilities of the Project team related to noise and vibration.</li> </ul>	Section 3.2	Induction slide pack Toolbox Records	Sessions are held with the General Superintendent and Supervisors regarding sensitive receivers and what can and cannot take place during normal hours with particular emphasis on out of hours work (OOHW) on a case by case basis.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b><i>Monitoring and Review</i></b>					
Noise monitoring will be conducted, if required, to verify compliance with the CoA objectives, and to determine if the actual construction noise generated exceeds the 'worst case' construction noise levels identified in this Plan.	Section 5.1	Noise monitoring records.	Noise monitoring completed to confirm noise goals are met.	C	
Documented weekly environmental inspections of the construction site will also be undertaken by the EV through the weekly environmental inspection checklist and forwarded to the EM. The weekly checklist includes a section on noise and vibration controls.	Section 5.1	Daily Environmental Inspection Checklist	Checks are completed daily for noise and vibration	C	
The Environmental Review Group (ERG) and ER will inspect the site regularly. Any actions to be undertaken as a result of any site inspection will be recorded in the CB&I Environmental Action Register	Section 5.2	ER Site Inspection Reports ER Monthly reports	ER inspects site approximately once per fortnight up to end December 2013. Frequency reduced to monthly commencing January 2014.	C	
Should complaints be received, additional noise monitoring may be undertaken at sensitive receivers to determine if the actual construction noise generated exceeds the predicted construction noise goals identified in Table 2-3 and Table 2-4 of this Plan	Section 5.2	Interview – CB&I Environment Manager	No complaints received therefore nil additional monitoring completed	NA	
Ongoing spot checks of noise intensive plant and equipment will also be undertaken throughout construction	Section 5.2	Noise monitoring records	Checks completed on machinery	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Where actual noise levels are found to exceed the predicted worst case levels, the source of excessive noise generations will be identified, and any additional feasible and reasonable measures available will be implemented to either reduce noise emissions or reduce the impacts on receivers.	Section 5.2	Interview – CB&I Environment Manager	No noise levels exceeded during spot checks during day time checks.	NA	
<p>Details of site activity and equipment usage will be noted during construction noise monitoring. Reports prepared following completion of monitoring will include the following:</p> <ul style="list-style-type: none"> <li>• the locations and results of construction noise monitoring;</li> <li>• tabulation of noise management results (including LMAX, L10, L90 and LAeq noise levels) together with notes identifying the principle noise sources and operations;</li> <li>• summary of any measurements exceeding the goals, and descriptions of the plant or operations causing these exceedances;</li> <li>• where exceedances of noise level predictions occur CB&amp;I will implement where reasonable and feasible, additional noise mitigation as soon as possible and</li> </ul>	Section 5.2	Interview – CB&I Environment Manager Noise Monitoring register	Noise register includes all information as per commitment	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<p>in consultation with affected landowners to ensure that adverse noise impacts are minimised to the extent possible (see Appendix B); and</p> <ul style="list-style-type: none"> <li>details of corrective action applicable to goal exceedances, and confirmation of its successful implementation.</li> </ul>					
Regular environmental compliance audits against the SWMS will also incorporate any concerns relating to noise.	Section 5.3	Interview – CB&I Environment Manager	SWMS reviewed using 170596-EN-P25-Task Observation Procedure	C	
Where actual noise levels are found to exceed the predicted worst case levels, the cause/source of excessive noise generation will be identified and the EM will notify AGL and EPA. CB&I will implement any additional reasonable and feasible measures available to either reduce noise emissions, or reduce impacts on receivers.	Section 5.4	Interview – CB&I Environment Manager	No noise levels found to exceed goals during day time checks	NA	
<b>Appendix B – Noise and Vibration Management and Mitigation Measures (additional to CoA and SoC)</b>					
Compounds will be designed to promote one way traffic so that vehicles that need to reverse is minimised, and thus noise from reversing alarms is minimised.	Appendix B, Table 8.3	Site Inspections	Car park is one way	C	
Machines that are used intermittently such as dump trucks, cranes, rollers, bulldozers, excavators, bobcats, mulchers etc. will be shut down when not operated for periods greater than 15 minutes.	Appendix B, Table 8.3	Site Inspections	Vehicles used on site limited to 2 Frannas, 1 crane, forklift, water cart and numerous small vehicles – all switched off during breaks unless not practicable.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Truck routes to and from the worksite will be via major roads where possible, in accordance with the Traffic Management Plan	Appendix B, Table 8.3	Interview - CB&I Environment Manager	Site is located near Old punt Rd and Pacific Highway - no minor roads located in vicinity.	C	
Reversing of vehicles and equipment, and use of horns will be minimised to prevent noise emissions to nearby sensitive receivers.	Appendix B, Table 8.3	Site Inspections	Number of vehicles on site limited, reversal alarms not dominant noise.	C	
Where feasible and reasonable, replace "beeper" style reversing alarms with broad band variable level "quacker" reversing	Appendix B, Table 8.3	Site Inspections	Quacker reverse alarms fitted on all vehicles.	C	



Annex G

Dangerous Goods and Hazardous  
Materials Handling and Management  
Sub Plan

**Table G.1 Compliance Assessment – Implementation of the Dangerous Goods and Hazardous Materials Handling and Management Sub Plan**

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>DoPI, Ministers Conditions of Approval MP10_0133 issued 10 May 2012</b>					
<p>During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:</p> <p>(a) all relevant Australian Standards; and</p> <p>(b) DECC's Environment Protection Manual Technical Bulletin – Bunding and Spill Management.</p> <p>In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.</p>	B15	Table 8-4 Site Inspections	<p>Minor amounts of fuel and oils currently kept on site. Contained in DG cabinets or bunded shipping containers.</p> <p>Site inspections indicate small fuel cans are stored on self-contained bunds or inside dedicated self bunded shipping container.</p> <p>Noted during audit site inspection storage of Class 8 shipping container located near workshop area also contained carton of Class 2 (gases). Segregation of Class 2 and 8 needs to be at least 3m in a well-ventilated area. Consider moving Class 2 gases out of shipping container storing Class 8 substances.</p>	NC-1	Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes.

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
<b>Statement of Commitments from the Preferred Project Report CR 6023_1-_v3 issued September 2011</b>					
Use licensed contractors to collect, transport and dispose of hazardous materials such as waste solvents, paints, mercury absorption medium and hydrocarbons to a licensed off-site facility in accordance with EPA guidelines	SoC8	Site Inspections ER Site Inspection Reports Materials Tracking Register	EPLs of waste contractors obtained. Waste tracking requirements met with check of disposal facilities EPLs completed. Materials and consignment numbers tracked in register. Disposal location randomly checked for one load.	C	
Regularly inspect hazardous material containment facilities to ensure their integrity.	SoC 10	CB&I Daily and Weekly Site Inspection reports	Checks completed and recorded by CB&I	C	
Inspecting and monitoring hazardous material containment facilities to ensure their integrity.	SoC 23	CB&I Daily and Weekly Site Inspection reports	Checks completed and recorded by CB&I	C	Duplicate with SoC 10
Minimise the volume of hazardous chemicals stored on site.	SoC 66	Site Inspections ER Site Inspection Reports CB&I Daily and Weekly Site Inspection reports	Minor quantities of hydrocarbons stored inside bunded shipping containers. Small volumes of fuel stored in impervious containers near work sites.  All chemicals brought onto site require form filled out and submitted to CB&I for review.	C	

Commitment	Commitment Reference	Reference / Evidence	Comments	Audit Classification	Recommendations
Store and transport hazardous materials according to their material safety data sheet (MSDS).	SoC 67	Site Inspections ER Site Inspection Reports CB&I Daily and Weekly Site Inspection reports	Noted during audit site inspection storage of Class 8 shipping container located near workshop area also contained carton of Class 2 (gases). Segregation of Class 2 and 8 needs to be at least 3m in a well-ventilated area. Consider moving Class 2 gases out of shipping container storing Class 8 substances.	NC-1 (duplicate with B15)	Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes.
Store potentially contaminating chemicals according to the appropriate standards, including measures such as impervious bunded areas capable of capturing 110% of the maximum spill volume.	SoC 68	Site Inspections ER Site Inspection Reports CB&I Daily and Weekly Site Inspection reports	Noted during site inspections minor quantities of hydrocarbons stored inside bunded shipping containers. Small volumes of fuel stored in impervious containers near work sites. Portable generators stored in portable bunds	C	
Prepare a spill response plan and ensure adequate spill kits are available at all construction sites and personnel are trained in their use	SoC 69	Appendix B13 - Emergency Response Plan Tool box records Training Records	Spill response plan included in ERP and in Table 8-13 of SMSPP. CB&I have developed and delivered training on how to use spill kits	C	

Annex H

AGL and CB&I Audit  
Response and Action Tables

**Table H.1 AGL and CB&I Audit Response and Action Table - 3<sup>rd</sup> Quarterly Audit**

Item No	Assessment Requirement	Audit Finding	Response/Action	Due Date
<b>Soil Management Sub Plan</b>				
<i>Minister's Conditions of Approval MP10_0133</i>				
B21	Erosion and Sediment controls consistent with Managing Urban Stormwater: Soils and Construction Manual (Landcom, 2004) or its latest version) shall be installed prior to the commencement of soil disturbing works and shall be maintained until such time as the disturbed areas have been rehabilitated.	Erosion and Sediment Control Inspection and Maintenance Checklist recently updated to include sediment capacity, performance of measures and conditions of measures. Consider updating the SWMSP with the amended Checklist.	Added reference to 170596-EN-C08-Erosion and Sediment Control Inspection and Maintenance Checklist to Table 8-1 and Section 4.1. Also added revised checklist to Appendix D of SMSP	Completed
B22	The Proponent shall carry out rehabilitation of disturbed areas progressively, and as soon as reasonably practicable following disturbance.	Old Punt Rd works have been completed with a delay noted for stabilising road edges. First raised in ER site inspection report of 1 May 2013 with works to be completed as at date of audit. Plan is for Wards Civil to roll edges of road to stabilise.	Road edges have been compaction rolled on several occasions but deteriorate with vehicle usage after rain event. Road edge is stabilised but trench area further in from verge is prone to sinking when trafficked in wet conditions. CB&I note that trench settlement has not progressed since additional trench compaction was undertaken. Ongoing observations to monitor and remediate as required.	Completed
<i>Statement of Commitments</i>				
1	Include a spill response plan in the emergency response plan and ensure that there is adequate spill response equipment stored onsite. Personnel will be trained on the emergency response plan and correct use of the spill response equipment.	Toolbox talks include spill response procedure. Consider including in the toolbox talks, training on how to use the spill kits and material effectively.	CB&I have prepared and delivered the training module.	Completed

Item No	Assessment Requirement	Audit Finding	Response/Action	Due Date
8	Use licensed contractors to collect, transport and dispose of hazardous materials such as waste solvents, paints, mercury absorption medium and hydrocarbons to a licensed off-site facility in accordance with EPA guidelines.	Four consignment numbers for contaminated soil material removed off site to be obtained from sub-contractors.  Consider confirming waste has actually reached disposal location as stated on tracking documents as "due diligence".	Four missing consignment numbers for contaminated soil removal have been obtained from the subcontractor.  CB&I contacted the waste disposal company to confirm that waste was received by the tip. This was based on the job number, date and a description of the waste. CB&I confirm that waste is being disposed of at a licensed facility.	Completed  Completed
14	Include inductions to construction personnel that outline measures on how to deal with suspected contaminated soil.	Induction directs personnel to contact supervisor if suspected contaminated soil is found during works. Consider including in induction how to recognise/identify contaminated soil for reporting to supervisor	Unexpected find and information on how to identify contaminated soil has been added to the environmental induction (Rev 6)	Completed
15	A construction Surface Water Management Plan that describes erosion and sediment control will be prepared in accordance with NSW DECC Managing Urban Stormwater: Soils and Construction – Volume 2A Installation of Services 2008 (DECC, 2008) and Managing Urban Stormwater: Soils and Construction (The Blue Book) (Landcom, 2004). All erosion control and drainage works will be designed in accordance with Urban and Sediment Control Guidelines (DLWC, 1992).	Installation of controls as per guidance documents with exception of diversion drains along cuts on Main Access Road. Consider installing diversion drains as per plans in SMSP (if possible, divert water away from site to minimise load on erosion and sediment controls).	Drainage has been designed as per drawings. Alterations to the design require approval and allocation of funds before physical changes can be made.	Completed
49	Secure disturbed bare soils by re-spreading topsoil, re-vegetating or applying a geo-fabric (or similar), as soon as practicable after reinstatement of earthworks.	Refer to MCoA B22 (duplicated)	Noted	NA

Item No	Assessment Requirement	Audit Finding	Response/Action	Due Date
50	Re-vegetate exposed soils as soon as possible to reduce potential for sediment-laden runoff.	Refer to SoC49 and MCoA B22 (duplicated)	Noted	NA
59	Stabilise the banks of any disturbed watercourses adjacent to Old Punt Road using measures such as rock rip-rap, diversion berms, sediment fences, jute matting and reseeded.	Watercourse on Old Punt Road does not currently have erosion and sediment control structures installed. Consider installing erosion and sediment control devices around watercourse on Old Punt Rd until area surrounding is stabilised.	Erosion and sediment controls have been added above and on the banks of the culvert. This will be left in place until the area stabilises.	Completed
60	Divert runoff upstream of disturbed areas to existing drainage lines to prevent the risk of increasing erosion and requiring further sediment control measures.	Refer to SoC15 (duplicated)	Noted	NA
<i>Additional SMSP Commitments</i>				
Section 3.2	Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in soil management. Examples of training topics include: <ul style="list-style-type: none"> <li>• Identification of potentially contaminated soil and fill material.</li> </ul>	Identification of potentially contaminated soil to be completed as per SoC14 (duplicated)	Refer Item No 14	NA
Section 5.2	Regular environmental compliance audits against the EWMS (Task Observation as described in Section 5.4.3 of the CEMP) will also incorporate any issues relating to soil.	EWMSs are anecdotally reviewed, marked up and comments given to the sub-contractors. No written records are currently maintained. Consider including a simple cover page which includes date, name of EWMS reviewed and any comments. Attached this to copy of marked up EWMS and filed as evidence of check being completed.	170596-EN-P25-Task Observation Procedure created and implemented.	Completed



Item No	Assessment Requirement	Audit Finding	Response/Action	Due Date
AGL	Provide workforce inductions and training to ensure personnel have knowledge of legislation regarding movement of soils (i.e. importing and exporting soils from site). Engage qualified consultants to assess materials proposed to be imported to or exported from site, and provide re-use/disposal options.	Legislation re movement of soils not included in induction. Topic not include in toolbox talks during audit period. Consider the inclusion of requirements to either inductions or target training to relevant staff.	Topic added into the environmental induction regarding requirements for importing and exporting soil to and from site.	Completed
<b>Surface Water Management Sub Plan</b>				
<i>Statement of Commitments</i>				
37	Test and treat water generated by dewatering of trenches or excavations if required, and infiltrate back into the groundwater table at designated infiltration areas, or alternatively transport offsite to a licensed disposal facility.	Daracon and Wards complete tests for different parameters and at different frequencies for dewatering. Consider developing standard procedure which outlines parameters to be tested and required frequency when dewatering and infiltrating to groundwater.	170596-EN-P22-Holding Pond Discharge Procedure completed and implemented 8 August 2013.	Completed
<i>Additional SWMSP Commitments</i>				
Section 5.2.2	For each sampling event, field water quality measurements will be recorded including field pH, electrical conductivity (EC), redox potential, turbidity, temperature and dissolved oxygen. Samples will be sent to a NATA accredited laboratory, for analysis of: <ul style="list-style-type: none"> <li>• General parameters – total suspended solids (TSS), turbidity, total dissolved solids (TDS) and EC;</li> <li>• Major cations – calcium, magnesium, potassium and sodium;</li> </ul>	Analytes tested as per commitment with exception of full suite of VOCs and SVOCs (BTEX and TPH tested monthly). Review likely contaminants and objectives of monitoring program and expand list of VOCs/SVOCs accordingly if required.	List of analytes included as part of the dewatering procedure 170596-EN-P22-Holding Pond Discharge Procedure. VOCs and SVOCs added to monthly monitoring program.	Completed

Item No	Assessment Requirement	Audit Finding	Response/Action	Due Date
	<ul style="list-style-type: none"> <li>• Major anions - alkalinity, chloride, sulphate and fluoride;</li> <li>• Dissolved and total metals - arsenic, cadmium, chromium, copper, lead, nickel, zinc and iron;</li> <li>• Total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene and xylenes (BTEX);</li> <li>• Nutrients - total nitrogen, total kjeldahl nitrogen (TKN), nitrate, nitrite and total phosphorus.</li> </ul> <p>Sampling and analysis of a volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) suite will also be undertaken at the start and end of the construction program.</p>			
<b>Acid Sulphate Soil Management Sub Plan</b>				
<i>Additional ASSMSP Commitments</i>				
Section 5.1	Documented weekly environmental inspections of the construction site will also be undertaken by the EV using the weekly environmental inspection checklist and forwarded to the EM for review. The weekly checklist includes a section on ASS.	Weekly checklist does not include a section on ASS. Review weekly checklist and current commitment in ASSMSP. As future ASS works are limited, consider revising commitment in ASSMSP to include 'comment on any ASS works into Weekly Checklist comments section'.	Weekly checklist updated to include comment on whether excavations are occurring in acid sulphate soils	Completed
Appendix B Table 7-1	Monitoring of ASS stockpiles after treatment. pH monitoring after initial treatment event. If pH values are <4, additional treatments will be required.	No further testing of pH was completed on the treated ASS stockpiles. Material was stored for a period > 4 weeks. Although this material was treated as a precaution and was not considered ASS, ensure if any treated stockpiles are stored in the future, testing is completed to confirm effective treatment of ASS.	Noted and agreed.	NA

Item No	Assessment Requirement	Audit Finding	Response/Action	Due Date
Appendix B Table 7-5	Ensure an appropriate lime register is maintained, listing the source of lime, quantity imported and where it is used on site.	A lime register was not maintained. Review the legal and guidance requirements for maintaining a lime register and action accordingly.	Review of ASMAC and other guidelines is silent on lime register. Original source reference to lime register is in Section 3 Table 6 of AGL ASSMP NGSF-AGL-NAS-EN-PLN-0005 (October 2011). Lime rate was set by Douglas Partners at 10kg/tonne in March 2013. Total lime used was 143 x 20 kilo bags.	Completed
Appendix B Table 7-9	ASS monitoring records; Excavation records; Stockpile tracking records; Register of lime used for ASS treatment; and Records of offsite disposal of treated stockpiles (i.e. landfill waste disposal docket).	All required records maintained with exception of lime register. Duplicated finding - refer Table 7-5.	As above	NA

**Table H.2 AGL and CB&I Audit Response - 4<sup>th</sup> Quarter Audit**

Item No	Assessment Requirement	Audit Finding	Response/Actions	Due Date
<b>Groundwater Management Sub Plan</b>				
<i>Statement of Commitments</i>				
107	Groundwater monitoring data collected from the site will be provided to HWC, EPA and NOW.	Groundwater monitoring completed monthly - review of correspondence sending reports to agencies to confirm compliance outstanding.	Minutes of meeting between NOW, HWC and PSC sighted which includes discussion on results and any exceedances. Daytime monitoring at the site compound compared to daytime monitoring at the site boundary shows the boundary to be seven (7) decibels quieter. This indicates that the site boundary is within the noise goals set for the project. A factor of seven (7) decibels may be used to correlate night monitoring at the site compound to the boundary in the future.	Completed
<i>Additional GMSP Commitments</i>				
Table 8-1	Construct hardstand and bunded areas for refuelling of construction machinery to mitigate potential risks of groundwater contamination.	All refuelling done on site using mobile refuelling trucks. EWMS for refuelling checked. Refuelling also include in Ward's EWMS for Clearing and Grubbing, Bulk Earthworks, Vibro compaction works with refuelling and associated controls discussed. Site inspections indicate any pumps containing fuel contained within impervious container. Crane will need oil change out during operations - consider the review of the EWMS prior to activity being completed to ensure appropriate mitigation measures are developed and implemented.	EWMS for crane operation reviewed and includes provision for spill control and containment. Task observation conducted on 3 December 2013 during engine oil change.	Completed

Item No	Assessment Requirement	Audit Finding	Response/Actions	Due Date
Table 8-2	Re-injection of excess groundwater pumped from trenches during construction where possible will minimise temporary changes in local groundwater levels.	All water pumped from excavations re-injected back to groundwater with exception of stormwater pit on PPA – minor quantities (unknown volume) used for dust suppression. Record volumes used for dust suppression for any future groundwater dewatering works.	Minor dewatering planned in November 2013 will complete all dewatering. There will be no future use of groundwater for dust suppression.	Completed
Table 8-2	Monitor bore integrity weekly. Decommission in advance of necessary site works, or if damaged, decommission properly. Replace bores as necessary.	Bore integrity formally checked during monitoring events only. Consider adding requirement to weekly checklist.	Added item to weekly checklist to confirm bore integrity in CB&I work areas. Added item 23 to 170596-EN-C02-Weekly Environmental Inspection Checklist to include monitoring bore condition inspection	Completed
<b>Waste Management Sub Plan</b>				
<i>Statement of Commitments</i>				
85	When wastewater is tankered, the system will have a telemetered level sensor that alarms when over range; the tank will be included on the regular site inspection and reporting program.	Wastewater pit located in the Primary Project Area is alarmed (visual and audible). Anecdotally area is checked daily. Consider the formal addition of daily or weekly check of pit levels (if practicable) to prevent further overflows.	Increased frequency of pump outs to twice weekly. Included visual and audible alarm inspection on daily check list. Created 170596-EN-C09-Daily Amenities Leak Inspection Checklist. Amenities checked for running water daily after cleaners leave site. Pump system is isolated after hours to ensure continuous flow is prevented.	Completed

Item No	Assessment Requirement	Audit Finding	Response/Actions	Due Date
<i>Additional WMSP Commitments</i>				
Section 3.2	<p>All project personnel will undergo a general project induction prior to commencing work with CB&amp;I. This will include a component on waste and reuse management, to ensure personnel understand the potential impacts and proposed mitigation measures.</p> <p>Examples of topics that will be covered during project induction and toolboxes include:</p> <ul style="list-style-type: none"> <li>• waste storage and segregation;</li> <li>• waste reporting;</li> <li>• roles of personnel in waste management and reporting;</li> <li>• actions to be taken if potential contamination is encountered; and</li> <li>• energy efficient work practices.</li> </ul>	<p>Toolboxes completed for all topics listed with exception of waste reporting and roles of personnel in waste management and reporting as not considered necessary/relevant.</p> <p>Focus of toolboxes has been on waste storage and segregation. Consider reviewing list of topics to reflect degree of risk and include relevant topics to the project.</p>	<p>Reviewed the list of topics in Section 3.2 and removed topics of waste reporting and roles of personnel in waste management and reporting from examples in Section 3.2</p>	Completed
Section 5.1.1	<p>Details of wastes removed from site will be included in monthly reports to AGL.</p>	<p>Review of monthly reports indicates details of waste removed not included. Consider confirming requirement for reporting with AGL and include waste volume breakdowns for types of waste removed into monthly report if required.</p>	<p>CB&amp;I has recommenced including waste volume breakdowns in the monthly report.</p>	Completed

Item No	Assessment Requirement	Audit Finding	Response/Actions	Due Date
Section 5.2	Annual waste audits will be undertaken to: <ul style="list-style-type: none"> <li>identify measures to improve waste management practices; and</li> <li>identify measures to improve energy efficiency and reduce greenhouse gas emissions.</li> </ul>	Annual waste audit to be completed as construction commenced 28 August 2012. Consider the completion of a waste audit.	CB&I have now completed waste audit	Completed
Appendix A, Table 7.3	Cover vegetation stockpiles where material is to remain exposed for a long period of time	Mulch stockpiles are located along Gas Access Track and are uncovered. Covering of stockpiles with plastic may affect seed viability. Consider the review of this condition and either implement the requirement or remove from Table 7.3.	Removed requirement to cover vegetation stockpiles that remain on site for more than two weeks point 10 in Table 7-3.	Completed
Appendix A, Table 7.6	Waste materials will be tracked so that the appropriate management of waste can be demonstrated	Waste register reviewed - logs and mulch recycled and concrete waste removal not included. Review all materials removed off site and include in materials tracking register.	Logs, mulch and recycled concrete added to register.	Completed

### Noise and Vibration Management Sub Plan

#### *Additional NVMSP Commitments*

Section 3.2	Examples of topics that will be covered during project induction and toolboxes include: <ul style="list-style-type: none"> <li>Normal work hours;</li> <li>What activities can and can't take place outside of these working hours;</li> </ul>	Toolbox topics do not include these topics. Requirements conveyed to sub-contractor (Daracon) management. Consider the review of toolbox topics to determine relevance and implement changes.	The noise topic is covered in the induction but has not been reintroduced in recent tool boxes. More specific sessions are held with the General Superintendent and Supervisors regarding sensitive receivers and what can and cannot take place during normal hours with particular emphasis on out of	Completed
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Item No	Assessment Requirement	Audit Finding	Response/Actions	Due Date
	<ul style="list-style-type: none"> <li>Location of noise sensitive areas;</li> <li>The employment of reasonable and feasible noise mitigation measures; and</li> <li>Roles and responsibilities of the Project team related to noise and vibration.</li> </ul>		hours work (OOHW) on a case by case basis. CB&I plans to work extended hours starting January 2014 and will conduct attended monitoring during out of hours work.	
<b>Air Quality Management Sub Plan</b>				
<i>Additional AQMSP Commitments</i>				
Appendix B, Table 8.3	Stockpiles will be stabilised or covered if they are to remain in place for a period of greater than 2 weeks.	Stockpiles spray mulched or natural revegetation occurring (in case of topsoil stockpiles). Covering of stockpiles would affect seed viability. Delay noted with stabilising with mulch. No further stabilising works required. Stockpiles not stabilised within 2 weeks. No further stockpiles to be generated for this stage of the project. Ensure any future stockpiles are stabilised within stipulated period.	CB&I will ensure this requirement is included in JSA and reinforced at prestart for activities requiring stockpiling of soil greater than two weeks.	Completed
Appendix B, Table 8.3	Mulch stockpiles will be limited to 1 metre in height where possible.	Mulch stockpiles initially greater than 1m but long term storage height as per commitment. SMSP lists heights of mulch can be stored to 3m. Review the SMSP and AQMSP mulch stockpile heights and remove inconsistency.	Inconsistency removed. Changed from 1m to 3m in AQMSP	Completed



**Table H.3 AGL and CB&I Audit Response and Action Table – 5<sup>th</sup> Quarterly Audit**

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
<i>Minister's Conditions of Approval MP10_0133</i>					
A15	The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within seven days of becoming aware of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.	NC-2	19/08/2013 sewage overflow reported to EPA but not DP&I within 24 hours. Reported to DP&I in six monthly compliance report. AGL to ensure all incidents reported to EPA are reported to DP&I concurrently.	Noted	Completed
B15	During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:  (a) all relevant Australian Standards; and  (b) DECC's Environment Protection Manual Technical Bulletin – Bunding and Spill Management.	NC-1	Bulk Fuel storage installed on site November 2013. Refuelling area does not drain to a fixed point to enable the control and clean-up of spills (Section 7.3.2 of AS1940:2004 states “Any area on which a vehicle can stand while being fuelled shall be so graded that spilled liquid will flow away from any building, and will not flow off the site. Any interceptor shall be readily accessible for inspection.”). Review of refuelling area design to be completed.	Barrier system installed to capture any leaks or spills.	Completed

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
<i>Statement of Commitments</i>					
107	Groundwater monitoring data collected from the site will be provided to HWC, EPA and NOW.	NC-2	Groundwater monitoring completed monthly - review of correspondence sending reports to agencies to confirm compliance outstanding. Minutes of meeting between NOW, HWC and PSC sighted which includes discussion on results and any exceedances. Evidence results are sent to EPA outstanding.	Email to EPA dated 5/05/2014 included groundwater monitoring results	Completed
<i>Additional Plan Commitments (Groundwater)</i>					
App B Table 8-1	Construct hardstand and bunded areas for refuelling of construction machinery to mitigate potential risks of groundwater contamination.	NC-1	Portable bulk fuel storage and associated refuelling area installed on site. Area for refuelling is not bunded. Consider review of refuelling area design with AGL (this commitment is an AGL requirement).	Barrier system installed to capture any leaks or spills.	Completed
Appendix B, Table 8.1	Diversion drains shall be constructed as necessary to divert surface water drainage away from soil stockpiles, excavations or other disturbed areas. No area requiring diversion drains shall be left overnight without diversion drains unless approved by the Environment Officer (or delegate).	NC-1	Diversion drain not installed along car park edge as per SMSP. Evidence of erosion in this area - sediment fences currently containing sediment on-site. Review the requirement for a diversion drain along the western edge of the PPA site car park. Consider additional controls to prevent further erosion in this area. Ensure SMSP reflects current site practice.	CBI constructed a bund wall to divert water away from slopes which prevented further erosion of the banks along the western car park.	Completed

**Table H.4 AGL and CB&I Audit Response and Action Table – 6<sup>th</sup> Quarterly Audit**

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
<i>Minister's Conditions of Approval MP10_0133</i>					
B20	Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997 during construction of the project.	NC-1	Noted during site inspection as part of audit second storage container for effluent added to toilets. Container is located in laydown area where forklift is in operations. As the groundwater in this location is less than 0.5mbgl any sewage spills are likely to impact groundwater before clean up could occur. Consider the placement of a visual or physical barrier to the area around the effluent tank with spacing to provide buffer to any accidental collisions by machinery in the area.	Bollards and flagging placed around the perimeter of the effluent storage container.	Completed
<i>Statement of Commitments</i>					
2	Ensure concrete mixers and pump trucks are washed on bunded hardstand areas so that no waste enters the environment.	NC-1	Concrete washouts occur as per approval modification. Site inspections during the audit period note the liner has been torn and requires replacement (two occurrences). CB&I have undertaken to replace liner.	Concrete washout area cleaned up and plastic reinstated. Only minor use of washout area required in future.	Completed
9	Remove wastewater and sewage from site by an EPA licensed operator for treatment at an EPA-approved wastewater treatment facility.	IO	Oily water removed by AES Pty Ltd and disposed to Environmental Treatment Solutions Pty Ltd. Consider the check of EPLs for the waste transport and disposal location for oily water waste.	EPLs for transporter and waste disposal facility downloaded and reviewed. Transport Certificate waste classifications verified. Waste disposed of correctly.	Completed

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
67	Store and transport hazardous materials according to their material safety data sheet (MSDS).	NC-1	Noted during audit site inspection storage of Class 2 (gases) stored next to Class 3 (flammable substances). Segregation of Class 2 and 3 at least 5 metres. Consider moving Class 2 gases away from shipping container storing flammable goods. Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes	Class 2 gases and Class flammable substances were removed from site during subcontractor demobilisation.  Segregation charts created. Tool box planned.	Completed
227	Meet the construction and operations noise goals of the Project to minimise disturbance to sensitive receptors.	NC-1	Night time monitoring completed near site office with noise goals exceeded and audibility of site works evident. Consider monitoring daytime noise levels at the site compound and at off-site locations to determine noise relationship at locations to confirm night time noise levels are not exceeded at the site boundary and works are inaudible at sensitive receptors.	Daytime monitoring at the site compound compared to daytime monitoring at the site boundary shows the boundary to be seven (7) decibels quieter. This indicates that the site boundary is within the noise goals set for the project. A factor of seven (7) decibels may be used to correlate night monitoring at the site compound to the boundary in the future.	Completed

**Table H.5 AGL and CB&I Audit Response and Action Table – 7<sup>th</sup> Quarterly Audit**

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
<i>Minister's Conditions of Approval MP10_0133</i>					
B15	<p>During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:</p> <p>(a) all relevant Australian Standards; and</p> <p>(b) DECC's Environment Protection Manual Technical Bulletin – Bunding and Spill Management.</p> <p>In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.</p>	NC-1	<p>Noted during audit site inspection storage of Class 8 shipping container located near workshop area also contained carton of Class 2 (gases). Segregation of Class 2 and 8 needs to be at least 3m in a well-ventilated area. Consider moving Class 2 gases out of shipping container storing Class 8 substances. Consider posting segregation charts in DG areas and/or training on segregation distances to relevant staff through toolboxes.</p>	<p>Class C2 gas removed from container. Segregation charts posted in DG areas.</p>	5 June 14
B20	<p>Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997 during construction of the project.</p>	NC-1	<p>A diesel spill was noted at the generator located near the gas storage tank. Indications are that it was likely a number of spills had occurred in the area over a period of time. Due to the design of the tank, the refuelling procedure had to be changed to allow for the refuelling to occur without the high level switch cutting off repeatedly. A breather cap was also removed to expedite refuelling which was located on other side of tank therefore any leaks/spills from this area were not noted during refuelling. This tank has now been removed from site; however, a</p>	<p>Created JSA for fuelling generator which includes fill volume limits and mandatory inspections during and after refuelling to check for leaks/spills.</p>	12 June 2014

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
			tank based on a similar design is still on site. Consider the removal of this tank and installation of a tank fit for purpose to prevent spills from overflowing. If not practicable to remove tank from site, consider adding walk around tank during and after refuelling to work method statement to check for leaks/spills.		
<i>Statement of Commitments</i>					
2	Ensure concrete mixers and pump trucks are washed on bunded hardstand areas so that no waste enters the environment.	NC-1	Concrete washouts occur as per approval modification. Site inspections at the beginning of the audit period noted the liner had been torn which was replaced but has since been torn again. Consider replacing thin plastic liner with HDPE liner or similar material to prevent tearing during normal concrete washout activities.	The liner is torn high on one side but not the base which is intact and covered by 200mm of sand.	9 May 2014
35	Develop hydrostatic test management measures in consultation with HWC and NSW Office of Water (NOW).	IO	Review of the plan for dewatering of the Gas Holder Tank indicates water will be tested for metals prior to release to the stormwater retention pond. Releases from the stormwater retention pond require further testing prior to release. Consider obtaining approval for testing water from the gas holder tank and then releasing directly to pit which releases to Old Punt Rd discharge point. This would prevent delays in receiving test results for the stormwater retention pond and prevent any contamination of the hydrostatic test water through surface water runoff.	CBI is discussing the change with AGL.	12 June 2014

Item No	Assessment Requirement	Audit Classification	Comment	Response/Action	Due Date
62	Maintain runoff, erosion and sediment control structures according to appropriate standards.	NC-1	Noted during site inspection, scouring of batter on road leading to laydown area along northern boundary. Some sediment is beginning to flow over silt fence. Consider the diversion of water from this area and clean out of sediment from behind the silt fence.	Arrangements are being made to clean out sediment from behind the silt fence and divert water from the area.	31 July 2014
67	Store and transport hazardous materials according to their material safety data sheet (MSDS).	NC-1	Refer to MCoA B15	Refer to MCoA B15	5 June 2014
87	Ensure that the banks of watercourses are not disturbed during construction.	IO	Works within one water course on Old Punt Rd completed past audit periods. Further stabilisation using sandbags as per SoC 59 completed. Area now stabilised with vegetation regrowth. Sand bags to be removed as beginning to degrade and may wash sediment into water course.	Arrangements have been made to have the sand bags removed from the culvert crossing.	14 June 2014

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### **Environmental Resources Management**

Suite 3/ 146-148 Gordon Street  
Port Macquarie  
NSW 2444

T: +61 2 6584 7155  
F: +61 2 6584 7160  
[www.erm.com](http://www.erm.com)

