

## CSG/LNG Compliance Plan 2011 Update:

### January 2011 to June 2011

As part of Queensland Government's proactive approach to monitoring compliance and regulating the CSG/LNG Industry, a specific CSG/LNG Compliance Plan was released by the Department of Environment and Resource Management (DERM) in May 2011.

This plan outlines a range of commitments including:

- inspections
- unscheduled audits
- monitoring programs
- reviews of reporting and monitoring data.

This plan complements the whole of department Annual Compliance Plan, which outlines an increased focus on compliance activities for the CSG/LNG Industry.

This report provides an update of several activities in the CSG/LNG Compliance Plan, including:

1. proactive audits and inspections of CSG operators
2. unscheduled audits and inspections of CSG operators
3. improved complaint management.

### 1. Proactive audits and inspections of CSG operators

Activity	Goal	Scope	Activities conducted up to 30 June 2011
Planned audits and inspections	To track and manage the environmental performance of the CSG industry and impacts on Queensland's environment.	<p>DERM will conduct 25 inspections of level 1 activities and 30 of level 2 activities.</p> <p>DERM will conduct 12 dredging inspections (i.e. one per month) of the construction phases of LNG facilities.</p> <p>DERM will conduct 12 island inspections of the construction phases of LNG facilities.</p> <p>DERM will conduct sampling and analysis of 300 bores by December 2011.</p> <p>Compliance inspections will assess disturbance to land, water management and releases, dam management including hazard assessment and reporting and rehabilitation of completed activities</p> <p>Compliance inspections of construction activities will include assessment of compliance with the marine species monitoring program, management of sediment plumes and disposal of dredge spoil.</p>	<p>DERM has conducted 11 inspections of level 1 activities and 20 inspections of level 2 activities.</p> <p>DERM has conducted nine dredging inspections of the construction phases of LNG facilities.</p> <p>DERM has conducted 11 island inspections of the construction phases of LNG facilities.</p> <p>As part of its monitoring regime, DERM has monitored 150 bores across the area of coal seam gas operations.</p>

## Target summary

### **Target: DERM will conduct 25 inspections of level 1 activities and 30 level 2 activities**

**Outcome:** DERM has conducted 11 inspections of level 1 activities and 20 inspections of level 2 activities.

#### *Level 1*

Level 1 activities include coal seam gas operations and extraction activities across the Surat and Bowen Basins such as:

- hydraulic fracturing
- storage and treatment of CSG waters, brine and salt
- vegetation clearance
- facility construction
- camp sites.

DERM officers found environmental compliance was being met by companies at the time of audits. There were no warning letters or Penalty Infringement Notices (PINs) issued across the level 1 activities audited.

#### *Level 2*

The level 2 activities inspected were exploration activities and low risk gas production activities. There was one warning letter issued for level 2 activities audited and some improvements were noted with companies such as needing written procedures and faunal ladders in water storage ponds.

Potential compliance issues were identified concerning gas safety in both level 1 and level 2 audits and were referred to the Department of Employment, Economic Development and Innovation (DEEDI) for further investigation.

### **Target: DERM will conduct 12 dredging inspections (i.e. one per month) of the construction phases of LNG facilities**

**Outcome:** DERM has conducted nine dredging inspections of the construction phases of LNG facilities.

Dredging inspection comprises the Western Basin Dredging program relating to LNG shipping channel access and berthing facilities. This involves the removal and relocation or up to 60 million tonnes of dredge material. A major bund wall is also being constructed as part of the dredging operations where approximately 40 Mt of dredge material will be placed in the reclamation area to the north and immediately adjacent to Fisherman's Landing. Dredge material not used as part of the reclamation program will be disposed of at the offshore disposal area in Commonwealth waters.

The primary risks are associated with turbidity from sedimentation of waterways resulting in impacts on marine flora, acid sulfate soils management and marine fauna impacts. The scale and intensity of marine operations presents risks relating to plant operations and oil spills management. The dredging activities are occurring in waterways within the Great Barrier Reef World Heritage Area.

The nine inspections of dredging operations prior to 30 June 2011 showed risks were generally well controlled, although there was need for clarification of operational procedures. During the period a significant number of marine turtles, dugong and dolphins deaths were reported. An expert panel has been established by the Minister to investigate. At this stage it appears to be related to the decline of seagrass associated with the wet season run off and not directly attributed to the dredging program.

### **Target: DERM will conduct 12 island inspections of the construction phases of LNG facilities**

**Outcome:** DERM has conducted 11 island inspections of the construction phases of LNG facilities.

On the island, activities being implemented during the first six months of 2011 included vegetation clearing and construction of infrastructure such as temporary refuelling stations, vehicle maintenance areas, aggregate loading facilities and marine facility works.

Potential environmental impacts arising from the island construction activities include dust, soil erosion and sedimentation, and oil spills associated with construction works. Water quality monitoring programs were also audited.

During island inspections, DERM officers checked to ensure good stormwater controls were in place on construction sites and erosion was appropriately being managed. Appropriate environmental awareness training is being provided to contractors and will provide the benchmark for ongoing environmental compliance throughout the

construction phase. Environmental compliance was achieved by the operating companies to these requirements. DERM will provide a regular attendance on-site as construction activities continue over the last six months of 2011.

**Audit follow-up and enforcement**

Proceeding each inspection, follow up action may be required to pursue confirmation of an outstanding issue from the inspection. An example of an outstanding issue may be the requirement to view a written procedure outlining soil erosion and sediment control practices, or a bore well log, if it was needed to demonstrate operational compliance at a site. Follow up action was required in approximately 30 per cent of audits conducted.

There are a number of enforcement options that DERM considers when non-compliance has been identified onsite. DERM’s enforcement approach is outlined in its [Enforcement Guidelines](#). Depending on the severity of the breach, some of the actions that may be taken include:

- verbal and written warnings
- infringement notices
- court orders
- prosecution.

DERM has issued three warning notices as a result of detecting low level non-compliance during proactive compliance activities. The warning letters related to matters such as inadequate refuelling areas, insufficient soil erosion and sediment control measures and lack of faunal ladders in water ponds. Enforcement action through the provision of warning letters was taken after seven per cent of conducted inspections. In accordance with the enforcement guidelines, historical compliance behaviour will be considered for future enforcement action taken against companies who demonstrate a continuation of non-compliant behaviour.

**2. Unscheduled audits and inspections of CSG operators**

Activity	Goal	Scope	Activities conducted up to 30 June 2011
Unscheduled audits and inspections.	To track and manage the environmental performance of the CSG industry and impacts on Queensland’s environment.	Unscheduled audits and inspections will be conducted when triggered by intelligence received from the community, planned inspections or other sources.	DERM conducted 11 reactive audits as a result of intelligence received from the community or industry.

Between 1 January 2011 and 30 June 2011 there have been 45 compliance related incidents. (This does not incorporate enquiries and complaints, which is reported separately). Of the 45 compliance related matters, 21 matters had been finalised as of 30 June 2011 and 24 matters were current.

The following incidents have occurred during the period 1 January 2011 to 30 June 2011, broken down by type.

Type of Incident	Number of Incidents	Percentage
<i>Spills</i> Releases of CSG water during operations account for the largest incident type. These spills typically occurred during drilling activities or resulted from opened/faulty valves within pipework.	23	51%
<i>Sewage</i> Gas field operating staff reside at base camps across the gas fields. These temporary camps have had several incidents from sewage overflows from associated latrines.	6	13%
<i>Discharge</i> These incidents involved the controlled or uncontrolled release of coal seam gas water or permeate to the environment.	4	9%

<i>Overflow (flooding)</i> During the January 2011 floods, several CSG water storage dams breached the dam banks.	3	7%
<i>Exceedance release limits</i> Discharge limits are set on environmental authorities and these limits were exceeded on several occasions.	3	7%
<i>Noise</i> Complaints were received by adjacent landholders of CSG activities. Conducted noise monitoring showed acceptable levels. (These complaints were received by the Pollution Hotline or through DERM Environmental Services)	2	4%
<i>Other (Vegetation clearing, BTEX etc.)</i> There was one incident relating to BTEX contamination and one incident of excessive vegetation clearing.	4	9%
<b>Total</b>	<b>45</b>	<b>100%</b>

For these incidents, the following enforcement actions have occurred.

<b>Enforcement option</b>	<b>Number</b>
No further action	13
Warning	7
Transitional environmental program	1

A Transitional Environmental Program (TEP) is issued when a company is not in compliance with the conditions of its environmental authority. A TEP allows an activity to complete actions outside of its agreed environmental authority conditions. The program is in place for a specified timeframe and strict conditions regarding discharge water quality must be adhered to. Once a TEP has expired the activity is again expected to comply with its EA conditions.

Six TEPs were issued as a result of the January 2011 floods. The TEPs were necessary to avoid potential breaches of CSG water storage dams. At the end of June, three TEPs had concluded. See below table for further details.

<b>Company</b>	<b>Location</b>	<b>Details</b>	<b>Status</b>
Arrow	Moranbah	Arrow's Moranbah Gas Project – Discharge of CSG water into the Isaac River under strict flow and dilution conditions.	Concluded
	Daandine	Discharge of RO permeate into a tributary of Wilkie Creek – Arrow has submitted a draft TEP for it's Daandine operation requesting all weather discharge of RO permeate into Wilkie Creek. The decision date has been extended.	Concluded
Origin/ APLNG	Spring Gully	Discharge of reverse osmosis permeate into Eurombah Creek under strict conditions.	Concluded
	Spring Gully	An amendment for the above TEP focussed on allowing higher electrical conductivity (EC) within the mixing zone, due to influence of higher EC background water quality.	No further action required

Santos	Arcadia	Investigation into how Santos will rehabilitate project dams and prevent release of water.	Further information required.
	Scotia	Proposal to discharge from site dam to avoid overtopping.	DERM assessing TEP

### Enforcement taken in 2011 from 2010 incidents

The investigation of an incident often takes time to collate the evidence required to substantiate an enforcement action. A summary of the enforcement actions taken on companies from incidents that occurred in 2010 are provided below.

Enforcement Option	Summary	Details
PIN	8	2—Santos
		5—QGC
		1—CH4 Pty Ltd (subcontractor of Arrow Energy)

The eight PINs were issued as a result of contravening operational conditions in the environmental approval issued to each company. Examples of conditions breached include not providing information to DERM prior to commencement of activities, not calibrating water measurement equipment and vegetation clearing.

### 3. Improved complaint management

Activity	Goal	Scope	Activities conducted up to 30 June 2011
Improved complaint management	To ensure complaints and requests for information are dealt with promptly and efficiently by DERM.	<p>New business unit to be created and staff placed in operational centres within the area of CSG operations by 1 November 2010.</p> <p>Complaints management framework developed and implemented by 1 November 2010.</p> <p>Regular attendance by staff to community and stakeholder meetings as required.</p> <p>Case managers to coordinate responses from various areas within DERM to ensure that a single, clear and concise response is provided to all complaints and requests for information received in relation to CSG activities.</p> <p>Database of all complaints and information requests is maintained.</p>	<p>The LNG Enforcement Unit has been operational since February 2011 with the recruitment of 50 staff covering various technical disciplines covering gas safety, land access, groundwater management and compliance.</p> <p>A dedicated team within DERM manage all complaints received by the CSG Hotline.</p> <p>Officers regularly attended stakeholder meetings, see below for further information.</p> <p>A case manager is assigned to each enquiry and complaint to facilitate its resolution across various teams in DERM and DEEDI.</p> <p>A database of complaints and enquiries is maintained.</p>

### Stakeholder engagement

DERM officers have regularly attended community and stakeholder meetings since the inception of the LNG Enforcement Unit. During the period until 30 June 2011, 16 conferences, forums and meetings were attended

outlining the role, function and structure of the unit and discussing environmental impacts, particularly on groundwater. Presentations were given to the following groups, including Agforce, Irrigators in the Condamine and Balonne region, South West Local Government and Regional Planning, Central Downs Irrigators and Fitzroy Water Quality Advisory Group amongst others.

## Complaints and enquiries

The following provides a summary of the type of enquiries received by DERM, CSG Activities Group within the LNG Enforcement Unit and progress made in resolving each issue.

Category	Resolved cases	Current cases	Total cases
Bores	18	7	25
CSG operations	38	15	53
Environment	13	8	21
General enquiries	21	2	23
Land access	19	7	26
Water (Other than bores)	41	13	54
Total	150	52	202

\*Summary as of 4 July 2011

Of all enquiries and complaints case managed by the Unit, the vast majority had been finalised by providing information to landholders in addition to facilitating their contact with CSG proponents, ultimately resolving their concerns.

Only 47 per cent of all complaints and enquiries received to date relate to a CSG company, with only 15 matters directly attributed to CSG activities. At the end of June 2011, no landholder bores had been found to have been impacted as a result of CSG water extraction and seven were currently under investigation.

## Amendments

DERM has been working on a number of policy amendments to improve the regulatory framework governing the CSG industry. These amendments include:

- The *Water and Other Legislation Amendment Act (2010)* was introduced in late 2010 and expands the existing regulatory framework for managing the groundwater impacts of the petroleum industry into the *Water Act 2000* (Water Act). Other amendments to the *Water Act 2000* make improvements regarding protection of groundwater in the context of coal seam gas and other petroleum activities.
- Amendments to the Environmental Protection Regulation 2008 took effect on 29 July 2011 and required a maximum threshold concentration of BTEX in 'restricted stimulation fluids'. The maximum threshold concentration reflects the values contained with the Australian Drinking Water Guideline (2004) or Australia and New Zealand Environment Conservation Council Guideline for Fresh and Marine Water Quality (2000).
- The CSG Water Management Policy is being revised and is currently in consultation with industry with release expected in September 2011. The revised policy will formally outline DERM's preference for groundwater injection as a priority for managing CSG water over other options such as beneficial use, release to streams and disposal.

Other components of the CSG/LNG Compliance Plan 2011 are being implemented and a brief will be provided in following updates. The next update will cover activities conducted over the July 2011 to September 2011 period.