

NSW CSG

ENVIRONMENTAL BREACHES IN THE PILLIGA STATE FOREST

Version 1 - March 2012

Overview

Santos purchased Eastern Star Gas (Eastern Star) in November 2011. Santos acquired all of Eastern Star's operations including its Bibblewindi water treatment facility in the Pilliga State Forest, south of Narrabri. On inspection of the Pilliga site, Santos identified initial concerns with the plant and closed the water treatment facility in December, pending a full review of the site and its operations.

In January 2012, Santos identified a water spill which had occurred on the site during June 2011 that Eastern Star had failed to report to the government. Santos reported the incident to the regulator, the NSW Department of Trade & Investment's

Division of Resources and Energy, and is continuing its full investigation of the operations in the Pilliga.

The investigations to date have shown Eastern Star had an unacceptable culture of accepting minor spills, failures to report and the possibility of unapproved land clearing on some sites.

Santos is taking action to implement much higher standards of operation on all previously Eastern Star operated sites. Santos is making an initial investment of \$20 million to bring the Pilliga operations up to Santos standards. The plant will remain closed until Santos is confident it can operate to the highest standards.

What leaks occurred at the water treatment plant?

After taking over operations, Santos discovered an internal Eastern Star report stating that on June 25, 2011, approximately 10,000 litres of untreated saline water had leaked from a pipe going into the reverse osmosis plant. Eastern Star did not report this to Government at the time. Santos reported the incident to the Government and commenced a full investigation into the site.

Another significant leak is likely to have occurred during 2010, but there is no record of the incident in Eastern Star's incident management system.



Pilliga area.

Santos
We have the energy.

In retrospect it is difficult to determine the total volume of water released as a result of this incident.

Santos has also been able to establish that Eastern Star experienced a number of smaller incidents associated with the water treatment plant, virtually from the time of its installation.

What has been the impact of leaks from the water treatment plant on the environment?

The area affected by the release is a corridor trending south-west extending approximately 700 metres from a water storage pond. There is visible vegetation stress for approximately the first 300 metres from the water treatment plant and a black residue on the ground surface that diminished with distance from the pond.

Santos engaged external scientific consultants, Golder Associates, to conduct detailed soil sampling of the area to assess the environmental impacts of the spills. A copy of the full report is available on the Santos website to download: www.santos.com/library/120222_Report_into_ESG_operations.pdf

They determined the following from the soil samples:

- "...the most distinct soil quality difference within the release area is a concentration of salts, and particularly sodium, in the shallow soil profile. This may have been the major contributing factor to the observed vegetation stress within the release area."
- "...the black substance is not consistent with a petroleum hydrocarbon source" and are likely attributable to natural organic material including eucalypt trees and grasses.
- The soil results are below the guidelines of the National Environment Protection Measure (NEPM) required for parks and playing fields. The soil was shown to fall below the most sensitive health-based land use soil criteria of low density residential with garden/accessible soil, children's day care centres, kindergartens and preschools.

Although these findings show there was no potential health or ecological risk, the spills are not acceptable and the site will be fully remediated and the water treatment plant upgraded before Santos allows it to recommence operations.

Have there been other environmental breaches on the site?

Yes. To date Santos investigations have revealed evidence of:

- Eastern Star failing to report water discharge into Bohena Creek.
- Water from an untreated water pond overflowing during rain.
- Possible unapproved land clearing.

Bohena Creek: Eastern Star did not in all instances accurately report data obtained by the company during weekly testing of the Bohena Creek discharge water.

Water pond overflow: During heavy rainfall in December 2010/January 2011 some water overtopped a holding dam. Santos understands that the Department was informed of the incident but has been unable to find a written record of the report.

Land clearing: It appears some land may have been cleared in excess of the estimates proposed in the review of environmental factors (REF) that Eastern Star submitted to the government.

What does Santos plan to do next?

- The full investigation by Santos will be delivered to government in coming weeks.
- Santos has also commissioned independent assessments of soil and water samples to assess the extent of contamination, indicate any further investigation required, and recommend immediate and full scale remediation options.
- Develop and implement a Remedial Action Plan in consultation with relevant experts and the government.

What has Santos done to date?

Santos commissioned an independent ecological survey for Matters of National Environmental Significance

(MNES) under the Environment Protection and Biodiversity Conservation Act 1999 on the spill that has been provided to the Commonwealth Government.

Other steps Santos has already taken to rectify the site include:

1. Audit and rectify safety signage in the field.
2. Develop significant hazard risk register.
3. Develop emergency response plans for NSW operations and roll out training.
4. Carry out training needs analysis and training plan development.
5. Develop waste disposal and waste management plan.
6. Dispose of glass fibre/poly pipe,
7. Dispose of scrap equipment/steel pipe/field pipe off-cuts.

What action is the government taking?

The NSW Division of Resources and Energy is undertaking an investigation of all of the non-reported incidents that have occurred in the Pilliga State Forest including interviewing the management team of Eastern Star Gas at the time of the incidents. Santos is assisting the government in its investigation.

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