

## CONTAMINATED SITES, ACCIDENTS AND OTHER INCIDENTS RELATED TO CSG/LNG IN AUSTRALA

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*The following is a compendium of publically sourced stories. It is by no means comprehensive as time does not permit keeping up with the growing number of problems associated with the industry.*

- **28 Sept, 2015 – Santos “flare” on Port Curtis Island**



- **28 Sept, 2015 -- NSW government too slow to act on CSG regulation**

<http://www.smh.com.au/environment/environmental-groups-claim-nsw-government-too-slow-to-act-on-csg-regulation-20150925-gjvfwr.html#ixzz3mzQzF7j6>

The NSW government is yet to meet eight of the 15 recommendations made by the NSW Chief Scientist, one year after they were made in the final report into coal seam gas, environmental groups say Monday marks one year since NSW Chief Scientist and Engineer Professor Mary O'Kane gave her review on coal seam gas, at the request of the government to "focus on the impacts of these activities on human health and the environment".

- **28 Sept, 2015 – Law academic wants clearer compensation laws for landholders affected by gas exploration and production**

<http://www.abc.net.au/news/2015-09-28/lawyer-on-gas-compensation/6806008>

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Deakin University's Professor Samantha Hepburn agreed, but said the regulation had to be "torn apart" to make sure it was rigorous enough to protect landholders. She said the compensation farmers received differed around the country and often depended on people's negotiation skills. "It will depend on the volume of wells... the type of surface industry you had and how that industry is impacted. "Did you have an established dairy farm for example, and how are those drills going to affect that dairy farm?" Professor Hepburn said the amount of compensation awarded to landholders varied from **\$30,000 to reinforce windows against noise**, while others who could prove a greater loss might get as much as \$200,000.

- **27 Sept, 2015 – NSW Environment Protection Authority investigating handling of gas drilling waste**

<http://www.smh.com.au/nsw/missing-csg-waste-from-agl-broke-site-found-but-investigations-underway-20150926-gjviab.html>

The Environment Protection Authority has launched an investigation into contaminated coal-seam gas drilling mud waste from an AGL drilling operation in the Hunter, after reports it had gone missing and was then found. A spokeswoman for the authority said legal notices had been served on the transport company that moved the waste from a site near Broke and on the facility that took the waste. "As investigations are continuing, the EPA has no further comment on this matter," she said.

- **22 Sept, 2015 - Flare questions to be taken by Department of Environment**

<http://www.gladstoneobserver.com.au/news/flare-questions-will-be-answered/2783475/>

A REQUEST for clarity from the state government about the safety of flare emissions on Curtis Island --- including explaining changes to the original environmental impact statement --- is expected to be resolved when the Department of Environment and Heritage Protection visits on October 19. Minutes from the Gladstone Region Environmental Advisory Network meeting in August detailed concerns about the smoke emitted from the LNG flares, as well as raise questions about the number of air monitoring systems.

- **20 Sept, 2015 - Contaminated CSG waste from AGL site near Broke in the Hunter goes "missing"**

<http://www.smh.com.au/nsw/contaminated-csg-waste-from-agl-site-near-broke-in-the-hunter-goes-missing-20150918-gjqblj.html#ixzz3mzeNkBRy>

It is the baffling case of a "missing" 212 tonnes of contaminated waste from a former coal seam gas drilling operation in the Hunter Valley. An Environment Protection Authority report written in 2013 said the waste was transported to a "composting" business which was not licensed to take it, sparking concerns by the EPA it "was not being disposed of in an environmentally friendly and proper manner". AGL dockets are understood to show the destination for their waste was Bettergrow Pty Ltd. But the business it was supposedly sent to, Bettergrow, said it never received the waste. Spokesman Craig Hogarth said the company had taken a conscious decision not to take any CSG waste even if they were licensed to.

- **24 Aug, 2015 - More flaring likely as Santos GLNG commissioning starts**

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<http://www.gladstoneobserver.com.au/news/more-flaring-likely-commissioning-santons-glng-sta/2748160/>

INCREASED flaring and potentially dark smoke is likely at the Santos GLNG site as the project begins the commissioning of Train 1. The current activity is commissioning the treating and drying units, which must be completed before drying of the liquefaction unit using warm, dry gas. The company says that during the preparation stage, there will be increased flaring and potentially dark smoke as systems are brought into service. "When this is complete the flare will return to its normal operation," the company said in a statement. "Flaring is an integral part of our plant's operational and safety management systems." **"We monitor and manage air quality emissions in accordance with the environmental authority."**

- 14 Aug, 2015 – Meters monitoring flares not fully functional: report

<http://www.gladstoneobserver.com.au/news/meters-monitoring-flares-not-fully-functional-repo/2740500/>

**An RTI document obtained by GREAN shows equipment used to monitor contents of flare smoke and gas flow was not fully operational between December 2014 and April this year.** FLARE flow meters at the QCLNG plant on Curtis Island, Gladstone had "potential defects" and couldn't be relied on for five months up to April this year, an official information request reveals. **The problems with the flare flow meters coincide with the most significant visible flaring activity of recent times. The monitoring meters check for health and environment impacts,** as well as the plant's productivity.

- 27 July, 2015 – Downs farmers shocked by pipeline gas release

<http://www.thechronicle.com.au/news/downs-farmers-shocked-pipeline-gas-release/2719377/>

THE Basin Sustainability Alliance (BSA) is calling for an investigation into the environmental and health impacts of a large volume of gas released from a 90km stretch of Origin Energy LNG pipeline which upset cattle and took landholders by surprise. **Landholders up to 25km down-wind from the release at Downfall Creek, about 30km south east of Wandoan, could hear the venting on May 25.** Local farmer Neville Stiller, who lives about 8km away, described the May 25 release like "listening to an F1-11 roaring for a couple of hours". A second gas release occurred on July 13. Mr Stiller has told BSA that the volume going into the sky during the first release on May 25 was around four times higher and significantly louder compared to what can be witnessed on the footage from July 13.

- 14 July, 2015 – GLNG flare to increase in size as first gas gets closer

<http://www.gladstoneobserver.com.au/news/glng-flare-increase-size-first-gas-gets-closer/2704806/>

*"Flaring is the safest and most environmentally friendly way to release gas from the Santos GLNG facility, and is **part of our stringent safety controls that meet the requirements of the Queensland Work Health and Safety Act 2011.**"*

- 9 July, 2015 – Chinchilla mum brings CSG fight to PM's doorstep

<http://www.sunshinecoastdaily.com.au/news/chinchilla-mum-brings-csg-fight-to-pm/2698867/>

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She says everyone in her family has suffered health effects since QGC started drilling on the property in 2005. "All of the children, me and my husband suffer very bad headaches and a couple have been having nose bleeds," she said. "We're sick all the time. "We mainly suffer from the noise of the wells, the rigs and the plants. We're only 6km from the Kenya plant and the noise is horrendous. "My husband and I don't sleep at night and we don't use one of our rooms because it is always rattling." Mrs Nothdurft said she was paid \$265 per well per year - a grand annual total of \$1855 for the seven wells on her land. "They said if we didn't let them come, they would take us to the Land Court and take our land off us," she said. "My husband refused to sign a confidentiality agreement when they came, which is why I'm able to talk about how much money we get."

- **1 July, 2015 – QGC use SLAPP to constrain gas field resident over facebook post - charges withdrawn due to lack of evidence.**

<http://www.thechronicle.com.au/news/downs-man-court-facebook-threat-shoot-csg-staff/2692012/#/0>

A TARA man who fronted court over an anti-CSG Facebook post says "common sense prevailed" after his charge of "using a carriage to menace" was withdrawn. John Jenkyn was discharged by Magistrate Kay Ryan, with the prosecution offering no further evidence to support the charge when the hearing resumed at midday. The hearing came after coal seam gas giant QGC filed an official complaint against Mr Jenkyn last November, after he took to social media to "vent frustration" about his dealings with the company.

- **19 June, 2015 - QCLNG flaring possible over coming weeks**

<http://www.gladstoneobserver.com.au/news/qclng-flaring-possible-over-coming-weeks/2679406/>

THE QUEENSLAND Curtis LNG plant is expected to begin infrequent flaring over the coming weeks as the second production train is commissioned. A QGC statement says flaring represents the controlled burning of gas released from our plant when it cannot be processed into LNG: "This is particularly relevant during the commissioning and start-up phase of construction as the plant is progressively brought online and equipment undergoes performance tests. Flaring from the process flare occurs any time the plant is shut-down for scheduled maintenance, unplanned repairs and maintenance or emergency situations. At these times, flaring is typically short-term. If refrigerants and nitrogen are present, then black smoke can be emitted with the flame. **"We closely monitor and manage air quality emissions and are committed to keeping our community informed."**

- **15 June, 2015 – CSG is destroying iconic Darling Downs as well as residents health.**

<https://independentaustralia.net/life/life-display/csg-is-destroying-the-iconic-darling-downs-along-with-residents-health,7792>

New York's acting Health Commissioner wouldn't let his family living in the vicinity of fracking, and our health specialists are warning the Palaszczuk government that ill health reported by families in Queensland's gas fields can no longer be dismissed. Lachlan Barker investigates.

- **3 June, 2015 – EPA investigates spill at former Metgasco site**

<http://www.echo.net.au/2015/06/epa-investigates-spill-at-former-metgasco-site/>

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The Environment Protection Authority (EPA) has commenced investigations into a suspected spill of contaminated water from a storage tank at Metgasco's decommissioned Corella exploration well near Dobies Bight.

- **14 May, 2015 – Queensland grazier calling on Government to act on dam spilling coal seam gas water**

<http://www.abc.net.au/radionational/programs/breakfast/queensland-grazier-calling-on-government/6468852>

A grazier is calling on the Queensland Government to take action over a dam that's been spilling treated coal seam gas water onto his property. The spill happened earlier this week, and is the second time the dam wall has been breached. Joe Hill, the farmer calling on the Government, runs Wandaloo Angus cattle stud near Miles in southern Queensland.

- **30 April, 2015 – Authorities battle to contain acid spill at CSG site (Woleebee – Qld)**

<http://www.thechronicle.com.au/news/authorities-battle-contain-acid-spill-csg-site/2623945/>

EMERGENCY crews are today battling to contain a hydrochloric acid spill on the western Darling Downs. The spill occurred at Woleebee, north-east of Miles. The spill, at a QGC work site, was reported to authorities about noon.

- **3 April, 2015 – Ex-Im Bank Flouted ESA By Funding LNG Project**

<http://www.law360.com/articles/639402/ex-im-bank-flouted-esa-by-funding-lng-project-envirosay>

The U.S. Export-Import Bank clearly ignored the risks to endangered species and sensitive habitat when it pumped \$4.8 billion into Australian liquid natural gas projects in the Great Barrier Reef, a trio of environmental groups said Thursday, urging a California federal judge for a quick victory in their lawsuit against the bank. In a motion for summary judgment in the case, the Center for Biological Diversity and its allies said the Ex-Im Bank shirked its duties under the National Historic Preservation Act and Endangered Species Act, with "real consequences" for one of the most diverse and beautiful ecosystems in the world. Potential impacts to the Great Barrier Reef from the Australia Pacific LNG Project and the Queensland Curtis LNG Project include reduced water quality; ship strikes that can kill or displace whales, dugongs and sea turtles; destruction of mangrove and seagrass habitats; underwater noise; and the "general industrialization of a currently relatively pristine area," the groups said.

- **25 March, 2015 – Kate 6 well emitting gas and discharging water from ground in residential estate near Chinchilla/Tara**

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"Had a scare this morning. Gas well on Winfield red was spewing brownly yellow liquid all the way down the road to Mary road and almost to the creek. Tara police attended and after contacting QGC informed me it "is only water". QFES Area Director Mick Patch showed more caution and got the urbans out to check for gas. None was found but that is still untreated contaminated water running freely down our table drains. Thank you to all the firies that turned up with no thought for their own safety."

At 8.30-9.30 am 25/3/2015 at Kate 6

About 250 m from end of Winfield Road, water on side of road, dirty yellow brown liquid coming out of ground about 50 meters from well.



- 2. At the moment it is not clear and the response using the Kate 6 incident indicated there was some issues not only with who is responsible at the time of an incident to manage it, but also how the details are communicated and what testing gets undertaken.*

QGC was responsible for managing and responding to the incident. This incident was, however, reported through incorrect channels and as such there was a delay in QGC's response to the incident. QGC also reported the incident to the P&G Inspectorate.

QGC became aware of the incident via its remote monitoring of the well; it proceeded to send a maintenance crew out to manually shut down the well. Both QGC and the P&G Inspectorate started an investigation on this event. On 22 April a P&G Inspector met with landholders to obtain further information with regards to their observations on site, followed by a site inspection. The well site was examined for the gas leakage, presence of volatile organic compounds (VOCs), nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and hydrogen sulphide (H<sub>2</sub>S). None of the mentioned contaminants were identified on site.

It was identified that the skid package used on this well head could not be remotely controlled from the control room and it only had the pressure meters connected to the telemetry which can be monitored remotely. This issue was raised with QGC and it is understood the system will be upgraded accordingly.

With regard to the cause of this incident it has been identified that an increase of pressure between the Boundary isolation valve ('BIV') and the Kate 6 well head caused the Pressure safety valve ('PSV') to activate. The PSV lifted as designed to relieve pressure in the system but did not re-seat correctly when the pressure reduced and this has led to the intermittent discharge of water and gas from the system.

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- **1 March, 2015 - Senators move to give CSG whistleblower air**

<http://www.smh.com.au/environment/senators-move-to-give-csg-whistleblower-air-20150227-13qvmm.html>

Coal seam gas projects worth almost \$50 billion are under fresh scrutiny, after allegations of rushed, incomplete approval processes that sidelined possible environmental impacts. Efforts will resume this week in a Senate committee to make public documents and comments by a Queensland whistleblower. Senator Glenn Lazarus of the Palmer United Party and Greens Senator Larissa Waters plan **to press fellow members of the Senate inquiry into Queensland Government Administration to lift a gag imposed on evidence presented by former state bureaucrat Simone Marsh.**

- **26 Feb, 2015 – Wayne Walker, Chinchilla landholder, describes his experiences with CSG Company, Origin Energy.** <https://www.youtube.com/watch?v=Jk5zDQ-rMa0>

*Nb. Origin have since negotiated to buy Mr Walkers property. He has signed a gag clause as part of the contract with the company, preventing him from continuing to speak further on the matter.*

- **5 Feb, 2015 – Compliance audits completed during 2015 - Summary of findings - QGC**

<https://www.environment.gov.au/epbc/publications/compliance-audits-2015>

Although the independent audit found that QGC had met the majority of activities to satisfy the conditions of the EPBC Act approval that were within the scope of the audit, the independent audit and the Department's review of the findings identified a number of non-compliances relating to:

- Conditions 5 and 20 which relate to the Constraints Planning and Field Development Protocol (the Protocol) which governs how constraints planning and field development decisions are to be undertaken before the final selection of specific sites for gas field development within the project area are made.
- Condition 9 which requires the approved Significant Species Management Plan(s) to be implemented.
- Condition 26 which required an Offset Plan to be prepared within 6 months of the commencement of the action.

The non-compliance with Condition 26 has previously been addressed by the Department and no further action is required. In relation to the remaining non-compliances the Department is engaging with the QGC to ensure that they are addressed to the satisfaction of the Department in accordance with the Department's EPBC Act Compliance and Enforcement Policy.

- **30 Jan, 2015 – Qld: landowners fight CSG expansion**

<http://www.abc.net.au/radionational/programs/breakfast/qld-landowners-fight-csg-expansion/6056482>

The Coal Seam Gas industry has emerged as a key issue in the Queensland election campaign. Rural lobby group Agforce has accused the Newman Government of backing the multinational coal and gas companies instead of landholders. But as Cathy Van Extel reports, landowners in the Surat Basin are fighting back.

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- **28 Jan, 2015 – Chemical leak at AGL’s Gloucester fracking site**

<http://www.echo.net.au/2015/01/chemical-leakagl-gloucester-fracking-site/>

Testing work at the Waukivory project near Gloucester has been suspended after benzene, toluene, ethylbenzene and xylene (BTEX) were detected in flowback water from four drilling wells and in a water storage tank. The state government has called in the EPA to investigate the breach and energy minister Anthony Roberts has questioned why it took the company almost a fortnight to admit the problem to the regulator.

- **25 Jan, 2015 – Jang’s water bore contaminated – drilling activity nearby thought to be responsible – QGC and government failed to respond adequately to requests to investigate – owners “walk away” from property due to health concerns.**

5 years ago they sunk a bore for their property. They have excellent records on this young bore. In 2012 QGC did a baseline test on it as part of their activities in the region. This report does show some interesting results that indicate a change may have been happening.

On 19 January, John Reid and Adam Simon went to Greg’s house to investigate his complaints of the water from his bore being awful. He has linked it in timing with the well that was drilled by QGC within 500 m away in direct line with his bore.

The readings of high methane and high H<sub>2</sub>S was recorded in the bore water and this was filmed and photographed.

John Reid and Shay Dougall complained to the CSG Compliance Unit, EHP, DNRM on 20 January.

CSG Compliance said they would send some people to test it.

On Wednesday John Herbet from CSG Compliance rang him and told him that they are looking in to it, and that they are getting reports from QGC .

To date no person from the authorities has been to Greg’s home to act on this. Greg and his family continue to be in a state of great angst, fear, grief, as their world is falling about them.

Greg is desperate to have his own independent tests done on the bore water and on his drinking water.

Greg took the pictures of the bubbling bore into QGC on Wednesday, he was offered no support but told someone would be in touch. He called them back Wednesday afternoon and Thursday. By Thursday at 3pm QGC “Patrick” rang and told him that CSG Compliance unit was now investigating the issue.

Over the last two months Greg had noticed that his pigs were wasting and not fattening, although nothing had changed. After putting together the water condition and their condition, of wasting,



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- **23 Jan, 2015 – GCC response to Jon Black (Director-General, Department of Environment and Heritage Protection) re LNG flares, Gladstone**

<http://gladstoneconservationcouncil.com.au/web/wp-content/uploads/2015/01/GCC-response-to-Jon-Black-CTS31275-14-.pdf>

- **8 Jan, 2015 – Doctor says CSG bad for kids, pregnant women**

<http://www.thechronicle.com.au/news/doctor-says-csg-fields-bad-for-kids/2504258/>

BRISBANE GP GERALYN McCARRON is urging families with young children or pregnant women not to buy lifestyle blocks near Surat Basin coal seam gas fields. Dr McCarron first became involved with coal seam gas research in June, 2012, gathering local anecdotes about headaches, nose-bleeds, gastric issues, pins and needles, rashes and fits. She published a report based on her experience with 113 people, 58% of whom "felt their health was affected by CSG". Queensland Health released its own study in 2013 which Dr McCarron said took information from just 56 people, 13 visited in person.

- **19 Dec, 2014 – Transpacific fined for dumping CSG fracking water from AGL site in Newcastle sewer**

<http://www.abc.net.au/news/2014-12-19/company-fined-for-dumping-csg-fracking-water-from-agl-site-in-n/5978776>

Hunter Water says in October it refused an application from waste contractor, Transpacific to discharge treated flow-back water from the AGL site. But it says it recently became aware that Transpacific had discharged a prohibited substance into the sewer system from its treatment site on Newcastle's Kooragang Island. The company has since been penalised \$30,000 and warned that any further breaches would result in the termination of its commercial agreement with Hunter Water.

- **18 Dec, 2014 – GCC request for information Andrew Powell re Gladstone LNG Flare**

<http://gladstoneconservationcouncil.com.au/web/wp-content/uploads/2014/12/GCC-request-for-information-Andrew-Powell-LNG-Flare.pdf>

- **24 Nov, 2014 - Queensland's CSG compliance unit investigating bore 'blow out' on the Western Downs**

<http://www.abc.net.au/news/2014-11-24/bore--blow-out-investigation/5914126>

Queensland Government officials are investigating whether a water bore 'blow out' on a Western Downs farm is related to coal seam gas production in the region. The CSG compliance unit is assessing the cause of an eruption of water and gas from the bore, on a property near Chinchilla, which occurred on Thursday afternoon. The Queensland Minister for Natural Resources and Mines, Andrew Cripps, says departmental staff are monitoring the bore's condition. "On inspection, the bore [casing] was shaking and there was an audible sound of gas escaping from the bore," he said.

- **Nov, 2014 – CSG study finds elevated methane levels near gas fields**

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<http://www.smh.com.au/business/carbon-economy/csg-study-finds-elevated-methane-levels-near-gas-fields-20141118-11p90>

Those findings, though, have now been published in the Water, Air and Soil Pollution journal. "It's exactly the same data that we presented then," said Damien Maher, a researcher at the SCU's Centre for Coastal Biogeochemistry Research, and one of the paper's authors. Methane triples. Deploying sensitive equipment, the researchers travelled hundreds of kilometres through the Tara gas field and an exploration field in Casino in northern NSW to gather air samples. The results found methane levels as high as 6.89 parts per million, or more than triple the background levels of about 1.8 ppm. Carbon dioxide levels reached as high as 541 ppm, or approaching a 50 per cent increase compared with general conditions. Dr Maher said the research could not identify the source of the higher methane levels although the chemical fingerprints – specifically the isotope of the gas – matched that of the CSG being produced from the field.

- **21 Oct, 2014 – George Bender, farmer, loses water bores due to CSG. Water reforms favour industry over farmers.**

[http://www.lockthegate.org.au/lock\\_the\\_gate\\_questions\\_preferential\\_water\\_rules\\_for\\_mining](http://www.lockthegate.org.au/lock_the_gate_questions_preferential_water_rules_for_mining)

Coal seam gas operators in the Surat Basin already enjoy this unlimited entitlement and local bore owner, George Bender has seen the effect of large-scale removal of water by companies that are not required to adhere to water planning limits.

Mr Bender, a Chinchilla cotton farmer, is about to lose two of his precious underground water bores that are being sucked dry by coal seam gas industry activities.

His bores are among 85 in the Walloon Coal Measures that are predicted to run dry by mid next year as a direct result of the CSG industry. The gas companies want to put up to 18 gas wells on Mr Bender's land. A further 528 bores will also be impacted in the longer term.

"We'll be living in a gasfield, it's as simple as that," he said. "The cards seemed stacked in favour of the resources industry with landholders left to suffer the impacts of coal seam gas exploration and mining with little recourse and few rights.

"You've got to agree to their terms or else. I reckon it's just all one-sided for the resources companies. It will completely interfere with the running of the property but that doesn't seem to matter as long as they get wells in and get the gas out of the ground."

- **16 Oct, 2014 - Why the QCLNG flare flame is so big**

<http://www.gladstoneobserver.com.au/news/flaring-only-temporary-bechtel/2486330/>

IT'S visible from Tannum Sands and even as far away as Seventeen Seventy, but **a Bechtel spokesperson was keen to reassure Gladstone residents the large flame at the QCLNG site on Curtis Island is not a permanent fixture of the city's skyline.** "The flare will typically be smaller, smokeless and more consistent in luminosity when the plant is operating and producing LNG for export," the spokesperson said. "The composition of the gas currently being burnt at QCLNG is predominantly methane - or natural gas - as well as a small quantity of nitrogen."

- **8 Oct, 2014 – Chief Scientist CSG report leaves health concerns unanswered**

<http://theconversation.com/chief-scientist-csg-report-leaves-health-concerns-unanswered-32422>

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The long-awaited independent review of coal seam gas (CSG) in New South Wales, released last week by the NSW Chief Scientist, highlighted many risks and uncertainties around human health from exposure to toxic CSG chemicals. Despite this, the report concludes the risks can be managed through unprecedented regulation and monitoring. But major health concerns remain unresolved. These include regulatory inadequacies, cumulative chemical and mental health risks, safety breaches, and climate change. Hence, the report leaves many health concerns regarding human health effects from CSG activities in NSW unanswered

- **4 Oct, 2014 - CSG means the grass is no greener**

<http://www.theaustralian.com.au/national-affairs/csg-means-the-grass-is-no-greener/story-fn59niix-1227079554316?sv=43cc918e67298bf117a34c5ecb9dffb>

QUEENSLAND cattle breeder Joe Hill admits to a little envy at the limitless water gushing from the Origin Energy pipeline into the large new dam on his neighbour's cropping farm near Miles. In his own 800ha "Wandaloo" on the Western Downs, it hasn't rained much in 18 months and the grey clay plains are parched and cracked. But overriding Mr Hill's desire for drought-time "liquid gold" is a bigger concern that the irrigation water supply may not be pure. "But this CSG water and what is in it needs to be researched more, and there must be independent monitoring of these treatment plants, because I know from experience that self-monitoring by these multinationals doesn't work," he says. "The danger is that by the time we realise there is a problem and we have irreversible contamination of our land, the environment and our cattle it will be too late and the clean, green reputation of our entire beef industry will be at risk."

*Nb. The CSG dam has breached twice since completion inundating tracts of Mr Hill's property with CSG water. The water has high salt content and contains other impurities not removed by the Reverse Osmosis treatment. Joe Hill speaks at Senate Inquiry:*

<https://www.youtube.com/watch?v=9YwsnVCyul8&feature=youtu.be>

- **1 Oct, 2014 - Allowing coal seam gas wells on property 'a mistake', Qld farmer says, amid Senate committee inquiry**

<http://www.abc.net.au/news/2014-10-31/allowing-csg-wells-was-a-mistake-qld-farmer-says/5848394>

CSG suppliers tempt landowners with unlimited water supply. He said that, in 2005, they had no water. "We were at the stage of having to buy water just to bath the kids. The dams were all running dry," he said. Photo: Allan Nothdurft and his wife Narelle have seven coal seam gas wells on their Queensland property. "They said 'how would you like a well [and] all the water you want? We said yeah, bring it on. That was the first mistake I suppose, but I don't think anyone knew about coal seam gas back then."

- **14 Sept, 2014 – GPC ignored bund wall advice, documents say**

<http://www.gladstoneobserver.com.au/news/corporation-ignored-key-rock-advice-bund-wall-fail/2386275/>

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THE Gladstone Ports Corporation ignored its approved plans and external advice when it failed to build a rock covering over the geotextile fabric which tore on a bund wall in Gladstone harbour, confidential government documents have revealed. An independent engineer who examined the failure of the Fisherman's Landing bund wall for the Federal Government's review has revealed the failure to build a rock covering was **the key problem that led to sediment leaking through and under the bund in 2011 and 2012.**

- **12 August, 2014 – Unexpected flaring at QCLNG after shutdown**

<http://www.gladstoneobserver.com.au/news/unexpected-flaring-qclng/2738712/>

SMOKE will be seen coming from QCLNG's flare today after an unscheduled shut-down of train two. The company put out a press release at just after 4pm on Wednesday saying the supply of natural gas to Train 2 had been stopped. **The flare is being used to evacuate gases from the plants processing systems. The flare itself will be larger and emitting more smoke.**

- **4 August, 2014 - QGC home buyout 'proof gas, people don't mix'**

<http://www.thechronicle.com.au/news/qgc-home-buyout-proof-gas-people-dont-mix/2339255/>

QGC is believed to have spent more than \$1 million buying properties in the area, many of which have no water or electricity access. Graeme Henderson was arrested in 2011 after chaining himself to a gate to stop QGC vehicles leaving a property outside Dalby. He confirmed his Tara property had sold, but said a confidentiality agreement meant he could not reveal the identity of the buyer.

- **10 July, 2014 – Workers medically cleared after gas detectors triggered**

<http://www.thechronicle.com.au/news/emergency-services-called-qgcs-kenya-site/2314691/>

AN exclusion zone has been set up at a QCG CSG well about 25km south-east of Miles after an incident this morning. A QGC spokesperson said two well-site technicians had been working at the Matilda John site when one of their personal gas detectors was triggered. Both technicians moved away from the site and Queensland Emergency Services, including Careflight, responded. Both technicians had been assessed by a doctor and cleared.

- **9 May, 2014 – Gladstone dredging project inquiry finds conditions on port expansion too vague to be enforced**

<http://www.abc.net.au/news/2014-05-09/bund-wall-inquiry-finds-gladstone-port-conditions-too-vague/5440860>

The investigation has found water quality monitoring sites in Gladstone were established in the wrong areas, and the federal Environment Department failed to adequately retain compliance records. It also says environmental conditions imposed by the Commonwealth lacked the specifics necessary to enable their effective enforcement.

- **May, 2014 – CSG company fails to tell landowner of radiation**

<http://www.qt.com.au/news/residents-left-in-dark-coal-seam-gas-radiation/2244686/>

## CONTAMINATED SITES, ACCIDENTS AND OTHER INCIDENTS RELATED TO CSG/LNG IN AUSTRALIA

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JULIE Fairweather simply wants an apology. After the Chinchilla- based landowner discovered QGC workers were exposed to radiation while drilling on her property, she was horrified the company had not informed her. Mrs Fairweather told Chinchilla News a neighbour had called to tell her about the incident the day after it had happened. "There was no phone call, no knock on the door, no email from QGC. I had to hear it through the grapevine," she said. "It's just dreadful, to have this happen on our property, no more than 700m from our home, and not even be told. QGC released an official statement last week confirming four workers were exposed to "low level radioactivity" while on the Montrose Rd property on February 28 this year.

- **29 April, 2014 - Radiation exposure on Chinchilla-based Weatherford CSG rig**

<http://www.australianmining.com.au/news/radiation-exposure-on-chinchilla-based-weatherford>

QGC has only recently revealed to local press a radiation exposure incident that took place near Chinchilla in February (28<sup>th</sup>). A spokesperson for QGC told the Dalby Herald that four QGC workers were exposed to radiation while involved with gas drilling work. It was reported that the radiation came from a Schlumberger "measurement device". The incident occurred on a drill rig south of Chinchilla which was operated by international oil and natural gas service company Weatherford. QGC said the workers were exposed to a "low level of radioactivity" and medical examinations were performed. QGC said it is still continuing to monitor the health of the exposed workers

- **16 April, 2014 – Santos issued "please explain" over radioactive material in Pilliga NSW**

<http://www.northerndailyleader.com.au/story/2223585/santos-issued-please-explain-over-radioactive-material-in-pilliga/>

PROTESTERS have issued Santos a "please explain" after the discovery of radioactive material at its coal seam gas operation in the Pilliga. A bright red box at one of the company's drill sites contains the radioactive isotope Caesium-137, which can be deadly at high exposure levels.- Cs-137 is commonly used in the mining and construction industries to detect liquid flows in pipes, tanks or bore holes dug for coal seam gas exploration. But its uncovering, coming just weeks after it emerged that in 2012 a leaking storage pond resulted in high levels of uranium, barium and other elements in an aquifer, has some worried.

- **April, 2014 - Water contamination may be linked to coal seam gas wells (Wallumbilla – Qld)**

<http://www.westernstarnews.com.au/news/contamination-is-confirmed/2219462/>

RESULTS have confirmed the presence of methane gas in the Wallumbilla water supply, following extensive CSG testing by ALS Environmental. In a statement released by Maranoa Regional Council yesterday, Mayor Robert Loughnan said until the source of the gas could be determined and corrective action taken, Bore 2 would remain offline, with Wallumbilla's water being sourced exclusively from Bore 1. "There continues to be no impact to Wallumbilla residents' water supply - we are ensuring that consistent quality water will continue to be available while Bore 2 is offline," Cr Loughnan said. The statement said council had no knowledge of gas being present in water before this instance.

- **29 March, 2014 – Santos Pilliga project: Coal seam gas waste water spillage causes alarm**

# CONTAMINATED SITES, ACCIDENTS AND OTHER INCIDENTS RELATED TO CSG/LNG IN AUSTRALIA

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<http://www.smh.com.au/nsw/santos-pilliga-project-coal-seam-gas-waste-water-spillage-causes-alarm-20140328-35ong.html>

[http://www.stoppilligacoalseamgas.com.au/wp-content/uploads/2011/12/The Truth Spills Out Final May 2012 without appendices.pdf](http://www.stoppilligacoalseamgas.com.au/wp-content/uploads/2011/12/The_Truth_Spills_Out_Final_May_2012_without_appendices.pdf)

The Environment Protection Authority is investigating a 500-litre wastewater spill from a coal-seam gas operation at the Pilliga forest in north-western NSW. The waste water was spilt during a transfer from an assessment well to a holding pond at the Santos gas field near Narrabri on Tuesday, the EPA said.

- **8 March, 2014 – Santos coal seam gas project contaminates aquifer**

<http://www.smh.com.au/environment/santos-coal-seam-gas-project-contaminates-aquifer-20140307-34csb.html>

The company failed to report a leak of 10,000 litres of contaminated water from a treatment plant after an electronic switch connected to the pipeline failed. The water was about half as salty as sea water and killed more than 70 per cent of the trees in the affected zone, prosecutor Stephen Rushton SC said. Ms Hogan said it had been up to a local farmer to report the coal seam gas brine spill to the media on 2 January 2012 before any action was taken by Santos

- **28 Feb, 2014 - CSG drilling rig workers in Queensland exposed to radiation by Schlumberger**

<https://indymedia.org.au/2014/03/05/csg-drilling-rig-workers-in-queensland-exposed-to-radiation-by-schlumberger>

On Friday 28 February, four Weatherford drilling rig workers at a QGC coal seam gas (CSG) well site near Tara in Queensland were exposed to as yet undisclosed levels of radiation. They handled a radioactive equipment component left at the site by workers from another oil and gas services company, Schlumberger. The radiation source was not shielded and labeled as required by regulation. According to an anonymous source, radiation incident response personnel from the USA have been summoned to the Tara area to investigate and provide support. The health of the four workers is “under observation”.

- **20 Jan, 2014 – Fishermen hope federal inquiry dredges up problems in Gladstone Harbour**

<http://www.abc.net.au/news/2014-05-09/bund-wall-inquiry-finds-gladstone-port-conditions-too-vague/5440860>

The inquiry follows Tony Moore's breakthrough story for Fairfax Media on the many failings of a bund wall, meant to contain dirty dredge spoil. Local fishermen have blamed the dredging project for a disease outbreak in 2011, which killed numerous fish, turtles, dugongs and other marine life. The state-owned Gladstone Ports Corporation has continually denied this and on Monday, sought to have a compensation claim by the fishermen thrown out of the Planning and Environment Court in Brisbane. The GPC's former environmental manager, John Broomhead, told media last week the design and size of the wall retaining the toxic material dredged up was a failure. **He said the wall started to leak in August 2011 and contributed to elevated turbidity in the harbour.**

# CONTAMINATED SITES, ACCIDENTS AND OTHER INCIDENTS RELATED TO CSG/LNG IN AUSTRALIA

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- **14 Jan, 2014 – Whistleblower claims harbour bund wall is still leaking**

<http://www.gladstoneobserver.com.au/news/claims-gladstone-harbour-bund-wall-still-leaking/2140058/>

A FORMER Gladstone Ports Corporation employee has claimed the bund wall built to contain dredge spoils from work associated with the Curtis Island LNG projects is still leaking and could cost as much as \$50 million to fix. Former GPC environment manager turned whistleblower John Broomhead has told The Australian the wall is not fixed, after speaking out about issues surrounding the wall's construction. "This thing is so hollow and the geotextile fabric against the wall so poorly installed it is going to continue to erode," Mr Broomhead said.

- **26 Dec, 2013 – Gladstone port plea to stem toxic leak**

<http://www.theaustralian.com.au/news/health-science/gladstone-port-plea-to-stem-toxic-leak/story-e6frg8y6-1226789797130>

GLADSTONE Ports Corporation was forced to seek urgent permission to breach its environmental approvals in a race to plug a leaking bund wall before it ran out of space to store potentially toxic acid sulphate soils from dredging associated with the \$33 billion Curtis Island LNG export terminals. **Gladstone Ports has consistently denied the leaking bund wall was responsible for a collapse of fish health in the harbour in late 2011. A series of investigations has blamed the poor harbour health on record flooding early in 2011. But documents show the Ports Corporation was aware of the extent of the environmental threat posed by the bund wall failure.** GPC expressed concern about the "reputational issues" reporting of the bund wall failure and poor water quality posed for the project.

- **18 Dec, 2013 – Santos faces fines for Pilliga coal seam gas salt spill**

<http://www.smh.com.au/environment/santos-faces-fines-for-pilliga-coal-seam-gas-salt-spill-20131218-2zkob.html>

Gas giant Santos' NSW branch could be slapped with hundreds of thousands of dollars in fines after it admitted to failing to report contamination and excessive salt levels at a drilling site in the state's northwest. Santos NSW has pleaded guilty to four charges relating to failures by the site's operator, Eastern Star Gas, to report contaminated water leaks and lodge environmental management documents, the NSW Land and Environment Court heard on Wednesday.

- **25 Nov, 2013 - Enough to make you sick**

<http://www.echo.net.au/2013/11/enough-to-make-you-sick/>

Dr Somerville said that many of the chemicals used in CSG mining have health impacts, even in minute quantities. 'Volatile organic compounds can cause eye, nose and throat irritation, headaches, dizziness, respiratory distress, visual disorders, memory impairment, loss of coordination, nausea and damage to liver, kidney and the central nervous system. Some can cause cancer and other irreversible health side effects. 'Radium is a very toxic carcinogen that is associated with bone, liver and breast cancer. Radon is a decay product of radium, and is the leading cause of lung cancer among non-smokers.' Dr Somerville listed further compounds that have adverse health impacts, saying that even exposure to minute quantities of chemicals is enough to disrupt the nervous and endocrine systems.

## CONTAMINATED SITES, ACCIDENTS AND OTHER INCIDENTS RELATED TO CSG/LNG IN AUSTRALIA

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'The damage may not be evident at the time of exposure but can have unpredictable delayed lifelong effects on the individual and/or their offspring and may last generations,' he said. Of concern to Dr Somerville is that children are more vulnerable than adults.

- **21 Nov, 2013 – Big stink at Kogan**

[Nb: QCL link returning an "Internal Server Error"]

### Big stink at Kogan - Queensland Country Life

[www.queenslandcountrylife.com.au/news/agriculture/.../2679137.aspx](http://www.queenslandcountrylife.com.au/news/agriculture/.../2679137.aspx) ▼

Nov 21, 2013 - IN A few months, Ipswich-based business NuGrow hopes to be spreading waste from CSG drilling and mining camps on the paddocks of its newly acquired Kogan property, Iona Park, and Brian Monk is far from happy. That's because Mr Monk's 2000-hectare beef property, Iona, sits across the road from the 513-hectare Iona Park, and Mr Monk is full of fears about what the proposed project will bring to the area. NuGrow's proposal is to blend CSG waste waters, mulched green waste, liquid and solid food waste, treated and untreated effluent, biosolids and manures prior to spreading them on cultivated ground on Iona Park.

Full Text (reproduced below) found here: <http://www.springhillvoice.com/22november2013.html>

"In A few months, Ipswich-based business NuGrow hopes to be spreading waste from CSG drilling and mining camps on the paddocks of its newly acquired Kogan property, Iona Park, and Brian Monk is far from happy. That's because Mr Monk's 2000-hectare beef property, Iona, sits across the road from the 513-hectare Iona Park, and Mr Monk is full of fears about what the proposed project will bring to the area. NuGrow's proposal is to blend CSG waste waters, mulched green waste, liquid and solid food waste, treated and untreated effluent, biosolids and manures prior to spreading them on cultivated ground on Iona Park.

While NuGrow is certain it has all the boxes ticked prior to the project receiving Queensland Government approval, Mr Monk is not so sure. He says he believes the soil conditioner or compost made from CSG waste will be saline and could contain harmful elements that will not be detected prior to the mix being spread on Iona Park's paddocks. And when a serious flood comes, Mr Monk fears NuGrow's compost will become his contaminant. "When it hits Montrose Road, the water's 18 inches deep and 2km wide. That's what I said to NuGrow. It's going to be my problem," Mr Monk said.

However, Peter Thompson, NuGrow's environmental compliance manager, said NuGrow would be constructing contour banks around the 10ha trial sites on Iona Park and discounted the neighbour's worries.

"Our site will be a non-release site so that any run-off will go into an on-site dam," he said.

A letter from NuGrow to Mr Monk and his wife Carolyn about the "proposed pasture improvement project", dated October 24, was the first the couple knew about what was planned for across the road. It invited them to a November 7 meeting at Kogan Community Hall, where Mr Monk came away with more questions than answers. "What about biocides and polonium and uranium? Will they be testing for that?" Mr Monk said. "When they are drilling for CSG, they are drilling through structures with naturally occurring radioactive material. Have they thought of that?"

Mr Thompson says he believes they have. "Prior to us accepting any waste stream, including CSG waste waters or effluent, we'll require the producer to supply a lab analysis," he said. That analysis would be monitored to ensure it met government-set criteria – and NuGrow was no stranger to the process. NuGrow already accepts drill waste at its Gracemere facility near Rockhampton, and organic liquid waste at other sites, including Swanbank near Ipswich, which is used in compost mixes.



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The company is currently negotiating with parties that have CSG drill water and other wastes close to Kogan they need to offload, and Mr Thompson said any waters would be put through the Delta water treatment system to ensure it was not excessively saline. "There is food waste and effluent coming from camps and we've come up with the solution to use it for agriculture instead of it going to landfill," Mr Thompson said.

But Mr Monk has little faith in the Delta process for desalination. "All they're doing is hiding a large amount of salt." "They are somehow avoiding calling it toxic waste by rebranding it as beneficial waste," said Mr Monk, an outspoken opponent of the CSG industry. NuGrow will be paid by drillers, mining-camp operators and others to remove the waste. "This industry stinks," Mr Monk said. "The water is their enemy and they want to dump megalitres of it every day."

But NuGrow sees the project simply as a means of using waste to benefit the depleted soils of the Western Downs. Pending Department of Heritage and Environment Protection approval and under the Waste Reduction and Recycling Act 2011, **NuGrow hopes to reclassify the wastes it takes in for the project as beneficial resources, rather than regulated wastes. That means it will then be able to spread for agricultural use.** Under the proposed plan, collected wastes will be blended at Iona Park prior to being spread in windrows for regular turning to ensure odour-minimising aerobic conditions. It will then be applied to paddocks which have been cultivated to a depth of 50mm. NuGrow will be required to work the product into the paddocks in a time frame, more likely to be hours rather than days, prior to planting of dryland crops."

Related links:

<http://zambellienvironmental.com.au/kogan-multiple-beneficial-use-approval.html>

<http://www.coal-seam-gas.com/pdf/approval%20of%20resource%20for%20beneficial%20use%204443%20att.pdf>

- **1 Nov, 2013 – Fishermen claim dredging impact covered up by GPC**

<http://www.gladstoneobserver.com.au/news/claims-of-dredging-cover-up/2070489/>

CLAIMS of a cover-up over Gladstone's massive dredging project could be key to a fishing industry class action against Gladstone Ports Corporation. Fisherman Trevor Falzon is leading the class action, which includes more than 20 fishermen, crabbers and trawlers who want more compensation for alleged lost fishing grounds. It's the second case fishers have brought against the port, claiming they weren't adequately compensated for the Western Basin Dredging and Disposal Project. Mr Falzon said the latest case could include revelations of what he called a "cover-up". He claimed information about the environmental effects of the project had been hidden from regulators. But a port corporation spokeswoman maintained no environmental information had been withheld from state or federal authorities. **Mr Falzon alleged a report about a leaking bund wall was kept under wraps for more than a year, before being released two weeks ago.**

- **22 Oct, 2013 - Qld farmers lose bore water following CSG extraction**

<http://coalseamgasnews.org/qld/qld-farmers-lose-bore-water-following-csg-extraction/>

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COL and Marcia Davis' Chinchilla property is in what you might call an awkward position. It comes under Arrow Energy's tenure in one half and Origin's on the other, and its boundary sits 600m outside the 'magical' cumulative management area (CMA) boundary as identified by the Surat Underground Water Impact Report. That means its failing groundwater supply is a priority only for the Davises, who run 1500 cattle and a piggery. "We've got surface water at the moment because the Wambo Creek got a flood in January-February, and seepage out of the banks is keeping it going, but we're in a position that we'll be looking for water within the next two to three months," Mrs Davis said. Wamba, which has been in Mr Davis' family for more than a century, had an unfailing supply of bore water until 2008, when gas started to severely impact on two bores. "We've got seven bores and six are in the Walloons," Mr Davis said. "The one that isn't, we're having no problems with, because it's shallower than the others." However, they did have a "big problem" with the main bore, which was 162 metres deep. "The two main bores we can't pump out of any more because they've got that much gas in them that the impellers or the mono rotor kits burn out," Mr Davis said. **The couple said gas levels in their bores had become worse in the past 18 months, and Origin had agreed to replace a bore. "They've said they'll do it in two years, but we'll need it before then," Mr Davis said.**

- **12 Sept, 2013 – CSG behind Cancer cluster MP – (Govt. reject this assessment)**

<http://www.myresources.com.au/news/17-othernews/8758-csg-behind-cancer-cluster-mp>

Three people who live near coal seam gas activities in southern Queensland have contracted terminal cancer, and one of them has since died, a state MP says. Katter's Australian Party member for Condamine Ray Hopper told parliament on Wednesday the residents live within four kilometres from a coal seam gas (CSG) evaporation pond in his electorate. All three have been diagnosed with pancreatic cancer, he says. "Sadly, one person has died and the two others have been given just months to live," he said. He called for Health Minister Lawrence Springborg to launch an investigation into whether CSG mining is linked to the cancer cluster. **But Mr Springborg rejected the suggestion that the CSG pond had anything to do with the illnesses.**

- **12 Sept, 2013 - Katter MP wants probe into CSG links to cancer cluster**

<http://www.thechronicle.com.au/news/katter-mp-wants-probe-csg-links-cancer-cluster/2018180/>

Ducklo resident Luigi Morrison, one of three people diagnosed with prostate cancer living near a coal seam gas evaporation pond, said he is right behind Ray Hopper's call for an investigation into the cases. He said while his specialist had told him a link between coal seam gas activity and his pancreatic cancer would be "difficult to prove", he believed the evaporation pond's proximity and chemicals in the water were part of the cause. "It would be a major coincidence," he said.

- **2 Aug, 2013 – Flooding, not dredging, caused sick fish in Gladstone harbour (according to Govt.)**

<http://www.gladstoneobserver.com.au/news/flooding-not-dredging-caused-sick-fish-gladstone/1969391/>

A FINAL (Govt) report on sick fish in Gladstone Harbour says flooding - not dredging - was the main cause of the problem. The report says flooding, combined with large numbers of fish being washed over the Awoonga dam, stressed the ecosystem in the harbour and adjacent waterways. The study, released on Friday, couldn't rule out the possibility that dredging and associated turbidity provided

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additional stress to the ecosystem, but it was not the primary stressor. **The report was put together by an independent panel of investigators appointed by the State Government** to investigate concerns about sick fish in the waterway. However, a separate report just released by veterinary scientist Dr Matt Landos shows levels of marine life disease around the harbour are much greater than previously thought. Dr Landos' data revealed 39% of mud crabs collected around Gladstone harbour tested positive for distinctive rust spots that indicated shell disease from ingested metals such as copper and aluminium. The Guardian Australia reports his results show that instances of shell disease soar in locations close to the Western Basin Dredging and Disposal project.

- **14 July, 2013 - 200m of steel drill pipes blown into air in July CSG mishap (Metgasco)**

<http://www.northernstar.com.au/news/a-dangerous-incident-that-occurred-during-the-deco/2033819/>

[http://www.resourcesandenergy.nsw.gov.au/\\_data/assets/pdf\\_file/0004/474610/Drill-string-ejected-from-gas-well.pdf](http://www.resourcesandenergy.nsw.gov.au/_data/assets/pdf_file/0004/474610/Drill-string-ejected-from-gas-well.pdf)

A DANGEROUS incident that occurred during the decommissioning of one of Metgasco's gas wells near Casino in July is the subject of an inquiry by the NSW Mine Safety Investigation Unit. On July 14 this year six Metgasco workers were placed into a "very high" risk situation during the shutdown operation of the Kingfisher E01 well on the outskirts of Casino, when 200m of steel drill pipes shot out of the well without warning.

- **28 May, 2013 – Health of Tara residents comes first: Toowoomba Bishop**

<http://www.thechronicle.com.au/news/health-tara-residents-comes-first-toowoomba-bishop/1884740/>

THE health of people living on the Tara residential estates needs to be put before the economic benefits of coal seam gas production, says Catholic Diocese of Toowoomba Bishop Robert McGuckin. "Every effort needs to be made to ensure that the extraction of coal seam gas and related activities does not impact negatively on the people on the Tara Residential Estates, particularly the health of children," he said in a statement released today. "Economic benefits to the area from mining must not be at the sake of the community's health and wellbeing - particularly of local children."

- **6 May 2013 – Great Barrier Reef in danger according to UN report**

<http://www.sunshinecoastdaily.com.au/news/great-barrier-reef-danger-according-un-report/1855970/>

THE State Government is convinced it will avoid the Great Barrier Reef being deemed under threat by United Nations' environmental arm after UNESCO raised concerns in a new report. The group gave some praise to both the Queensland and Federal Government but warned that with up to 43 proposed developments along the coastline of the reef, UNESCO would still recommend the reef's status be listed as "in danger". To avoid this, both levels of government must act before February 1 next year. Queensland **Environment Minister Andrew Powell said the LNP government was already reviewing Gladstone Harbour and putting together a ports strategy - two issues highlighted in the report.**

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- **9 May, 2013 – Report details health concerns for residents affected by CSG**

<http://www.thechronicle.com.au/news/report-details-health-concerns-residents-affected-1862076/>

She said that in dealing with the community, she had concerns children could be experiencing damage to their nervous system, as some reported sensations of numbness and pins and needles. "In my suburban practice, that's not something I would see in people of that age group," Dr McCarron said. "My feeling is that people's concerns for their health have substance. "There needs to be an intensive investigation to find out what's going on." She said the government research from Dr Keith Adam - a specialist in environmental medicine - and the Darling Downs Public Health Unit was not sufficient.

- **1 May, 2013 - GP fears for health of gasfield residents - Independent health survey highlights need for better understanding of coal seam gas health impacts.**

<http://dea.org.au/news/article/media-release-gp-fears-for-health-of-gasfield-residents>

A report released today by Brisbane general practitioner Dr GERALYN McCARRON highlights the need for further investigation of the health impacts for people living in a coal seam gas (CSG) field. Dr McCarron has been communicating with affected residents of the Tara estates in SE Queensland who believe their health has been adversely affected by pollution from CSG activities near their homes. **She was highly dissatisfied with the adequacy of the recent Queensland Government report** and so undertook her own survey of health complaints. The report Symptomatology of a gas field describes interviews with 38 households, encompassing 113 people. Over half of residents surveyed reported that their health has been adversely affected by CSG activities.

- **5 April, 2013 – QGC response to anonymous allegations of non-compliance made to media by a contractor**

[http://www.qgc.com.au/media/250265/qgc\\_non-compliance\\_allegations\\_5\\_april\\_2013\\_.pdf](http://www.qgc.com.au/media/250265/qgc_non-compliance_allegations_5_april_2013_.pdf)

[Nb. Unable to locate any related media article on this subject]

- **1 April, 2013 – Gas Leak! Four Corners**

<http://www.abc.net.au/4corners/stories/2013/04/01/3725150.htm>

But why weren't these problems picked up in the development approval process? The answer is simple: according to one insider, the approval process is significantly flawed. Four Corners reveals what really happened when two major companies applied to develop thousands of square kilometres of southern Queensland for coal seam gas. Using hundreds of pages of confidential documents, the program reveals that the companies didn't supply enough basic information for an informed decision to be made about environmental impacts. Despite this, various government agencies permitted the developments to go ahead, allowing the companies to submit key information at a later date. A decision which shocked some who were involved: *"It was quite frightening that they would consider approving such a project without the basic information that a normal mining project would have been asked to submit, given that this was like six hundred times the size of your standard, large mine."* This same insider claims pressure was applied to the bureaucracy to fast track approval for coal seam gas development. This allegation would deeply concern many farmers who have seen their land used for

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coal seam gas sites and raises significant concerns about the future expansion of the industry across Australia.

[QGC Response: <http://group1403.rssing.com/browser.php?indx=5398583&item=67>]

- **28 March, 2013 - QGC response to questions asked by the ABC in relation to upcoming program, Gas Leaks!**

[http://www.abc.net.au/4corners/documents/CSG2013/QGC\\_response.pdf](http://www.abc.net.au/4corners/documents/CSG2013/QGC_response.pdf)

- **22 October, 2012 – Land Holder Taking Water Fight to Santos**

<http://www.nvi.com.au/story/405991/landholder-taking-the-water-fight-to-santos/?cs=382>

Mr Pickard reports that the sodium content in the water samples is actually 1030 ppm (parts per million) and the pH of the ponded water is 9.93, while the sodium content in the soil at Bohena 7 is 17200 ppm, with a pH of 11.2. "Another point to look at is the Sodium Absorption Ratio (SAR) is 200 in the ponded water," he said. "Rain water has an SAR between 1 and 2 at its worst, with bore water generally slightly higher. "Bore water for domestic use in the area (my house bore sampled 16.5.2012) was 2.6 and on 27.6.2012 was 2.97," he said. "When you get a SAR in water of four (4) you know you are in trouble... twenty (20) is desert. The native wildlife do not drink this water and live and the water is not conducive to plant and tree growth or survival either. He says, however, that the biological activity in the water tells the most compelling argument, citing astronomical counts of sulfate reducing and hydrocarbon utilising bacterias.

- **18 October, 2012 – Family fights for compensation for well site**

<http://au.news.yahoo.com/thewest/regional/countryman/a/-/news/15144422/family-fights-for-well-site-compo/>

As a fruit and vegetable producer, Mr Copeland said he was losing substantial income from the existence of the well site. "If I put zucchinis into the 9000sqm area this year I would have made in excess of \$80,000 gross," he said. "If I planted rockmelons there in April to May 2012 I could have made in excess of \$80,000 for the price we were receiving at that time. "This is providing the site had been property rehabilitated and soil nutrients lifted to the appropriate levels for our industry." AWE was contacted for comment but a spokesman said the company was unable to respond because the matter was before the court.

- **20 Sept, 2012 – Gladstone Dredging**

<http://www.abc.net.au/catalyst/stories/3593812.htm>

Mark Horstman explores the environmental consequences of a large dredging project at Port Curtis harbour in Gladstone Queensland.

- **12 September, 2012 – Gas Company (AGL) illegally emitting acid rain compounds for 3 years**

<http://au.news.yahoo.com/video/national/watch/26473248>

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AGL found for 3 years have been pumping 30% more Sulphur Oxide into air than environmental limits allow. Also found to be exceeding limits for hazardous waste stored on site.

- **4 September, 2012 – Farmers and environmental groups blast new gas industry ad that claims coal seam gas is safe for groundwater – (APPEA)**

<http://www.couriermail.com.au/news/farmers-and-environmental-groups-blast-new-gas-industry-ad-that-claims-coal-seam-gas-is-safe-for-groundwater/story-e6freon6-1226464606972>

<http://www.news.com.au/breaking-news/national/csg-ad-criticised-for-false-claims/story-e6frku9-1226464941206>

Deceptive advertising by APPEA claims that CSG is safe for groundwater. A PRO-COAL seam gas (CSG) television advertisement has falsely claimed Australia's national science agency believed groundwater was safe from contamination by CSG mining, CSIRO says. The Australian Petroleum Production and Exploration Association (APPEA) authorised the television ad that aired on Network Nine at the weekend. The ad claimed CSIRO believed groundwater was "safe from coal seam gas" activities. CSIRO has rejected the claims. "At no time has CSIRO made such a statement, and nor do the results of CSIRO research support such a statement," a spokesman said in a statement.

- **4 September, 2012 - CSIRO wants ads pulled as coal seam gas industry claims rejected**

<http://www.coastaltimes.com.au/news/national/national/general/csiro-wants-ads-pulled-as-coal-seam-gas-industry-claims-rejected/2658104.aspx>

- **20 August, 2012 – Dalby gas fire denial - Arrow**

<http://www.brisbanetimes.com.au/queensland/dalby-gas-fire-not-csg-related-arrow-energy-20120820-24h5s.html>

Arrow Energy says a *gas fire burning* on one of its properties in Queensland is under control and is not linked to the company's coal seam gas activities. Fire fighters were called to a grass fire at the site of Arrow's Daandine CSG project, west of Dalby, on the weekend. The grass fire has been put out. Arrow Energy says the gas fire is centred on an old coal mine well, and is continuing to burn, but in a controlled, secure way.

- **20 July, 2012 - CHINCHILLA beef producer David Hubbard has seen his property impacted four times by QGC spillages this year - GGC**

<http://qcl.farmonline.com.au/news/state/agribusiness-and-general/general/ggc-should-spill-details-not-just-gas/2614696.aspx>

"Drilling fluid from a QGC mining rig had twice spilled into the Condamine River, a few hundred metres from where he accessed water for stock, and fluid also had spilled twice across a boundary fence into his paddock, he said. The accidents, which had occurred at a neighbouring property, had taken place over a single month. While he expressed his annoyance these incidents were occurring in the first place - a familiar story for many across rural Queensland - Mr Hubbard said his ongoing frustration was that he was not being adequately informed by the company about the discovery of the incidents

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and the follow-up investigations into the impacts. He said he had only learnt about two of the incidents following his own initiative and questions.”

- **20 July, 2012 - Corybas leak sparks alarm – Geraldton - AWE**

<http://au.news.yahoo.com/thewest/regional/gascoyne/a/-/news/14280202/corybas-leak-sparks-alarm/>

Gas bubbling at the surface of a fracking well on The Grange farm, south of Dongara, has raised new concerns about the environmental safety of the process. Nearby growers expressed fears about contamination of groundwater supplies when a leak was discovered at AWE's Corybas wellhead. AWE managing director Bruce Clement this week confirmed the company found a gas leak on the valve of Corybas 1, which was bubbling up through rainwater in the cellar trap. Mr Clement said the leak at the well, which was fracked at 2.51km in 2009, was picked up during routine maintenance checks and was being fixed now.

- **6 July, 2012 – Coal seam gas blamed for health problems**

<http://www.abc.net.au/local/stories/2012/07/06/3540381.htm>

The Australian Medical Association's incoming president in Queensland has confirmed several of its member doctors have raised concerns that residents living near coal seam gas mining operations may be showing symptoms of gas exposure.

- **19 June, 2012 – Metgasco fined for failure to comply - Metgasco**

<http://www.northernstar.com.au/story/2012/06/19/metgascos-wastewater-fine/>

METGASCO has been fined \$5000 by the State Government for failing to provide information about its plans to dispose of wastewater produced by the coal seam gas extraction process. The fines were revealed on a government web site which listed cases of "non-compliance" with the Mining Act and Petroleum (Onshore) Act. A COAL seam gas company has disposed of more than a million litres of dirty water at a sewage treatment plant in northern NSW, breaching the plant's licence conditions, the NSW Environment Protection Authority says

- **12 June, 2012 - Coal seam effluent salts sewerage - Metgasco**

<http://www.smh.com.au/environment/coal-seam-effluent-salts-sewerage-20120611-2060v.html#ixzz1xWyBfdZU>

- **28 May, 2012 - Methane Migration Affects 5 km stretch of Condamine River - Origin**

<http://www.abc.net.au/news/2012-05-30/claim-csg-river-leak-caught-on-video/4041298>

Gas is bubbling to the surface on a five-kilometre stretch of the Condamine River near Chinchilla on the Western Downs. The Queensland Government's LNG Enforcement Unit says it is investigating the claims. Mr Hutton says while he cannot rule out naturally occurring methane, the incident is unprecedented. "The landowners say they've never seen this happen before," he said. "It's along quite a lengthy stretch of the river - there's very strong bubbles coming to the surface. "This is a new

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phenomenon for this section of the river." Mr Hutton says the river is close to CSG wells operated by Origin Energy.

- **24 May, 2012 - Varanus gas explosion report slams Apache Energy – LNG/Apache**

<http://www.abc.net.au/news/2012-05-24/varanus-gas-explosion-report-released/4031146/?site=northwestwa>

The report is critical of Apache, saying the company had ultimate responsibility for maintaining the site and should have identified the risk that corrosion posed to the affected pipeline. It has described Apache's safety culture as 'middle-rank'.

- **12 May, 2012 – Gas leak forces suspension at QGC rig at Surat Basin - QGC**

<http://www.couriermail.com.au/business/gas-leak-forces-suspension-at-queensland-gas-company-rig-at-surat-basin/story-fn7kjcme-1226347929202>

Gas leak forces suspension at Queensland Gas Company rig at Surat Basin-QGC. THE Queensland Gas Company has suspended operations at one of its drilling rigs on the western Darling Downs after detecting a gas leak. A 150-metre exclusion zone was established around the Surat Basin rig as a precaution late on Saturday night. The incident occurred during drilling of the Argyle 162 well, about 25km southwest of Chinchilla, on a QGC-owned property.

- **28 April, 2012 - CSG company spills fluid into river - QGC**

<http://www.smh.com.au/environment/water-issues/csg-company-spills-fluid-into-river-20120428-1xr4k.html>

Drilling fluid linked to a CSG project has leaked into a Queensland river that is part of the Murray-Darling Basin. The leak occurred when contractors for coal seam gas company QGC were drilling to run a pipeline underneath the Condamine River in Queensland's southwest.

- **10 April, 2012 - Missed pollution leak raises concern about credibility of mine audit**

<http://www.eco-business.com/news/missed-pollution-leak-raises-concern-about-credibility-of-mine-audit/>

The breaches included suspected dumping of drilling mud and a failure to properly rehabilitate a site. But the audit, conducted in September and October, failed to detect serious incidents at coal seam gas drilling sites in the Pilliga woodland in north-west NSW. The sites had long been the subject of community concern and numerous breaches were self-reported by the owner Santos in February. Santos found the sites' previous operator, Eastern Star Gas, had serially breached environmental rules, including 16 spills or leaks of contaminated water. It also found evidence of error-ridden work practices, such as records lost, and land cleared apparently without approval.

- **4 Apr, 2012 - Queensland reveals Condamine water quality report**

<http://www.abc.net.au/news/2011-11-24/chinchilla-condamine-water-quality-report/3677838>



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The Queensland Government has confirmed the toxicity of coal seam gas water to aquatic organisms is assessed against environmental standards after it is released into rivers and not prior to discharge. This approach appears to stand at odds with the approach taken by the Queensland co-ordinator-general in his approach to contaminant guidelines when he approved the Australia Pacific Liquid Natural Gas (APLNG) project. Environmental protection standards are set through ANZECC aquatic ecosystem guidelines. In June 2010, the Queensland Government granted an environmental approval allowing APLNG to discharge the equivalent of eight Olympic swimming pools of treated coal seam gas water per day into the Condamine River south of Chinchilla. The water comes from the company's desalination plant on the Walloons gas field, which is part of Origin Energy and ConocoPhillips' \$35 billion coal seam gas and liquefied natural gas plant near Gladstone.

- **16 March 2012 – Lightning strike on gas pipelines**

<https://pipelinesoz.wordpress.com/2012/03/16/lightning/>

<https://pipelinesoz.wordpress.com/2012/03/22/lightning-damage-pictures/>



“The APIA/POG incident database received a new incident report the other day – a pipeline leak caused by a lightning strike. The confidentiality requirements mean that I’m not going to tell you where it was or which pipeline, other than that it was in an outback environment and there was a fused crater in the pipe wall about 17 mm in diameter with a 1.6 mm diameter hole at the bottom.

What I regard as striking is that lightning now ranks as the third most frequent cause of pipeline damage in the database, regardless of whether you

count all incidents or just those causing loss of containment. External interference of course remains dominant with over 80% of damage incidents. The remaining causes and number of incidents are:

- 8 construction defects (3 leaks)
- 7 lightning strikes (4 leaks)
- 6 corrosion leaks

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- 5 earth movement incidents (2 leaks)

The non-leak lightning strikes were discovered through in-line inspection where strange defect indications were investigated and revealed fused craters in the pipe wall. There may be more of these that have not yet been discovered. Two of the lightning incidents were associated with power lines, where the lightning initially struck the wires then ran down a stay wire that passed close to the pipeline. So there is an obvious way to avoid that. But apart from that situation there appears to be no mitigation available for random lightning strikes on a buried pipeline.”



- **10 February, 2012 - Arsenic and lead found in contaminated water leak at coal seam gas drill site - Santos**

<http://www.smh.com.au/environment/water-issues/arsenic-and-lead-found-in-contaminated-water-leak-at-coal-seam-gas-drill-site-20120209-1rx7s.html>

FOUR separate leaks of polluted water have now taken place at a coal seam gas drilling site near Narrabri in northern NSW since June, the resources company Santos confirmed. The spills of contaminated water led to the detection last month of toxic heavy metals, including arsenic, lead and chromium, plus traces of petrochemicals in water and earth samples taken in the Pilliga forest area. Tests last year also showed elevated levels of metals and chemicals, though these were initially blamed on the use of chemical fertilisers on farms. The company then conceded that an unreported spill of 10,000 litres of polluted water had taken place in June. But Santos has now reported a series of leaks that occurred since it took over the site from Eastern Star Gas late last year. "There have been *three subsequent, smaller leaks* of water from coal seams within Eastern Star's Pilliga operations in the weeks immediately following Santos' acquisition of the company," a spokesman said.

- **February 2012 – APPEA Report: LNG tank gas release – Woodside**

<http://www.appea.com.au/images/stories/Safety/71%20%20lng%20tank%20gas%20release.pdf>

During the installation of an LNG loading pump a significant amount of hydrocarbon gas was generated and released to the atmosphere when the loading pump at 300C came into contact with the -1620C LNG product within the pump well. The resultant vapour cloud engulfed the work party located on the scaffold above the LNG tank. The scaffold had only one “intended” means of escape which was blocked by the vapour cloud due to the prevailing wind direction. The work group left the scaffold and waited for the gas release to dissipate. After initial contact and subsequent gas release the pump was lowered to normal position. There were no injuries or immediate damage associated with this incident

- **14 January, 2012 - Coal-seam gas pollution spill went unreported - Santos**

<http://www.theaustralian.com.au/national-affairs/coal-seam-gas-pollution-spill-went-unreported/story-fn59niix-1226244002610>

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COAL-SEAM gas giant Santos has admitted a company it now owns last year spilled 10,000 l of polluted waste water in the Pilliga State Forest, in northern NSW, potentially contaminating 1.2ha of bushland.

- **4 Jan, 2012 – Acting Premier denies fish kills related to LNG harbour dredging**

<http://www.smh.com.au/environment/conservation/fish-kill-not-linked-to-gladstone-dredging-acting-premier-20120104-1pko0.html>

Another fish kill in central Queensland may not necessarily be linked to dredging in Gladstone Harbour, acting Premier Andrew Fraser says.

- **3 Jan, 2012 – Fish Kills at Gladstone extend upriver**

<http://www.abc.net.au/news/2012-01-04/investigation-underway-into-queensland-fish-kill/3758334>

The Queensland Government is investigating the discovery of more dead fish in a Gladstone waterway. The Department of Environment and Resource Management imposed a local fishing ban when sick fish were found in Gladstone Harbour in recent months. Barramundi and other fish turned up with cloudy eyes and discolouration, and the ban forced a number of commercial fishing operators out of business. Now local fisherman Chris Sipp says he has found 15 dead barramundi in the upper Boyne River in recent days.

- **Dec, 2011 – Report – AGL - A total of 53 environmental incidents at AGL operated sites were recorded in AGL's corporate incident reporting systems during FY2011**

<http://2011.aglsustainability.com.au/index.html#/76/zoomed>

A total of 53 environmental incidents at AGL operated sites were recorded in AGL's corporate incident reporting systems during FY2011, compared with 15 incidents recorded in FY2010. One of the incidents was rated as having a high potential risk (the overtopping of a dam at the Downlands Facility during the Queensland floods in December 2010). Other incidents included minor spills and leaks, administrative non-compliances and noncompliant air emissions. In addition to environmental incidents at AGL operated sites, during FY2011, a number of incidents occurred at the AGL-Arrow Energy Moranbah Gas Project joint venture, where Arrow Energy is the operator. Further information can be found in the 2011 Annual Report available at [2011annualreport.agk.com.au](http://2011annualreport.agk.com.au).

- **Dec, 2011 – Qld Gov. CSG (6 monthly) Compliance Report**

<http://www.ehp.qld.gov.au/management/coal-seam-gas/pdf/csg-compliance-report-jan.pdf>

The Queensland government reported that in only the first six months of 2011 there were forty-five CSG compliance related incidents, including twenty-three spills of CSG water during operations, four uncontrolled discharges of CSG water, three exceedances of discharge limits, three overflows of storage ponds, and other incidents relating to vegetation clearing and BTEX contamination (see "Drilling Down" – link on final page)

***Nb. The document quoted from and linked (above) has since been removed from the DPH website and replaced with this document:***

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<https://www.ehp.qld.gov.au/management/non-mining/documents/csg-compliance-report-jan.pdf>

- **10 Nov, 2011 – In pictures: Mystery marine disease off Gladstone**

<http://www.abc.net.au/news/2011-11-09/gladstone-harbour-in-pictures-and-quotes/3650296>

Fishing in the World Heritage-listed waters off the coast of Gladstone is a business for many and a popular pastime for locals, but ever since the outbreak of disease in marine life, the industry there has been in panic mode. An unprecedented number of fish with red spots, lesions and parasites, as well as dead dugongs and turtles, have been found this year. Fishermen and conservationists blame the state of the marine life on dredging to widen Gladstone Harbour to accommodate carrier ships servicing the booming liquefied natural gas and coal seam gas industries. But the Gladstone Port Corporation does not believe the dredging is causing the disease in fish, and authorities say last year's wet summer may be a factor in the poor health of the harbour. Water testing shows a number of sites within the harbour exceeded national guidelines for aluminium, copper and chromium. Experts say the levels pose a minimal risk to marine life; however, the Queensland Government has appointed an independent scientific panel to conduct more research.

- **October, 2011 – APPEA Report: LNG Pressure Vacuum breaker loss of containment – gas release**

[http://www.appea.com.au/images/stories/Policy - Safety and Health/incident alerts/60 - Pressure Vacuum breaker loss of containment.pdf](http://www.appea.com.au/images/stories/Policy_-_Safety_and_Health/incident_alerts/60_-_Pressure_Vacuum_breaker_loss_of_containment.pdf)

A gas cloud was observed emanating from the hydrocarbon Pressure Vacuum (PV) breaker on-board a GPSO. The PV breaker released at a lower pressure than the expected design pressure, resulting in the release of about 28,000kg of hydrocarbon gas. The cargo tanks took approximately 1.5 hours to depressurise via the PV breaker.

- **23 September, 2011 – Is dredging killing the Gladstone fish and making us sick?**

<http://theconversation.com/is-dredging-killing-the-gladstone-fish-and-making-us-sick-3517>

Several individuals have required medical attention after a mystery disease appeared to spread to humans from fish in waters near Gladstone, Queensland. Fishing bans are currently in place and local residents have been told not to eat local seafood. While little is known about the disease, test results from several affected fish are due to be released in the coming days. Environmentalists, such as Dr Andrew Jeremijenko, have suggested that the dredging of Gladstone Harbour – to accommodate the burgeoning liquified natural gas (LNG) development on nearby Curtis Island – could be to blame for the disease.

- **17 September, 2011 - Academics warn of looming seam-gas 'mess'**

<http://www.theaustralian.com.au/national-affairs/academics-warn-of-looming-seam-gas-mess/story-fn59niix-1226139356296>

"Dr Mudd said one of his students had recently conducted such a study of a CSG well, and found while one nearby water bore was unaffected by the operations another 5km away suffered a "very major impact". "If a an undergraduate student can do that in three weeks of full-time work why the hell hasn't the government done that?" he said. A LEADING resource economist has called for restrictions

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on the booming coal-seam gas industry until proper water quality and technology monitoring systems can be implemented.

- **4 September, 2011 - QLD gas well leaking - QGC**

Gas is leaking from a five-centimetre crack in a pipe on a Queensland coal seam gas development. Queensland Gas Company senior vice-president Jim Knudsen said the leak was not dangerous and an exclusion zone had been set up while workers fixed the problem. The pipe was damaged on Monday near the well head at QGC's Berwyndale South gas field

- **13 September, 2011 - Crews work to fix leaking gas well - QGC**

<http://www.thechronicle.com.au/story/2011/09/13/crews-work-fix-leaking-gas-well-toowoomba/>

A SAFETY zone has been established around a Darling Downs gas well which has been leaking since last night.

- **13 September, 2011 - Gas mine leaking in southern Queensland – QGC**

<http://www.smh.com.au/environment/gas-mine-leaking-in-southern-queensland-20110913-1k7do.html#ixzz1Y9QBEyFG>

- **22 August, 2011 - Santos fined over outback gas blast – Santos (Ethane- not CSG but worth noting as it was a lack of maintenance which caused this issue)**

<http://www.abc.net.au/news/2011-08-22/santos-fined-moomba-explosion/2850122>

Oil and gas producer Santos has been fined for breaching workplace safety laws over an explosion at its Moomba natural gas plant in South Australia.

- **10 August, 2011 - NSW Gov't issues AGL with a formal warning after coal seam gas well blow-out - AGL**

<http://www.kateausburn.com/2011/08/10/nsw-govt-issues-agl-with-a-formal-warning-after-coal-seam-gas-well-blow-out/>

The NSW Government has issued AGL with an official warning following an incident during maintenance of a coal seam gas well at a site in Camden on 17 May 2011.

- **10 August, 2011 - AGL warned over coal seam well leak - AGL**

<http://www.northernstar.com.au/story/2011/08/10/agl-warned-over-coal-seam-well-leak/>

ENERGY firm AGL has been formally warned by the NSW government after a leak at one of its coal seam gas wells in southwest Sydney.

- **3 August, 2011 - Coal seam damage to water inevitable - APPEA**

<http://www.eco-business.com/news/coal-seam-damage-to-water-inevitable/>

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“Coal seam damage to water table inevitable” APPEA

- **21 July, 2011 - Leaking, bubbling coal seam gas well - Pilliga State Forest NSW -Santos**

Video from the Pilliga: <http://www.youtube.com/watch?v=qf5Rj3vfQPc>

- **21 June, 2011 – Arrow fined \$40,000 for Breach – Arrow & QGC**

<http://www.couriermail.com.au/ipad/arrow-hit-with-40000-fine-for-breach/story-fn6ck2gb-1226078776279>

ARROW Energy has been hit with a \$40,000 fine - Queensland's biggest penalty to date against a coal seam gas company - for five breaches of the petroleum and gas laws at the Daandine Homestead property near Dalby. The fine does not include any penalty for the blowout of Arrow's well on the same property, which is still under investigation by the State Government. Arrow was fined in this instance over breaching access laws that state a landowner must be given 10 days' notice before a company can enter private property. Another breach related to a technical issue over a pipeline. The fines followed more than a year of controversy for the emerging industry. Rival company Queensland Gas was also fined almost \$20,000 in April for illegally clearing trees at its project near Tara.

- **17 June, 2011 – Dredging starts, Data next month**

<http://www.gladstoneobserver.com.au/news/dredging-starts-data-next-month-marine-health/881096/>

WATER quality and marine health data will be made public and updated weekly on the Gladstone Ports Corporation website starting next month, despite the dredging having already started.

- **13 June, 2011 - Gas chief admits company at fault – (Metgasco)**

<http://www.northernstar.com.au/story/2011/06/13/gas-chief-admits-company-at-fault-over-storage-pond/>

METGASCO CEO Peter Henderson has conceded the gas company was remiss in not cleaning up two ponds after drilling at a site at Dyraaba was abandoned.

- **7 June, 2011 - Coal seam gas leaks posed fire threat: report**

<http://www.abc.net.au/news/video/2011/06/07/3238112.htm?site=southqld>

A new report has revealed five coal seam gas wells in Queensland could have ignited after they developed leaks.

- **5 June, 2011 - Coal Seam Gas Pond Toxic water storage leaking and overflowing (Metgasco)**

[http://www.youtube.com/watch?v=smP9tL\\_e3U8](http://www.youtube.com/watch?v=smP9tL_e3U8) - Dobie's Bight Rd

- **23 May, 2011 – Qld farmer worried about gas leak on land (Arrow)**

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<http://news.smh.com.au/breaking-news-national/qld-farmer-worried-about-gas-leak-on-land-20110523-1f063.html>

Mr O'Connor told AAP it was the fourth gas incident on his property in two years. "We've had three gas leaks prior to this but none as big as this," he said. "The other incidents didn't come from the wells. One was from a leaking pipe." Mr O'Connor has 12 wells on his 1847-hectare property after Arrow Energy gained access in 2006.

- **23 May, 2011 – Queensland coal seam gas leak plugged – (Arrow)**

[http://mines.industry.qld.gov.au/assets/mines-safety-health/Safety\\_Alert\\_Well\\_48.pdf](http://mines.industry.qld.gov.au/assets/mines-safety-health/Safety_Alert_Well_48.pdf)

<http://www.theaustralian.com.au/news/nation/queensland-coal-seam-gas-well-blows-its-top/story-e6frg6nf-1226061049085>

A LEAKING coal seam gas well west of Brisbane has been plugged. The gas well, west of Dalby, began leaking yesterday while Arrow Energy, the company which operates the well, was preparing it for gas production. The well was uncapped to install a pump when water and gas burst to the surface. Greens spokeswoman Libby Connors said water and gas exploded up to 100 metres high. Contractors at the scene were not hurt and a 100m exclusion zone was established around the well on a farmer's property off Kogan-Condamine Road

- **4 March, 2011 – Gladstone dredging begins soon**

<http://www.gladstoneobserver.com.au/news/gladstone-dredging-start/786237/>

QUEENSLAND Treasurer and Minister for State Development and Trade Andrew Fraser has welcomed the announcement of a dredging project that will see Gladstone Port become one of the world's major Liquid Natural Gas exporters. Gladstone Ports Corporation announced that the first stage of the \$1.3 billion Western Basin Dredging and Disposal Project has been awarded today. Joint venture partners Van Oord and Dredging International Australia will commence the first stage of the dredging project worth an estimated \$387 million immediately.

- **3 March, 2011 - CSG concerns bubble to surface – (Metgasco)**

<http://www.echonews.com.au/story/2011/03/03/csg-concerns-bubble-to-surface-locals-csg-concerns/>

Northern Rivers residents continue to be alarmed by the practices involved in coal seam gas exploration, with revelations that a tailing pond (where water used in the test bore is kept until it can be trucked away) is poorly maintained. The pond at Dyraba has a lining made of builder's plastic that is ripped in places and overflowed in the January rains. Reports of a possible third leaking test well, at the same site at Dyraba.

- **1 March, 2011 - Leaking coal seam gas concerns – (Metgasco)**

<http://www.northernstar.com.au/story/2011/03/01/leaking-coal-seam-gas-concerns/>

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STATE Greens candidates Sue Stock and Janet Cavanaugh say they have been alerted about a potential leaking coal seam gas site at Lower Dyraba, west of Casino. This leaking drill site is north-west of Casino at Lower Dyraba, close to Dyraba Creek which forms the boundary between the Clarence and Lismore electorates. I was contacted by a concerned resident downstream of the well," Ms Cavanaugh said. "This is one of Metgasco's exploratory drill sites. It is the third of their sites that has been found to be leaking by members of the public. According to Metgasco's own Review of Environmental Factors, on completion of the 10 to 20 days spent drilling at the site the bore should have been abandoned to the satisfaction of the relevant Government department, namely Industry and Investment NSW.

- **March 2011 – QGC contractor breaches environmental laws**

<http://www.pnronline.com.au/article.php/212/1670>

March 2011 - QGC suspended work in its major pipeline in Queensland after admitting one of its contractors may have breached Federal and State environmental conditions in clearing a 6 km long, 40 m-wide route for the pipeline near Dalby. Knudson said at the time that the *lack of approved plans for soil and species management* may have resulted in the breach, but said QGC does not believe the clearing had an adverse impact on protected plants and animals.

- **24 February, 2011 – Leaking gas - Call to hold off on gas drilling (Metgasco)**

<http://www.northernstar.com.au/story/2011/02/24/call-hold-gas-drilling/>

The Northern Star revealed at least two sites on the Northern Rivers were leaking. The Star yesterday revealed there were more than 50 drill sites in place or approved across the region. It revealed two supposedly sealed drill sites near Bentley were leaking methane gas through the soil. Metgasco, which is responsible for the sites, insists the leaking gas is not entering underground water reservoirs around the drill sites.

- **24 February, 2011 - Gas wells leaking methane – (Metgasco)**

<http://www.northernstar.com.au/story/2011/02/24/local-gas-wells-found-leaking-metgasco-lismore/>

METGASCO has confirmed methane gas has escaped from two of its drilling wells, prompting calls that the industry regulator immediately inspects all coal seam wells in the region to discover if more are leaking. Metgasco's chief operations officer, Mick O'Brien, said yesterday methane was found to be leaking from sealed wells near Bentley and north-west of Casino. "These were small gas leaks from the piping connections at the top of the ground," he said, adding they have both since been re-sealed. "At Bentley we couldn't detect any methane, but I heard someone managed to light it and from the piping you would expect it to be methane."

- **14 Feb, 2011 - Farmer worried about coal seam gas water release**

<http://www.abc.net.au/news/2011-02-14/farmer-worried-about-coal-seam-gas-water-release/1941086>



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A farmer on Queensland's Darling Downs says she is concerned about the quality of water discharged by a coal seam gas plant onto her property during last month's flood emergency. Megan Baker's farm is only a few kilometres from Arrow Energy's water storage and treatment facility at Daandine, north-west of Dalby. During last month's flood emergency, Arrow received State Government permission to release water from a storage dam into a nearby creek to prevent damage to the dam wall. The discharge flowed over Ms Baker's property and she is now concerned about the impact it has had on her cattle and crops. Ms Baker says she has not seen the results of water tests conducted by Arrow.

- **16 Feb, 2011 – Bore testing gives carcinogen chemical all-clear**

<http://www.abc.net.au/news/2011-02-16/bore-testing-gives-carcinogen-chemical-all-clear/1944490>

Arrow Energy says water bore tests in Queensland's Central Highlands have found no traces of benzene. The tests were conducted after traces of the carcinogen were detected in nearby coal seam gas (CSG) wells last year. Last November, Arrow Energy found traces of benzene in three out of 60 water samples taken from coal seam gas wells near Moranbah, south-west of Mackay in north Queensland. Secondary testing confirmed the presence of the chemical but recent testing of water bores near the wells have found no traces of the carcinogen.

<http://www.abc.net.au/news/2011-02-16/bore-testing-gives-carcinogen-chemical-all-clear/1944490>

- **Feb, 2011 –QGC fracking causes interconnectivity between aquifers and leaking wells not rectified in a timely manner**

[http://www.abc.net.au/4corners/special\\_edds/20110221/gas/docs/QGC\\_Response.pdf](http://www.abc.net.au/4corners/special_edds/20110221/gas/docs/QGC_Response.pdf)

<http://www.abc.net.au/4corners/content/2011/s3144681.htm>

Myrtle 3 – Anne Bridle: About six weeks after the fracturing process in mid-2009, QGC's monitoring indicated that the Walloons and the Springbok formations were connected where the Myrtle 3 well had been drilled. Argyle 2 & 5 – Scott and Kate Lloyd: The Argyle 2 well, about 1km from the Lloyd's homestead and the Argyle 5 well, about 1.4km from the Lloyd's homestead, were leaking gas for 5 years before QGC decided to rectify the matter after being exposed by the ABC. Lauren and Cody: Leaks identified

- **January, 2011 – Huge Loss of Containment Toowoomba Range – Roma to Brisbane Pipeline**

[http://pipeliner.com.au/news/roma\\_to\\_brisbane\\_pipeline\\_flood\\_damage\\_and\\_response/077836/](http://pipeliner.com.au/news/roma_to_brisbane_pipeline_flood_damage_and_response/077836/)

On 10 January 2011, a violent 'inland tsunami' struck Toowoomba causing landslides and washouts. The RBP, which runs down the Toowoomba escarpment at an acute angle, suffered exposure and damage at several sites. In particular, there was a significant washout of the DN400 pipeline approximately 200 m from the top of the Toowoomba range where the pipeline crosses under a dual railway line. Approximately 20 m further down the slope there was also a loss of containment on the DN250 pipeline caused by an excessive amount of stress placed on the pipeline during a landslide.

- **19 November, 2010 -Toxins found at third site as fracking fears build – Arrow & Metgasco**

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<http://www.smh.com.au/environment/toxins-found-at-third-site-as-fracking-fears-build-20101118-17zfv.html#ixzz1ViDujTwr>

TRACES of toxic chemicals have been found at a "fracking" operation to extract coal seam gas - the third time this year that gas producers have detected contamination at a drill site. Arrow Energy confirmed that benzene, toluene, ethylene and xylene - together known as BTEX - had been found in wells at a gas site east of Mackay, Queensland. In NSW documents obtained from the Department of Industry and Investment show that a coal seam gas drilling site near Lismore, run by the Sydney company, Metgasco, was permitted to use fracking after supplying a generic list of hazardous materials safety guidelines. Emails [between department staff and Metgasco] show that testing for coal seam gas using fracking can go ahead without approval being sought, or required, from the Environment Department.

- **21 October, 2010 - Origin stops coal seam gas drilling after chemicals found in water around 8 wells – Admits contaminating water - Origin**

<http://www.smh.com.au/environment/energy-smart/origin-stops-coal-seam-gas-drilling-after-chemicals-found-in-water-20101020-16ud7.html#ixzz1ViEpErIH>

Farmers near a coal seam gas "fracking" site in Queensland will have their water supplies tested for toxic benzene and other chemicals today after Origin Energy found contaminated water near drilling sites. The discovery of BTEX - a mixture of benzene, toluene, ethylbenzene and xylene - around eight coal seam gas wells near Miles, west of Brisbane, marks the first time a resources company has admitted to contaminating water at a fracking site. Origin detected the chemicals a week ago and told the Queensland government - which is legislating to ban the use of BTEX chemicals during coal seam gas drilling - on Friday. Most landholders in the area have been notified of the contamination. There is no known impact on drinking water in the gas field. Origin has shut down all 17 of its drilling rigs across a 40-kilometre-wide area while an investigation is carried out.

- **September 2010 – APPEA Report: Significant spill of produced water – QGC**

<http://www.appea.com.au/images/stories/Policy - Safety and Health/32 - High Potential Incident Alert - Water Trunk Line Strike.pdf>

During excavation of a new trench along an existing right off way the bucket of an excavator struck and ruptured a buried 315mm water line resulting in a significant spill of produced water. The water trunk line was immediately adjacent to a gas gathering system pipeline. 'As Built' information was not available for the buried pipelines but their approximate location was indicated on alignment drawings and the contractor being aware of the Brownfield nature of the site, had also sought to locate and mark these pipelines prior to excavation via the use of Pot Holing and or Metro Tech devices. The incident occurred when the excavator struck a roping bend in the buried pipeline that had not been properly located. The Company did not ensure the contractor had located all underground services prior to commencing the physical work program. The activity was covered by a Permit to Work but relevant controls were not checked prior to issue of the Permit.

- **September 2010 - Bugged Grader Pipeline Strike & Gas Release – Santos**

<http://www.appea.com.au/images/stories/Policy - Safety and Health/36 - High Potential Incident Alert - Bugged Grader Pipeline Strike Gas Release.pdf>

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A grader operator bogged over a live gas pipeline attempted to use the blade to recover the grader. The blade struck and ruptured the HDPE line, releasing gas to atmosphere.

- **March 2010 – APPEA Report: LNG Loss of Containment incident – Gas release – Woodside**

<http://www.appea.com.au/images/stories/Policy - Safety and Health/41 - High Potential Incident Alert - LNG Loss of Containment Incident.pdf>

During an LNG carrier's routine cool-down operations, the shore terminal loading arm emergency release coupling (ERC) separated close to the vessel cargo manifold. The separation did not close the ERC dry break arrangement, resulting in LNG loss of containment. Cargo operations were immediately stopped with the activation of an emergency shutdown, ship and shore staff mustered, and area secured until gas free. The release size was classified as Major using the RIDDOR system. The officer of the watch on board the LNG carrier suffered LNG cold-burn injuries.

- **February 2010 – APPEA Report: Uncontrolled Gas Release – Arrow**

<http://www.appea.com.au/images/stories/Safety/11 - High Potential Incident Alert - Uncontrolled Gas Release.pdf>

Incident summary - A 1/2" ball valve was attached to the pressure test points to enable diagnostics to be conducted. The nipple on the ball valve failed resulting in the release of methane gas. Personnel advised not to enter the plant in the event of a gas release, due to the potential for explosion.

- **21 September, 2009 - Broken leg from coal seam gas sampling incident involving high pressure**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert043.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert043.pdf)

- **29 August, 2009 - Crushing fatality – pipe racks load shift**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert042.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert042.pdf)

A 24-year-old man was struck and crushed by pipe racks which came off a truck that was being unloaded at a drill site. The rig worker did not survive his injuries.

- **25 June, 2009 - Drill Rig Walkway - Toe amputated when securing walkway**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert041.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert041.pdf)

- **10 Jan, 2004 – Big Stink in gasland**

<http://www.smh.com.au/articles/2004/01/09/1073437472720.html>

Minor volumes of methane from coal seams are being tapped around Camden, with plans to tap into the coal reserves of the Hunter Valley. A small gas field near Narrabri is also being developed. But NSW is yet to find an oil or gas field large enough to reduce its reliance on Moomba in South Australia, which is becoming increasingly unreliable with three incidents over the past two years - and declining reserves, to boot. Exploration of the acreage off the NSW coast begins in earnest this month, with seismic mapping of the most likely section - a huge underground structure called Biggus, which lies

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about 12 kilometres off Terrigal - to start on Monday week, and an exploration well to be drilled 2 kilometres into the earth's crust later this year. The structure is around 30km long and 7km wide, and large enough to hold 1 trillion cubic feet of gas, according to estimates of former holders of the acreage.

- **March 2003 – Fatality on CSG Drill Rig**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert012.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert012.pdf)

A drill rig operator suffered fatal injuries when he was crushed between a length of drill collar and an adjacent “mousehole” during stacking pipe on an unstable foundation. It appears that the ground gave way between the position where the pipe was being stacked and the hole excavated to locate the “mousehole”.

- **21 September 2009 - A crushing incident involving drill collars and selection of lifting elevators**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert044.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert044.pdf)

- **6 September, 2002 – Injury**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert010.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert010.pdf)

A floorman was removing the covers from casing when two stands fell on him resulting in a broken leg and evacuation by the Royal Flying Doctor. Stoppers were not in place and the activity was being carried out in poor light conditions.

- **5 January, 1998 – Drill rig serious leg injury**

[http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety\\_alert002.pdf](http://mines.industry.qld.gov.au/assets/petroleum-pdf/safety_alert002.pdf)

Repairs to a rig at night involved electric welding and the rig was shut down while work was carried out. The electric welder cables were coiled on the deck and draped across an exposed drive shaft. When the clutch was engaged to test the repair, cables which were thought to have been removed were caught up in the drive shaft. The cables wrapped up the leg of an operator standing on the coil and dragged him into the shaft. The young operator suffered serious injuries to his leg.

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## New Zealand

September 20, 2012 – *Fracking in Southland exposed – New Zealand*

<http://www.3news.co.nz/Fracking-in-Southland-exposed/tabid/423/articleID/259325/Default.aspx>

But over the 21 months it was active, more than 11 million litres of waste water - including fracking chemicals and potentially carcinogenic coal residue - was dumped in the stream. “The stream was looked at with regard to its ability to assimilate such waste water,” says Environment Southland consents manager John Engel. “The nature of it was such that it was relatively clean water but it did contain materials from the coal seam that were not normal for that stream.” The permit - granted by Environment Southland - to dump the waste was non-notified, meaning only the bare minimum of people knew.

September 20, 2012 - *Taranaki gas field **contaminates soil** – New Zealand*

<http://www.3news.co.nz/Taranaki-gas-field-contaminates-soil/tabid/1160/articleID/269871/Default.aspx>

Hundreds, potentially thousands of cubic metres of soil have been contaminated by toxic chemicals at a gas field in Taranaki. Six well sites at the Kapuni gas field south of New Plymouth used unlined pits in the earth to store and burn off chemicals from operations, including hydraulic fracturing. And the company was sometimes doing so without the required council consent. Kapuni is the oldest gas field in the country. For decades the normal practice was to use unlined pits to store and burn off chemicals and sludge from the wells. Six well sites are contaminated. Soil from one had to be transported recently to a waste treatment plant in Wellington to be stabilised

## Accidents and Safety – Critical Reports

<http://www.appea.com.au/oil-a-gas-in-australia/safety-and-health.html>

<http://mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm> (NB: Gas industry incident reports appear to be unavailable)

## Other Information

<http://www.jeremybuckingham.org/?p=967>

“The depth of the Wyoming gas wells blamed for the contamination is very similar to the depth that many Australian coal seam gas will operate, and much shallower than typical North American East Coast shale gas wells. This is a direct warning for the Australian situation.

“The NSW Government should make public a list of all coal seam gas wells in NSW that have been fracked and their location, and initiate an investigation to see if there has been any contamination of adjoining aquifers.”

“We heard evidence in the coal seam gas inquiry yesterday that **AGL had fracked 117 wells at its Camden Gas Project but also heard that no groundwater monitoring has been conducted by the company of surrounding ground water,**” he said.

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[https://www.youtube.com/watch?feature=player\\_embedded&v=NQ6\\_Uvs\\_vxE](https://www.youtube.com/watch?feature=player_embedded&v=NQ6_Uvs_vxE)

*This paper mentions some Australian CSG incidents (page 37 & 38):*

*“Drilling Down - Coal Seam Gas - A background paper”*

Queensland: Jan - June 2011 (6 months) there were:

23 spills - 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.

4 Discharge - These incidents involved the controlled or uncontrolled release of coal seam gas water or permeate to the environment.

3 discharges - Overflow (flooding) During the January 2011 floods, several CSG water storage dams breached the dam banks and discharged directly into the environment.

3 Exceedance release limits - Discharge limits are set on environmental authorities and these limits were exceeded on several occasions.

4 Other (vegetation clearing, BTEX etc.) - There was one incident relating to BTEX contamination and one incident of excessive vegetation clearing.

<http://www.cityofsydney.nsw.gov.au/environment/EnergyAndEmissions/documents/CoSCSMReportfinalv4pdf.pdf>

<http://www.cityofsydney.nsw.gov.au/environment/EnergyAndEmissions/documents/CoSCSMReportfinalv4pdf.p>

## **Version Control**

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