

REPORT ON PROCEEDINGS BEFORE

PORTFOLIO COMMITTEE NO. 4 – INDUSTRY

**INQUIRY INTO THE IMPLEMENTATION OF THE RECOMMENDATIONS
CONTAINED IN THE NSW CHIEF SCIENTIST'S INDEPENDENT REVIEW OF COAL
SEAM GAS ACTIVITIES IN NEW SOUTH WALES**

UNCORRECTED

At Macquarie Room, Parliament House, Sydney, on Tuesday 3 December 2019

The Committee met at 9:30

PRESENT

The Hon. Mark Banasiak (Chair)

The Hon. Lou Amato

Mr Justin Field

The Hon. Trevor Khan

The Hon. Peter Primrose

The Hon. Adam Searle

The Hon. Natalie Ward

The CHAIR: Welcome to the hearing of Portfolio Committee No. 4 for the inquiry into the implementation of the recommendations contained in the New South Wales Chief Scientist's Independent Review of Coal Seam Gas Activities in New South Wales. The inquiry is examining the status and effectiveness of the implementation of those recommendations. Before I commence I acknowledge the Gadigal people, who are the traditional custodians of this land. I also pay respect to the Elders, past and present, of the Eora nation and extend that respect to other Aboriginals present.

Today we will hear from a number of representatives from the Department of Planning, Industry and Environment and the NSW Environment Protection Authority. Before we commence I will make some brief comments about the procedure for today's hearing. Today's hearing is open to the public and is being broadcast live via the Parliament's website. A transcript of today's hearing will be placed on the Committee's website when it becomes available. In accordance with broadcasting guidelines, while members of the media may film or record committee members and witnesses, people in the public gallery should not be the primary focus of any filming or photography.

I also remind media representatives that they must take responsibility for what they publish about the Committee's proceedings. It is important to remember that Parliamentary privilege does not apply to what witnesses may say outside of their evidence at the hearing, so I urge witnesses to be careful about any comments they may make to the media or others after they complete their evidence as such comments would not be protected by Parliamentary privilege if another person decided to take action for defamation. The guidelines for the broadcast of proceedings are available from the secretariat.

There may be some questions that a witness could only answer if they had more time or with certain documents to hand. In these circumstances witnesses are advised that they can take a question on notice. However, please note that, given the short time frame between today's hearing and the tabling date, the Committee has resolved that answers to questions taken on notice must be returned within seven days. Witnesses are advised that any messages should be delivered to committee members through the committee staff and, to aid the audibility of this hearing, may I remind both committee members and witnesses to speak into the microphones. The room is fitted with induction loops compatible with hearing aid systems that have telecoil receivers. In addition, several seats have been reserved near the loudspeakers for persons in the public gallery who have hearing difficulties. Finally, could everyone please turn their mobile phones to silent for the duration of the hearing.

JAMES ANGUS McTAVISH, NSW Regional Town Water Supply Coordinator, Department of Planning, Industry and Environment, sworn and examined

JAMES MICHAEL BENTLEY, Deputy Secretary, Water, Department of Planning, Industry and Environment, sworn and examined

MITCHELL ISAACS, Director, Office of the Deputy Secretary and Strategic Relations, Department of Planning, Industry and Environment, affirmed and examined

TRACEY MACKEY, Chief Executive Officer, NSW Environment Protection Authority, affirmed and examined

KEVIN RUMING, Director, Strategic Resources Assessment and Advice, Geological Survey of New South Wales, Resources and Geoscience, Department of Planning, Industry and Environment, affirmed and examined

MICHAEL WRIGHT, Deputy Secretary, Resources and Geoscience, Department of Planning, Industry and Environment, affirmed and examined

The CHAIR: I will now invite all of the witnesses to make a short statement.

Mr WRIGHT: Thank you. The Government published a response accepting the Chief Scientist and Engineer's recommendations as part of the NSW Gas Plan. The implementation of this Government response and the actions in the NSW Gas Plan have resulted in more robust and comprehensive regulatory controls and closer coordination across government on gas regulation matters. The Government's submission to this inquiry outlined the status of its response to the Chief Scientist and Engineer's recommendations. In total, the Government responses to 14 of the 16 recommendations are complete, or are complete and ongoing due to their inherently ongoing nature. Good progress is being made on the pending Government responses to recommendation 4 and recommendation 9.

Since 2014 the State's gas exploration and production also changed significantly. The Government's petroleum exploration licence buy-back scheme reduced the area of the State covered by petroleum titles from approximately 60 per cent to around 7 per cent. AGL also announced that the Camden gas project would cease production in 2023 and that it would not proceed with the proposed Gloucester gas project. The Narrabri gas project also remains under Government assessment. Once finalised, the Independent Planning Commission will determine that application. While the Government has started investigating the potential release of areas for gas exploration in the State's Far West region, it has not issued any new titles since releasing the Gas Plan. If the Government does release new gas exploration areas and grant new titles in the future, it will take some time for potential production projects to emerge and obtain development approval.

This changed industry landscape and the Government's reforms have significantly altered and reduced the industry size and risk profile, which may have not been the expected outcome in 2014 at the time of the Chief Scientist's report being released. The reforms today ensure that New South Wales is well-positioned to develop a safe and sustainable domestic gas industry. The Government also recognises that in recent years other Australian jurisdictions, primarily in the Northern Territory and Queensland, have also embarked on significant reviews of their regulatory frameworks for gas, and the Department of Planning, Industry and Environment continues to actively monitor developments in these jurisdictions to ensure that our regime remains fit for purpose, particularly should the gas industry grow beyond its current relatively small size in coming years.

Mr JUSTIN FIELD: Thank you all for being here today. Potentially, Mr Wright, this question is for you. Who prepared the Government's submission to the inquiry?

Mr WRIGHT: It was prepared by the Department of Planning, Industry and Environment.

Mr JUSTIN FIELD: Did the Government—

The Hon. ADAM SEARLE: Just on that, which part? It is a pretty big agency.

Mr WRIGHT: It was primarily the division of Resources and Geoscience but we did have input from other parts of the department.

Mr JUSTIN FIELD: Did the Government coordinate its submission with Santos or Australian Petroleum Production and Exploration Association [APPEA]?

Mr WRIGHT: Not at all.

Mr JUSTIN FIELD: Well, it is pretty clear reading the submissions that there is direct line for line paragraphs and sentences that are mirrored in the Santos, APPEA and Government submissions, particularly around the implementation of particular recommendations. So there was no cross-ventilation—

Mr WRIGHT: There has been no discussion with anybody outside of the Department of Planning, Industry and Environment in the preparation of that submission.

Mr JUSTIN FIELD: How would you explain those similarities and direct quote, line for line, paragraph by paragraph?

Mr WRIGHT: I am not aware of those similarities.

Mr JUSTIN FIELD: Recommendation 2 of the Chief Scientist's recommendations is that the Government ensure clear and open communication on coal seam gas [CSG] matters is maintained at all times. How would Santos and APPEA effectively mirror the Government's submission with regards to the implementation of different—

Mr WRIGHT: Sorry, I have no knowledge of that matter.

Mr JUSTIN FIELD: We could—

Mr WRIGHT: I am sorry, I cannot answer that question because—

Mr JUSTIN FIELD: I have not finished the question, to be honest.

Mr WRIGHT: Okay. Continue.

Mr JUSTIN FIELD: It seems strange to me that Santos and APPEA mirror the Government's submission around key recommendation implementations, yet Lock the Gate Alliance, North West Protection Advocacy and Doctors for the Environment Australia have a very different view around the implementation or express concern about being unsure about the status of implementation.

The Hon. TREVOR KHAN: Is this a question or are you just—

Mr JUSTIN FIELD: It is.

The Hon. LOU AMATO: It sounds like interrogation.

The Hon. TREVOR KHAN: Sounds like a sneeze.

Mr JUSTIN FIELD: The very first recommendation is around open lines of communication. The industry seems to be completely aware of where the Government is at on all the recommendations—it mirrors. All the other stakeholder groups seem to be unclear about the status of implementation. Can you explain why that might be?

Mr WRIGHT: All I can say is that the submission was prepared solely by the Department of Planning, Industry and Environment. If other bodies outside of government have particular views they may well have read the records of budget estimates hearings where these matters were also discussed. But I cannot speak on behalf of Santos or APPEA. All I can say, and I will reaffirm this, honestly, is that that submission was prepared solely by the Department of Planning, Industry and Environment.

Mr JUSTIN FIELD: I hope to step through these recommendations this morning, but recommendation 2, which is around open communication on CSG matters, the Lock the Gate submission in particular is quite critical of the implementation around being able to get access—

The Hon. NATALIE WARD: Surprise.

Mr JUSTIN FIELD: It is not surprising, I guess, because they spend so much time watching how this industry operates on the ground so they are very well informed about the rules and regulations and what is going on. They have expressed concern that attempts to obtain information under the Government Information (Public Access) [GIPA] Act have been unsuccessful, particularly requests to the Environment Protection Agency [EPA], and that some of their requests have been referred to Santos as it relates to their operations. They have indicated that they have:

... tried to obtain information from the EPA about Santos' Petroleum Operations Plan for PAL2 and annual environmental management reports, a list of active wells that are producing gas on PAL2 and PEL238 and which are venting or flaring gas—

That is a concern at the moment, given the bushfire threat. How does the Government consider that it is ensuring open and clear communication if community groups with a very clear interest are not able to obtain basic information about the operations of Santos?

Mr WRIGHT: I am not in a position to respond to the status of GIPA requests.

Mr JUSTIN FIELD: Potentially, Ms Mackey, you might be able to respond. I think some of these have gone to the EPA.

Ms MACKEY: Yes. There have been a number of GIPA requests from a range of parties to the EPA around our regulation of the gas sector. Some of those GIPA requests have resulted in a release in part, some have resulted in access being refused and some have resulted in full access to information. So we are absolutely considering those GIPA requests on their merits, consistent with the requirements of government around, where possible, releasing information and, where there are particular considerations of why we would not release the information, clearly stating those to the applicant around those particular GIPA applications.

Mr JUSTIN FIELD: Have any requests for information been referred to Santos?

Ms MACKEY: My understanding is there was a particular one that asked for details around the operations of that provider and we suggested that that information be sought from the operator. It is not information that we would hold.

Mr JUSTIN FIELD: Operation plans and annual environment management reports provided to the Government by Santos?

Ms MACKEY: I would have to take that on notice.

Answer 1: I am advised by the EPA:

No applicants who have formally requested information under the *Government Information (Public Access) Act 2009* have been referred to Santos to obtain the information requested.

However, section 54 of the *Government Information (Public Access) Act 2009* requires the EPA to consult with third parties to obtain their views before releasing their information where it is reasonably practicable to do so, especially if it appears they may reasonably be expected to have concerns about the disclosure of their business, commercial or financial information, the information concerns research that has been, is being, or is intended to be, carried out by or on behalf of them, or they may reasonably be expected to have concerns about the disclosure of the information and those concerns may reasonably be expected to be relevant to the question of whether there is a public interest consideration against disclosure of the information.

Therefore, where requests for information have encompassed Santos' information, Santos have been consulted in order to obtain their views about releasing information.

Any third-party objections are taken into account when making a decision whether or not to release information. Similarly, factors provided by access applicants are also taken into account. Review rights are available to third parties if the EPA decides to release information contrary to their objections. Applicants also have review rights.

The EPA has advised individuals and organisations informally requesting specific industry operational information that it is appropriate that requests for such information are directed to the owner(s) of the information, including Santos, in the first instance.

Mr JUSTIN FIELD: If they were I assume they would be available if a GIPA request was put in.

Ms MACKEY: I cannot answer on the basis of an application we do not have before us.

Mr JUSTIN FIELD: Is there any information that you hold that you refuse to provide to stakeholders on the basis of commercial-in-confidence?

Ms MACKEY: There are a range of clauses in the GIPA Act which we are required to consider. Some of those relate to seeking third party permissions. They go to a range of consideration. So unless there is a particular GIPA application that you want me to take you through, they are based on the individual circumstances

Mr JUSTIN FIELD: Thank you. I might just skip down to recommendation 5. This specifically relates to the strategic release framework. Obviously this was a proposal from the gas plan to be considered with future exploration licences, so that it has not been applied to existing exploration licences and therefore the economic, environmental and social factors that are supposed to be considered under the strategic release framework have not been fully assessed for those existing licences. Just to be clear, do you accept that the strategic release framework and the preliminary consideration of environmental and social issues does not allow for any of those areas with a current licence to be ruled off limits to CSG?

Mr WRIGHT: The strategic release framework was put in place pursuant to the Chief Scientist's recommendations as part of the NSW Gas Plan. As I indicated in my opening remarks, I think 60 per cent of the State was covered by petroleum exploration licences [PELs] in 2011, when there was a change of government. That figure is now down to about 6 per cent of the State. So there are a range of existing petroleum exploration licences which continue to have effect in New South Wales and they obviously have not been picked up by that strategic release framework process, which is forward looking rather than retrospective.

Mr JUSTIN FIELD: Six per cent of the State sounds like a small amount, but when you live in the north-west of the State it is a very significant chunk of their region. How can the Government claim to have implemented this recommendation—which was about ensuring critical areas, particularly of agriculture, were not going to be impacted by CSG—when none of those areas currently covered by licences, including many that have expired, will never be subjected to the strategic release framework?

Mr WRIGHT: All I would say is—and this is primarily a matter for the Minister for Planning and the Planning and Assessment division within the department—that, should any of those petroleum exploration licences proceed to development application stage, as is the case with some of the Santos Narrabri PELs, then those matters will be considered through the Environmental Planning and Assessment Act.

The Hon. ADAM SEARLE: Sure. But just on that, when the Chief Scientist made her report I think both major sides of politics said they endorsed the Chief Scientist's recommendations. I guess there was the presumption that the implementation of those recommendations would be done in advance of anything further happening with the gas industry. That was an unstated assumption. So when the PEL buyback was engaged in, why were those areas that were the subject of exploration licences also not bought back at the time? What was the policy rationale for that?

Mr WRIGHT: I was not with the department at that time so I have to take that question on notice.

The Hon. ADAM SEARLE: If you could, that would be useful.

Answer 2:

As part of the NSW Gas Plan, the government established a one-off, voluntary buy-back of petroleum exploration licences (PELs). The scheme gave all existing titleholders an opportunity to surrender their PELs in exchange for limited compensation. Remaining titles are subject to the reforms introduced as part of the NSW Gas Plan, including the government's 'use it or lose it' policy.

Cancelling all titles via legislation on an involuntary basis would have created severe sovereign and legal risks for the state.

Mr JUSTIN FIELD: Given that a number of those licences have expired—I cannot recall exactly how many; I know that the Deputy Premier of the State certainly had a view that some of those should be torn up—why have those that have expired not been extinguished or cancelled so that any future consideration of an exploration licence in those areas could then be subjected to the strategic release framework? It seems like they have a degree of protection whilst they are sitting in that status of expired but not yet cancelled.

Mr WRIGHT: Some of those PELs are still active. Minister Harwin when he was the Minister for resources stated in Parliament that a determination on the applications for renewal of those petroleum exploration licences would not be made until such a time as there was a determination on Santos' Narrabri gas project proposal. So that remains the Government policy position on the treatment of those applications for PEL renewals from Santos and its subsidiaries.

Mr JUSTIN FIELD: Are they all owned by Santos; or does Santos at least have some degree of interest in those licences?

Mr WRIGHT: Some are owned directly by Santos and others are owned by subsidiaries of Santos. I am happy to provide the Committee with the details of the ownerships of those PELs.

Answer 3:

The titleholders for each petroleum title are as follows:

- Petroleum Production Lease (PPL) 1: AGL Upstream Investments Pty Limited
- PPL 2: AGL Upstream Investments Pty Limited
- PPL 3: EnergyAustralia Narrabri Gas Pty Ltd, Santos NSW (Eastern) Pty Ltd, Santos NSW (Hillgrove) Pty Ltd and Santos QNT Pty Ltd
- PPL 4: AGL Upstream Investments Pty Limited
- PPL 5: AGL Upstream Investments Pty Limited
- PPL 6: AGL Upstream Investments Pty Limited
- Petroleum Assessment Lease (PAL) 1: EnergyAustralia Narrabri Gas Pty Ltd and Santos NSW Pty Ltd
- Petroleum Exploration Licence (PEL) 1: Australian Coalbed Methane Pty Limited and Santos QNT Pty Ltd
- PEL 6: Comet Ridge Gunnedah Pty Ltd and Santos NSW (Betel) Pty Ltd
- PEL 12: Australian Coalbed Methane Pty Limited and Santos QNT Pty Ltd
- PEL 238: EnergyAustralia Narrabri Gas Pty Ltd and Santos NSW Pty Ltd
- PEL 285: AGL Upstream Investments Pty Limited
- PEL 427: Comet Ridge Gunnedah Pty Ltd and Comet Ridge Ltd
- PEL 428: Comet Ridge Gunnedah Pty Ltd, Comet Ridge Ltd and Davidson Prospecting Pty Ltd
- PEL 433: Santos NSW Pty Ltd and Santos QNT Pty Ltd, EnergyAustralia Narrabri Gas Pty Ltd, Santos NSW Pty Ltd and Santos QNT Pty Ltd
- PEL 434: EnergyAustralia Narrabri Gas Pty Ltd, Santos NSW Pty Ltd and Santos QNT Pty Ltd
- PEL 450: Santos QNT Pty Ltd
- PEL 452: Santos QNT Pty Ltd
- PEL 456: Hunter Gas Pty Ltd and Santos QNT Pty Ltd
- PEL 462: Santos QNT Pty Ltd

Mr JUSTIN FIELD: The fact that they are expired reflects that they do not have an active exploration plan in place—as I understand it—and that they are not doing work on those exploration sites. Is there any requirement for them to meet any exploration activity requirements while they continue to hold these expired PEL licences?

Mr WRIGHT: The requirements for exploring under the PEL apply as a guide. All I would say is that given Minister Harwin's statement about the Government's position on the status of those PELs, that criteria around active exploration would be considered at the time the department and Government made a determination on those renewables.

Mr JUSTIN FIELD: I might move on recommendation 6.

The Hon. ADAM SEARLE: Before you do, I might take you back to recommendation 4, which states that the full cost of regulating and supporting the industry should be paid for by industry. What is the current financial cost of regulating and supporting the CSG industry in New South Wales?

Ms MACKEY: In terms of the current cost, I would have to take that on notice.

Answer 4: I am advised:

The EPA's gas regulation budget for 2019/20 is \$3.75 million.

The Resources Regulator expects that its costs associated with regulating the NSW upstream petroleum industry in FY19/20 will be \$535,000 including labour, on-costs and operational costs. These functions are fully funded from the mine safety levy.

The Hon. ADAM SEARLE: Could you hazard a guess?

Ms MACKEY: I have only been in this role for a relatively short time so I would not want to hazard a guess.

The Hon. ADAM SEARLE: Sure. But I am sure there are many people in your organisation who have had a longer carriage of this. Are you telling us that you have come to this inquiry, which is about the implementation of the Chief Scientist's recommendations, and you cannot tell us what the current cost to the New South Wales Government is of supporting and regulating the industry?

Ms MACKEY: We certainly have figures that we could provide from the previous financial year.

The Hon. ADAM SEARLE: We are here until 12.30 p.m. I would like to see if you can get a response before then.

Ms MACKEY: I can certainly try.

The Hon. TREVOR KHAN: She is entitled to take it on notice.

Answer 5: I am advised:

The EPA's gas regulation budget for 2019/20 is \$3.75 million.

The Resources Regulator expects that its costs associated with regulating the NSW upstream petroleum industry in FY19/20 will be \$535,000 including labour, on-costs and operational costs. These functions are fully funded from the mine safety levy.

The Hon. ADAM SEARLE: She is, but I am entitled to expose the fact that the Government witnesses have come here—

The Hon. TREVOR KHAN: She is entitled to take it on notice.

The Hon. ADAM SEARLE: It is a matter of record that the Government witnesses have chosen to come here—

The Hon. TREVOR KHAN: She is entitled to take it on notice. We have passed resolutions on that. She is taking it on notice.

The Hon. ADAM SEARLE: She can do that. But I can request that we get an answer by 12.30 p.m. If she does not, she does not.

The Hon. NATALIE WARD: I think it also states that it is part of the budget process.

The Hon. ADAM SEARLE: It may well be, but I did not see anything in the budgets of this year, last year or any other year since 2014 that—

The Hon. NATALIE WARD: There is a budget estimates process for that. That question may well have been asked.

The Hon. ADAM SEARLE: It was and no-one from the Government could answer that question at budget estimates. And here we are in this inquiry, which is about the implementation and status of these recommendations, and we have established that the witness does not know the answer. Mr Wright, do we know which bit of recommendation 4, which the Government's submission says is in progress, has been progressed?

Mr WRIGHT: Speaking in terms of the work undertaken by the Division of Resources and Geoscience, and also by the Resources Regulator more generally in the resources space, we are substantially funded by the mining and petroleum administrative levy, which meets our costs, in addition to some Commonwealth funding. In terms of the question around the regulation of gas and the cost of that, that is a matter I would refer to the EPA on.

The Hon. ADAM SEARLE: But what about the reporting in the budget? Can you tell us why there has been no reporting in the budget about these matters, despite the Government saying from 2015 onwards that it has embraced these recommendations?

Mr WRIGHT: I am unable to answer that question. I do not know the answer to that question. We can take it on notice.

Answer 6: The Department is considering the best way to report on this matter, and who would do the reporting, as part of its work to implement the government's response to Recommendation 4, which is ongoing and yet to be finalised.

The content included in the annual budget papers is a matter for the Treasurer and the relevant Minister. The Department notes that an annual statement may not fit the Outcome Budgeting approach now used in the budget papers.

The Hon. ADAM SEARLE: If you could that would be useful.

Mr JUSTIN FIELD: Just to be clear, it is a specific recommendation from the Chief Scientist, which the Government picked up, to provide an annual budget statement on the implementation of the recommendations. Do you acknowledge that that has not been happening?

Mr WRIGHT: I am not aware of that having occurred. That is correct.

Mr JUSTIN FIELD: Do we know who would be responsible for preparing that annual budget statement?

Mr WRIGHT: We would have to take that on notice.

Refer to Answer 6 above.

The Hon. ADAM SEARLE: Out of interest, if there any person or body in the Department of Primary Industries [DPI] who is charged with coordinating the implementation of the Chief Scientist's recommendations?

Mr WRIGHT: The Division of Resources and Geoscience coordinates the implementation of the NSW Gas Plan, which is the Government's response to the Chief Scientist's report.

The Hon. ADAM SEARLE: During budget estimates we found that your part of the department could not answer all of the questions; some fell into the Environment, Energy and Science area.

Mr WRIGHT: That is correct.

The Hon. ADAM SEARLE: I note that there is no-one here from Environment, Energy and Science. Is there a reason for that? I know the EPA is here, but Ms Levy, who took the led on the issue at budget estimates, is not here. Is there a reason for that?

Ms MACKEY: Ms Levy is currently overseas.

The Hon. ADAM SEARLE: Is there no-one standing in for her?

Ms MACKEY: Not at this inquiry.

The Hon. ADAM SEARLE: Okay. Is Santos currently paying royalties on gas that it is using commercially from the exploration process?

Mr WRIGHT: Santos is subject to a royalty regime when it is producing gas beneficially from its exploration wells. In a nutshell, there is a royalty deduction scheme in place for beneficial gas use. In the case of Santos' production of beneficial gas from its exploration wells, the cost it incurs in actually bringing that gas to the surface is greater than the value of the gas it produces. Therefore, whilst royalties are payable, no royalties are currently being paid.

Mr JUSTIN FIELD: Moving on to recommendation 6, do you agree that currently there is no single Act in New South Wales for all onshore subsurface resources, excluding oil?

Mr WRIGHT: That is correct.

Mr JUSTIN FIELD: Has the Government decided to abandon that particular recommendation of the Chief Scientist?

Mr WRIGHT: That recommendation was looked at by the Government and because of the complexities of the statutes, the Government, rather than seeking to put a single statute in place, looked to harmonise the provisions across the both the Mining Act and the Petroleum (Onshore) Act. Back in 2015 a series of amendments were made to ensure greater harmony across the provisions of those two onshore resources statutes.

Mr JUSTIN FIELD: I understand that. That is made clear in the submission. But, just to be clear, the

Mr WRIGHT: Not at this point in time.

The Hon. ADAM SEARLE: When is the review of those two statutes due?

Mr WRIGHT: In February of this year the Government released its NSW Minerals Strategy, which committed to reviewing the Mining Act. We are currently progressing with a review of that Act. We are not currently actively progressing a review of the Petroleum (Onshore) Act.

The Hon. ADAM SEARLE: When is the statutory review of that legislation due?

Mr WRIGHT: I would have to take that on notice.

Answer 7:
The Petroleum (Onshore) Act 1991 does not have a legislated statutory review date.

Mr JUSTIN FIELD: Ms Mackey, has the memorandum of understanding on the regulation of gas activities in New South Wales between the EPA and the former Department of Industry, Skills and Regional Development and the former Department of Planning been updated since it was established in 2016?

Ms MACKEY: I am not aware that it has been updated, but I will take the question on notice and come back to you during this timeframe.

Mr JUSTIN FIELD: Is it still in force?

Ms MACKEY: I understand that it is still in place.

Mr JUSTIN FIELD: How does it operate at the moment?

Ms MACKEY: I would have to get you the detail on how that operates.

Answer 8: I am advised by the EPA:

The 2016 MOU defines the responsibilities of the key agencies involved in the regulation of gas activities in NSW. The MOU also establishes the necessary systems and processes for agencies to perform their roles effectively and seamlessly. In addition, the MOU includes provisions that help the community and industry understand and navigate the government's regulatory framework.

While the EPA is the lead regulator for gas, under the MOU all agencies have agreed to a whole of government approach to regulate gas activities by:

- Sharing information, knowledge and experience
- Maintaining relationships to ensure effective and timely communication
- Considering other agencies advice in decision-making
- Minimising duplication, overlap and inconsistency where possible
- Collaboratively engaging with the community to ensure clear and consistent communication
- Notifying relevant agencies in the event of any incident, policy amendments, planning approval, or other material that will have an impact on the regulation or operation of gas activities.

The MOU is a key instrument for government and is used by the agencies responsible for oversight of the gas sector.

Mr JUSTIN FIELD: Who is represented in the interagency gas working group?

Ms MACKEY: The EPA chairs the interagency gas working group. There are representatives from water, the organisations represented by my colleagues sitting at the table with me now and a range of others in the broader DPI cluster, as well as central agencies. Those members are able to attend depending on what the issues are. The group meets every six weeks.

Mr JUSTIN FIELD: When was the last time it met?

Ms MACKEY: It is meeting again tomorrow.

Mr JUSTIN FIELD: What is on the agenda?

Ms MACKEY: I do not have an agenda for tomorrow. I am not the chair of that group. The chair of that group is our director of gas, and he is currently on paternity leave, having just had his first child, so that will be chaired by the relieving manager.

Mr JUSTIN FIELD: I have a series of questions that relate to the EPA's work in particular. How many full-time equivalent staff are there within the dedicated branch of the EPA that is responsible for regulating coal seam gas activities in New South Wales?

Ms MACKEY: I will take that on notice.

Mr JUSTIN FIELD: Can you provide an organisational chart of how that branch is structured and the key skill sets within that branch?

Ms MACKEY: I can certainly provide you with information about the key skill sets. We are currently going through a process of realigning the organisation. We could provide you with the organisation chart once it has been to the board and those arrangements are—

Answer 9: I am advised by the EPA:

23.2 FTE, including:

- Hydrogeologists
- Petroleum engineers
- Spatial data analysts
- Policy officers
- Scientific officer
- Operations officers
- Project officers.

Mr JUSTIN FIELD: The EPA generally, or that particular branch?

Ms MACKEY: The EPA generally.

Mr JUSTIN FIELD: This year's annual report came out just a few days ago, or just last week. There is a series of information in there. There were 252 inspections of active gas sites last year that are referred to in the report. Where each of these inspections conducted by EPA staff?

Ms MACKEY: Yes. They are inspections undertaken by EPA.

Mr JUSTIN FIELD: They visited the sites to conduct the inspections?

Ms MACKEY: Where they are inspections, they visit the site.

Mr JUSTIN FIELD: The annual report also mentions new gas leak monitoring equipment obtained by the EPA and several leaks were detected. Can you provide more information on the leaks?

Ms MACKEY: We could take it on notice in terms of the individual circumstances of those.

Answer 10: I am advised by the EPA:

There was a total of nine reportable leaks detected during EPA leak detection and repair inspections in 2018-2019. All leaks were detected at well surface infrastructure; eight at the Narrabri Gas Project and one at the Camden Gas Project.

Of the eight leaks identified at Narrabri, six were identified as occurring as a function of the L2 controller component operation, which is a component of the well surface infrastructure. The EPA is currently working to determine whether this release of gas is an acceptable practice for this component of the well surface infrastructure, or if these gas releases should be classified as leaks and further action taken.

The two remaining identified leaks at Narrabri were repaired within 24 hours by Santos. The leak identified at Camden was also repaired within 24 hours.

Mr JUSTIN FIELD: The report also mentions the reaching of a milestone, I guess: The rehabilitation of 100 per cent of gas sites in the New South Wales Government buyback scheme, which was a year ahead of target. In the report it refers to gas sites. Does the site refer to a licence, or is that each well in a licenced area?

Ms MACKEY: The site includes the licenced area and any wells or any activity that has taken place on that site.

Mr JUSTIN FIELD: If you do not have it can you provide on notice how many sites that refers to in particular?

Ms MACKEY: Yes, we can take that on notice.

Mr JUSTIN FIELD: If you could also include how many wells in total were in those areas that have now been deemed to be 100 per cent rehabilitated now.

Ms MACKEY: Yes.

Answer 11: I am advised by the EPA:

The gas buy-back scheme was for 20 Petroleum Exploration Licences which encompassed 140 wells. The rehabilitation of all wells has been endorsed by the EPA since it became lead regulator.

Mr JUSTIN FIELD: Can you tell us if the EPA staff inspected each of those wells?

Ms MACKEY: It was part of the rehabilitation program, the inspection, which is quite thorough. Any activity that has occurred on those sites will have been looked at.

Mr JUSTIN FIELD: If you could confirm that an EPA staff person actually visited the sites—

Ms MACKEY: All inspections are done by EPA. They are not outsourced; they are done by EPA staff.

Mr JUSTIN FIELD: The language in the annual report is a little bit loose in that it suggests it was done in cooperation with other agencies. That is why I am asking the very specific question.

Ms MACKEY: I can possibly give you some clarity on that. Because the EPA took over responsibility from this once it took on the role of lead regulator in July 2015, there had already been rehab of nine of the titles, which was done by my colleagues in the Division of Resources and Energy at that point in time. They are the others who undertook the rehab of those initial sites before the EPA took over responsibility.

Mr JUSTIN FIELD: That is useful, I understand. Were any groundwater monitoring activities conducted as part of this rehabilitation process?

Ms MACKEY: I will take that on notice.

Mr JUSTIN FIELD: Do landholders get asked about any groundwater impacts that they might have experienced in determining whether or not those sites could be deemed rehabilitated and finalised?

Ms MACKEY: Given the number of sites I think it is best if we come back to you with the detail.

Mr JUSTIN FIELD: Were any remediation orders issued to companies in order to complete this rehabilitation process?

Ms MACKEY: There have been a range of regulatory responses in regard to both the rehab and the broader regulation of the gas sector. I can get you a breakdown. We would look at leak and detection, repair, we would look at the general inspection and we would look at particular incidents. We can go through and give you some information on that.

Answer 12: I am advised by the EPA that:

Groundwater inspections are not a component of the rehabilitation inspections conducted by the EPA.

The EPA has not issued any remediation orders to title holders for rehabilitation activities.

The EPA has carried out a total of 26 regulatory actions on petroleum sites across NSW since 1 July 2015. This includes:

- 1 Official Caution
- 1 Penalty Notice
- 3 Licence Variations
- 2 Licence Surrenders
- 2 Show cause letters
- 12 Notices to provide information / records
- 3 Variations to Notices to Provide information and records
- 1 Notice to nominate a corporate representative
- 1 Power to require answers
- 1 Prosecution

Mr JUSTIN FIELD: Were there any costs recovered from gas companies related to the rehabilitation project? It is just mentioned as a very specific and separate process in the annual report, so I assumed it was a separate project.

Ms MACKEY: It is certainly undertaken by our gas team, which has a range of functions. The reason we have profiled it in the annual report is because it is complete early and it is very good for the community to have completed that in a timely manner in terms of the rehab of that land. That is why it was highlighted in the annual report. It is not that we have a separate team within gas who are just doing rehab. It is part of the day-to-day responsibilities of that team.

Mr JUSTIN FIELD: Were any costs recovered from gas companies related to that rehabilitation process?

Ms MACKEY: I will take that on notice. Not that I am aware of.

Answer 13: I am advised by the EPA:

No.

Mr JUSTIN FIELD: The other specific project mentioned in the annual report was the finalisation of the AGL Gloucester gas project. Were any costs of regulating that closure process recovered from AGL?

Ms MACKEY: My understanding is not for the EPA. I cannot speak on behalf of the other regulators.

Mr JUSTIN FIELD: Is there any plan to do ongoing monitoring of the wells decommissioned at the AGL Gloucester site?

Ms MACKEY: We do ongoing monitoring at decommissioned sites for a period of time depending on what has happened at the site to the point at which it is rehabilitated.

Mr JUSTIN FIELD: Is there ongoing monitoring for Gloucester?

Ms MACKEY: I will take it on notice and get you some detail around the decommissioning of that site and any rehabilitation works that are underway.

Mr JUSTIN FIELD: Once it is deemed finalised, what happens if there is a gas leak, water

contamination issues or issues with groundwater connectivity at one of those sites?

Ms MACKEY: I will take that on notice.

Mr JUSTIN FIELD: If you could also give us a sense of who carries the liability, whether it is the landholder where the well is located, the company or the Government. That would be useful.

Answer 14: I am advised by the EPA:

Decommissioning of all coal seam gas wells at the Gloucester Coal Seam Gas Project was completed by November 2016.

Rehabilitation of the Gloucester Coal Seam Gas Project was completed in July 2018. The EPA confirmed that the rehabilitation of the Gloucester site was complete and complied with the relevant statutory instrument conditions of Petroleum Exploration Licence 285.

There is no on-going monitoring at Gloucester.

Following project closure and surrender of a petroleum title, the gas industry operator continues to remain liable for environmental risks.

Where the gas operator cannot be held responsible or is unable to pay for clean-up costs, liabilities for long-term environmental risks will fall to the NSW Government. This may occur where, for example:

- the NSW Government no longer holds a security deposit (or clean-up costs exceed the amount of security deposit held) or
- the gas operator is no longer operating, insolvent or has quarantined its assets.

Property owners are not liable for environmental risks associated with the gas industry operator's activities under or in connection with a petroleum title.

The EPA's annual report states that a study on annual and remote sensing and a cost-benefit analysis demonstrated that 100 per cent of the EPA's regulatory tasks in regards to monitoring Santos' Narrabri gas licence conditions were more effectively performed by remote sensing, provided imagery and data was available at the required quality. Does this mean that the EPA is intending to move away from physical onsite inspections and monitoring?

Ms MACKEY: It is just part of the complement of tools that we have to be able to regulate in a very timely and immediate way.

Mr JUSTIN FIELD: It seemed like very strange language to suggest that there had been a cost-benefit analysis that showed that 100 per cent of the tasks could be done more effectively if performed remotely. Is there a suggestion that some specific tasks will not be done on site in the future?

Ms MACKEY: As I said, it is part of the suite of tools that we have available for our authorised officers to undertake that regulation. As an agency we are certainly looking at the tools that give us best practice and more immediate information about what is happening on particular sites. It is part of our suite of tools and it is part of us continuing to improve the way we deliver our regulatory responsibilities.

Mr JUSTIN FIELD: Are there EPA officers based at Narrabri?

Ms MACKEY: Yes.

Mr JUSTIN FIELD: How many are up there?

Ms MACKEY: One.

Mr JUSTIN FIELD: I would imagine they would be commonly out on site. It is the only major gas project going on in New South Wales.

Ms MACKEY: Regulation of gas in New South Wales is carried out by officers who are based in a range of locations across the State. It is not always about being on site in terms of the regulation of a particular gas site. We also have quite a significant gas site on the edges of Sydney at Camden, which our staff are regularly at. We have a number of other sites across the State that we have undertaken activity on since we have taken responsibility as the lead regulator.

Mr JUSTIN FIELD: When there is an inspection, is notice given to the company ahead of time?

Ms MACKEY: Part of our regulatory approach is a risk-based approach. At times we would give notice, and that would be part of a monitoring program, and at other times we do unannounced visits as a part of our regulatory practice.

Mr JUSTIN FIELD: Could you give the Committee an indication of how many unannounced visits would have occurred at Santos' sites over the last 12 months?

Ms MACKEY: I will have to take that on notice.

Answer 15: I am advised by the EPA:

The EPA conducts both announced and un-announced inspections.

The EPA has not conducted any un-announced on-site visits in the past 12 months; however, the EPA has conducted numerous un-announced inspections of wells and associated infrastructure.

Generally, prior notice is given for inspections to ensure staff safety and to allow the licensee adequate time to arrange site access with relevant landowners (where applicable), and to ensure that proposed site visits align with site operations and activities at any given time.

The Hon. ADAM SEARLE: In relation to recommendation 8, reading the Government response, what are the compliance and enforcement tools that you refer to there to combat noncompliance?

Ms MACKEY: Are you referring just to the EPA?

The Hon. ADAM SEARLE: Yes, we will start with the EPA.

Ms MACKEY: Sure. From the EPA's point of view this refers to our risk-based licensing system. That is well entrenched across the EPA across a range of sectors. It includes formal, structured and evidence-based risk assessment of every licenced activity and aims to ensure the licensee receives an appropriate level of regulation based on the risk that they pose.

The Hon. ADAM SEARLE: Step us through what that means in the real world.

Ms MACKEY: In terms of looking at the risk assessment, we might look at the potential for discharges to air, we might look at the hazardous level of air discharges, the contribution to regional air quality, the potential for the release of odours, the proximity to sensitive receivers and a range of other things around air quality.

The Hon. ADAM SEARLE: These assessments are done on the ground at the site by a person?

Ms MACKEY: Yes, they are done as part of the initial licensing and then updated in terms of our ongoing monitoring. It gives us a risk profile, if you like, of the licensee.

The Hon. ADAM SEARLE: How is that risk assessed?

Ms MACKEY: Our officers are technical experts in what they do, so the assessment looks at air and odour, it looks at water, it looks at noise, pollution and the management of any incidents and events. There is a range of expertise that our officers bring around each of these areas to assess the risk of those individual sites.

The Hon. ADAM SEARLE: In terms of ongoing monitoring, is that some of the monitoring that is done remotely or could be done remotely?

Ms MACKEY: Some of that monitoring would be likely to be done remotely for sites that have that technology in place.

The Hon. ADAM SEARLE: What is the technology you would need in place to be able to do that?

Ms MACKEY: I take on notice the detail around the individual sites and what we are using.

The Hon. ADAM SEARLE: The recommendation of the Chief Scientist also talked about automatic monitoring processes that provide the data to the data repository to detect cumulative impacts of a project. What automatic monitoring processes have been implemented? Is it just these remote ones that you are talking about?

Ms MACKEY: It is certainly the remote one. I will confirm whether or not there are others that have

been established or are underway.

Answer 16: I am advised by the EPA:

The EPA currently has the capacity to remotely monitor compliance with a range of gas conditions using remote sensing technologies.

Compliance using remote sensing requires satellite imagery such as Planet, Sentinel, NearMap, or ADS aerial digital photography. The imagery that can be used for the purpose of checking compliance depends on availability (some products are not state-wide), the resolution and image date for the purpose of checking compliance.

The selected imagery is uploaded to ArcGIS software and / or ERDAS (remote sensing analysis software) for review and interrogation. The EPA has employed spatial data experts to undertake these remote sensing functions.

The Hon. ADAM SEARLE: The recommendation also talked about regularly reviewing environmental impact and safety targets to encourage the uptake of new technologies.

Ms MACKEY: That is part of our risk-based licensing approach.

The Hon. ADAM SEARLE: Apart from that, Mr Wright, is the Government doing anything else in that space to implement or deliver on this part of the recommendation?

Mr WRIGHT: In response to that recommendation, in 2015 the Government brought into place the Improved Management of Exploration Regulation [IMER] initiative where it reviewed all codes and conditions that regulate the onshore petroleum industry. That review saw new strict rules covering all types of exploration activities introduced, and simplified and strengthened the regulation for gas exploration, effectively making it clearer and more streamlined. Codes of practice now outline managerial requirements for explorers and provide clear standards to enable the industry to introduce new technical innovations to meet regulatory requirements. Those 2015 reforms promote stronger accountability for industry as well as the use of innovative and best practice methodologies to meet risk-based requirements.

Mr JUSTIN FIELD: I might jump in on that. How does the Sharing and Enabling Environmental Data [SEED] portal detect cumulative impacts at project, regional and basin scales?

Ms MACKEY: Before I do that, can I clarify something?

The CHAIR: Yes.

Ms MACKEY: I have not been to Narrabri yet. I had planned to go, but the fires got in the way. I understand I actually have three staff up there, so two operational staff and one community liaison staff. In terms of the SEED program, that has operated more broadly in the science area of the energy, environment and science group within the DPI cluster. That SEED portal has been fully established and is operational, and there is a range of agencies, including the EPA, that share significant datasets. I think the EPA has 21 datasets that we share within that portal, and we are not alone in terms of sharing a large number of datasets, so as our data is updated, that is updated in that SEED portal and, as you would be aware, that portal is available for members, for those interested in that information, to be able to access and utilise that information.

Mr JUSTIN FIELD: The question was how does it detect cumulative impacts at project, regional or sedimentary basin scale. This was one of the critical questions that the Chief Scientist grappled with. The cumulative impact was a concern given the number of licences across the State, including multiple licences, within particular water catchments or using particular groundwater systems, so how can it identify and measure cumulative impacts?

Ms MACKEY: My understanding is that the database SEED actually is not the measurement tool, so it allows access to a range of datasets and there are tools within it, including a mapping tool, which enables you to go to a site level and pull together the information from a range of sources, and then you can look at that over time or you can look at it at a point in time.

Mr JUSTIN FIELD: I will put it in a different way: How is the Government measuring and identifying cumulative impacts at project, regional and sedimentary basin scales, which was a key recommendation?

The Hon. ADAM SEARLE: That is 8 and 11.

Mr JUSTIN FIELD: Yes, 8 and 11 cross over quite a bit. Are you not sure? Hard to tell?

The Hon. ADAM SEARLE: A number of submissions have said that the SEED portal does not fulfil

the different functions suggested or set out by the Chief Scientist. Can you comment on that and, given that its status is said to be bizarrely complete and ongoing, it sounds like you have used the SEED portal to consolidate some Government datasets, but there is an intention to build on it over time. Is that what is happening?

Ms MACKEY: My understanding is that it is considered complete because the SEED has been established and is now able to be accessed, and the core datasets that were envisaged for it have been put into place. They are now considered to be in what they are calling the acquisition phase, so any additional datasets that come to light, or as the datasets grow, they are also added to the portal.

The Hon. ADAM SEARLE: So any member of the public can access SEED. Is that correct?

Mr WRIGHT: That is my understanding.

The Hon. ADAM SEARLE: And it can take citizen data input. Is that right? People can upload their own additional information.

Ms MACKEY: I would have to take that on notice.

The Hon. ADAM SEARLE: I am not going to read out verbatim all of the Chief Scientist's recommendations. I do not know who is the relevant person—is it you, Mr Wright?

Mr WRIGHT: It is probably Tracey, back through to the ES part of the department.

The Hon. ADAM SEARLE: Could we have a fuller description of how the SEED portal actually delivers on what the Chief Scientist said should go into this, because it seems to be a pretty hotly contested area? I am not a subject matter expert and I am not a computer expert either, but a number of the submissions have said that it simply does not do what the Chief Scientist said it ought to and it has a number of shortcomings. A somewhat fuller response on notice would be useful.

Answer 17:

The Sharing and Enabling Environmental Data (SEED) portal is an initiative of the NSW Government to provide the community with reliable and readily available information about the environment of NSW. SEED is being developed and enhanced in stages.

The portal aspects of SEED have been fully established, as per Recommendation 10 of the NSW Chief Scientist & Engineer's 2014 Independent Review of Coal Seam Gas Activities. It is publicly accessible and presently provides open access to over 2,550 NSW environmental data sets held by NSW government entities related to water, land, air, vegetation and threatened species.

SEED is progressively expanding on the number of datasets available on open access, including other types of government environmental data as well as data from industry and citizens. This is an ongoing process.

SEED processes are designed to include citizen data from verified and validated data projects and repositories. Data placed on the SEED portal must meet quality and trustworthiness standards to be included via the portal. SEED has a FAQ section to assist contributors understand the portal and its requirements for inclusion and how to suggest a data set for inclusion.

Over time SEED will strive to add more sophisticated capacity for users to visualise and interpret data.

Moving to the centralised risk management and prediction tool in recommendation 11 of the Chief Scientist, the Government says that this is complete because it already has a number of suitable risk management and prediction tools to analyse risk. That is not really expanded upon, and that again is something that is pretty hotly contested by a number of stakeholders. Can you tell us what are the existing risk management and prediction tools that the Government says fulfils the Chief Scientist's recommendations?

Ms MACKEY: I would refer back to the risk-based licensing in terms of the EPA regulatory component as being one of the tools that has been referenced for both this recommendation and also I think recommendation 8. I can talk to that again, if that is helpful.

The Hon. ADAM SEARLE: Yes, you can, but again when you look at recommendation 11 from the Chief Scientist it seems to go a lot beyond what you are talking about. Is it simply the Government's position that

Ms MACKEY: I think the risk-based licensing from the EPA's point of view is one of the risk tools that is available for Government and a range of other agencies.

Mr WRIGHT: I would refer back to what I said earlier about some of the codes of practice that came out of the IMER initiative back in 2015 as part of the suite of risk-based tools, in addition to obviously the consideration of gas related development proposals under the Environmental Planning and Assessment Act.

The Hon. ADAM SEARLE: Is there a risk register as proposed by the Chief Scientist?

Mr WRIGHT: I have to take that on notice. I am not aware of a risk register, per se.

The Hon. ADAM SEARLE: Is there a database of event history, as recommended by the Chief Scientist? I am happy for you to take that on notice.

Mr WRIGHT: I will have to take that on notice.

The Hon. ADAM SEARLE: Is there an archive of trigger action response plans, again also as recommended by the Chief Scientist?

Mr WRIGHT: I will take that on notice.

The Hon. ADAM SEARLE: Are any of these, if they exist, updated annually?

Mr WRIGHT: Similarly, on notice.

Answer 18: I am advised by the EPA:

The EPA developed a coal seam gas risk register in 2014 that identifies potential environmental risks posed by the coal seam gas industry to guide EPA regulatory activities. A review and update of this risk register has recently been undertaken and the revised register is in the process of being finalised.

The EPA also utilises Case and Investigation Reporting, Administration and Management (CIRAM) system software for the recording of gas incidents. Incidents can be linked to licence holders and individuals. The Case and Investigation Reporting, Administration and Management system contains search functions which allows the extraction of event histories.

All environment protection licensees are required to have in place a Pollution Incident Response Plan (PIRMP) in accordance with section 153A of the *Protection of the Environment Operations Act 1997*. The PIRMP outlines what notification, action and communication procedures are in place to minimise the risk of a pollution incident on a premise. The PIRMP must be tested routinely at least once every 12 months and within one month of any pollution incident occurring.

Trigger Action Response Plans (TARPs) may also need to be developed for certain gas activities as required under relevant activity approvals. TARPs are often a component of various management plans. An example of this is the requirement for a TARP to be developed as a component of the Produced Water Management Plan in accordance with the *Exploration Code of Practice: Produced Water Management, Storage and Transfer*.

PIRMPs may be updated following annual testing, a change in contact details, or as part of any general PIRMP review. Changes in operations, plant and equipment may also trigger the need to the PIRMP to be updated by the licensee.

Requirements to review and update other TARPs vary depending on the revision and triggers specified in relevant instruments. For example, revisions to Produced Water Management Plans must occur at the direction from the Minister or the EPA; if changes to the way in which produced water is managed under the relevant authority or prospecting title requires additional assessment under the *Environmental Planning and Assessment Act 1979*; before making any significant changes to design and operations of produced water storage or transfer; in the event the TARP is activated; or at intervals no longer than one year.

Mr JUSTIN FIELD: Just on that, if I could, the improved management of exploration regulation was mentioned by you, Mr Wright. On the flow chart that was provided about how that operates, the coal seam gas well integrity and fracture stimulation codes are listed as "under review".

Mr WRIGHT: Correct.

Mr JUSTIN FIELD: The codes that are available on the website are 2012 codes, and it is said in the codes that they are supposed to be reviewed after the first year and then every two years. The petroleum deep drilling code is listed as "under development". Have the two codes mentioned as being under review been reviewed?

Mr WRIGHT: The code of practice for coal seam gas well integrity is currently under active review and the code of practice for coal seam gas fracture stimulation, also published in September 2012, is not being

reviewed at this point of time. I refer back to what I said in my opening statement about the size of the gas industry now compared to its size back in 2014.

Mr JUSTIN FIELD: Sure. But they were drafted in 2012 and it was said that they would be reviewed after one year. It is 2019. It is still under review.

Mr WRIGHT: As I just said, the code of practice for coal seam gas well integrity is currently being reviewed.

Mr JUSTIN FIELD: Did any wells get drilled between 2012 and 2019 anywhere in the State?

Mr RUMING: I have those data here. In 2013 we had nine wells drilled immediately after the code of practice was released. In 2014 we had eight wells and since then there have been no wells drilled.

Mr JUSTIN FIELD: No wells drilled anywhere in the State?

Mr RUMING: Not for petroleum.

Mr JUSTIN FIELD: Has the petroleum deep drilling code been finalised? That is the one that is on the IMER, which you highlighted in answer to a question as being part of the Government's response from a risk perspective.

The Hon. ADAM SEARLE: It was recommendation 8 I think.

Mr JUSTIN FIELD: It says it is under development. Has it been finalised?

Mr WRIGHT: Not finalised at this point in time is my understanding.

The Hon. ADAM SEARLE: What is the time frame for finalisation?

Mr WRIGHT: I will take that on notice.

Answer 19:

The Guideline for mineral exploration drilling; drilling and integrity of petroleum and production wells: *Mining Act 1992 and Petroleum (Onshore) Act 1991* addressed this matter. The document was published in March 2016.

For further information see:

https://www.resourcesandgeoscience.nsw.gov.au/_data/assets/pdf_file/0005/596066/Guideline-for-mineral-exploration-and-petroleum-drilling-final-version.pdf

The CHAIR: Mr Wright, going back to your answer about royalties, you said that they are not paying royalties because essentially they cannot control their operational costs—their operational costs of doing that exploration far outweigh the benefit.

Mr WRIGHT: Sorry, I did not say they cannot control their operational costs.

The CHAIR: You said that their operational costs were higher than the value of the gas.

Mr WRIGHT: Correct.

The CHAIR: Which is essentially the same thing. Why are we bearing the costs of a company that cannot control its own operational costs by granting them an exemption for royalties? Is this a common practice where a company cannot get its own house in order and we say, "Well, you're exempt from royalties"? Is this the only company that is doing this?

Mr WRIGHT: I really cannot comment on Santos' operational cost framework.

The CHAIR: I am asking whether any other company has an exemption where their operational costs far outweigh the benefit of what they are bringing up out of the ground and therefore we lose royalties on it.

Mr WRIGHT: The only other gas operation in New South Wales is the AGL Camden operation. My understanding is that AGL does pay royalties.

The CHAIR: It just seems a strange policy to have that we essentially give the benefit to a company that cannot get its own house in order.

Mr RUMING: In terms of those royalties things, there are allowable deductions. For example, in the coal industry there will be some minor deductions against your royalties that are part of the legislation. It is my understanding that in the petroleum space it is not so much the total operational cost but there are allowable deductions against royalty payments. It is a bit like your tax deductions. You are allowed certain deductions against your tax paid. The royalty framework is much the same.

Mr JUSTIN FIELD: I am going to move to recommendation 9. How does the Government ensure that gas operators continue to hold appropriate insurance coverage or demonstrate alternative financial arrangements to cover the costs of clean-up of potential pollution incidents?

Ms MACKEY: There has been quite a bit of work to date on recommendation 9, particularly looking at continuing the existing security deposit scheme, requiring coal seam gas operators to hold appropriate insurance coverage and using the existing—

The Hon. ADAM SEARLE: Just pausing there, what is the appropriate insurance coverage? Who determines whether it is appropriate?

Ms MACKEY: That is being done at the moment jointly across government in the Department of Planning, Industry and Environment [DPIE] around whether or not they are able to demonstrate alternative financial arrangements or whether or not the insurance coverage is appropriate.

The Hon. ADAM SEARLE: Before we continue, this is a matter of great interest to me because when I travelled around some of these areas a number of the farmers said that they could not get insurance from the private market. I have checked that with industry stakeholders and they have confirmed that there just are not the insurance products. This is a matter I raised in budget estimates in August 2016. The then department essentially said, "Well, this is a matter for the private sector. We the Government do not have an interest in getting involved in that." So I am asking: Has that now changed? Is government now actually actively investigating the provision of some kind of insurance product to cover the fact that there is a market gap? And when did that happen? Because in 2016 the Department of Industry—Resources and Energy had essentially walked away from recommendation 9, as I understood it. I am just trying to understand what the Government's position is. Is the Government committed to providing an insurance product as recommendation 9 suggested?

Ms MACKEY: Perhaps if I can go back and finish my response, because there is a suite of components that are being looked at with regard to responding to recommendation No. 9.

The Hon. ADAM SEARLE: Yes, but one of them is private insurance.

Ms MACKEY: One of them, as I have said, is looking at the appropriate insurance—

The Hon. ADAM SEARLE: And where is that up to?

The Hon. TREVOR KHAN: Just let her answer.

Ms MACKEY: There is also the existing final assurance under the Protection of the Environment Operations Act and there is also continuing the legacy wells program. So there are those four components. There has been quite detailed work done on those components including looking at the feasibility of implementing those individual mechanisms and looking at strengthening the existing protections. There has been quite a bit of consultation with industry, agencies, the insurance sector. There have also been conversations with environmental groups, community and local councils, and advice has been provided to government on this one. So it is currently with government for consideration.

The Hon. ADAM SEARLE: Just looking at the government response at page 7, it says there is a comprehensive security fund framework—it sounds like that is what exists now. And it says, "We will further consider whether there are additional benefits," from other things including industry insurance. It sounds like, in your submission, you are still working out whether or not there is a need for an insurance product. Can you update the Committee as to what the Government's level of interest or commitment to providing an insurance product is?

Ms MACKEY: As per the advice from my colleagues at the recent estimates hearings, this is currently before government for consideration.

The Hon. ADAM SEARLE: What is before government for consideration? Is it the idea or a detailed plan?

Ms MACKEY: Advice has been provided to government—I think we have given quite a good indication

The Hon. ADAM SEARLE: Well, again, in 2016 officials of the then industry resources and energy department essentially gave evidence that the Government had walked away from private insurance, that that was no longer something it was looking at. When did that change, now that you are providing information to government for government to consider?

Mr WRIGHT: I am not aware. I have to go back and look at the historic record in terms of what was said by those bureaucrats at the time. I need to look into that matter.

The Hon. PETER PRIMROSE: Are you taking that on notice?

Answer 20: I am advised by the EPA:

Recommendation 9 of the Chief Scientist and Engineer recommended that Government consider a robust and comprehensive policy of appropriate insurance and environmental risk coverage of the CSG industry, specifically examining enhanced insurance coverage.

In the first response to the Chief Scientist and Engineer's report, the Government committed to further considering whether there are additional benefits that could be gained from adoption of a three layered policy including industry insurance coverage (*Government response to the final report of the independent review of coal seam gas activities in NSW by the NSW Chief Scientist and Engineer – undated*).

In October 2015, the Government stated that its review will also consider the utility of adopting a harmonised insurance and environmental risk coverage framework across the gas industry (*Implementing the final report of the Chief Scientist and Engineer's Independent Review of Coals Seam Gas Activities in NSW, October 2015*).

To do this, the EPA has sought to better understand the insurance frameworks already available that provide financial protection against environmental liabilities.

The EPA has consulted with industry members and insurance providers to assess whether existing insurance products and frameworks provide sufficient financial protection against potential environmental incidents and identified requirements for enhanced insurance coverage.

Work to date has focused on requiring coal seam gas operators to hold appropriate insurance coverage or demonstrate alternative financial arrangements to cover the costs of clean-up of potential pollution incidents.

The outcomes of this work are currently being considered by Government.

Mr WRIGHT: Happy to take that on notice.

Mr JUSTIN FIELD: I might have missed it in the to and fro there, but my question originally was, "How does the Government ensure that gas operators continue to hold appropriate insurance coverage or can demonstrate alternative financial arrangements?" That language is from the recommendations—the ones the Government broadly agrees with. Is there a requirement annually for Santos to provide a certificate of currency or is there a bond that they hold? The two operators are AGL in Camden and Santos in Narrabri.

Mr WRIGHT: Petroleum gas operators are covered by the same security deposit regime that all extractors of resources in the State are covered by. So there is a requirement to lodge a rehabilitation security bond with the department, which is set at—can you just tell me the formula for setting that?

Mr RUMING: I understand the rehab bonds are related to the potential liabilities that the Government may incur, if you have to go and clean up the mess, basically.

The Hon. ADAM SEARLE: Just on that, when the Auditor-General did her report in 2017 on the adequacy of the regime, I cannot remember if it was in her report but it was certainly discussed after that, in most cases that takes the form not of money in the bank but of a sort of bank guarantee. From her report and from the briefing I received from the Audit Office and subsequently from the department, I think, there did not seem to be any mechanism to make sure that those bank guarantees remained current. There was actually a risk that at some point those guarantees could lapse and there would not be the security able to be drawn on. Can you update the Committee about where that issue—

Mr WRIGHT: I am not aware of that particular risk. My understanding is that the security deposits that

we hold are all current. But I am happy to take that on notice and determine whether in fact there is a risk.

Answer 21:

Security deposits remain 'current' as they are bonds in the form of a deed or paid in full in cash with no expiry dates.

The Hon. ADAM SEARLE: The other thing the Auditor-General said in relation to the security bond regime more generally was that there was no financial assurance to cover the costs associated with mitigating future environmental degradation once a mine or operation closes. There was a recommendation about the development of some kind of additional security mechanism for mining but also the gas industry because, presumably, those same drawbacks would apply. Since 2017 what has the department done to address that particular shortcoming?

Mr WRIGHT: We are looking into this matter. In particular, we are looking at what some of the other jurisdictions, including Queensland, are doing. We are taking a resource neutral approach to this, so whatever applies to minerals should apply to petroleum as well. I have got to say that it is a matter that is under active consideration.

The Hon. ADAM SEARLE: But nothing has happened in the last two years?

Mr WRIGHT: It is under active consideration as we speak.

Mr JUSTIN FIELD: Going back to my question to be clear, because I still do not think that I am, for Camden and Santos, is a rehabilitation bond all that is held from an insurance perspective?

Mr WRIGHT: A rehabilitation bond would be held for both those projects.

The Hon. ADAM SEARLE: Can you tell us what the value of that would be?

Mr WRIGHT: No, I cannot. I do not know what the value is. I can take that on notice.

Answer 22:

The total sum of rehabilitation bonds held by the Department on behalf of AGL is \$29,515,000.
The total sum of rehabilitation bonds held by the Department on behalf of Santos is \$38,306,000.

The Hon. ADAM SEARLE: Please do.

Mr JUSTIN FIELD: But we do not know if there is any additional insurance held by either of those companies that could cover any liabilities?

Mr WRIGHT: I think we would have to take that on notice. I am not aware of any.

The Hon. ADAM SEARLE: Just out of interest, Santos claims that it does have an insurance arrangement in place that would do that, but I do not think it has shared those details with neighbouring residents or farms. But, again, I am happy for you to come back to us on notice.

Answer 23: I am advised by the EPA:

In working to address Recommendation 9, the EPA has consulted with industry members to assess whether existing insurance products and frameworks provide sufficient financial protection against potential environmental incidents and identified requirements for enhanced insurance coverage.

The outcomes of this work are currently being considered by Government.

Mr JUSTIN FIELD: It goes back to my question, which is: How does the Government ensure that it holds those insurance policies? Do you check that when it puts an application in? Do you go back and ensure that it is maintaining that insurance policy?

Ms MACKEY: We can't—

Mr JUSTIN FIELD: You do not have an answer to that. What is the state of the EPA's management framework for environmental liabilities? Lock the Gate indicated that it had been suggested that the EPA was developing that some time ago, but, as I understand it, that is still incomplete.

Ms MACKEY: That is currently with Government for consideration.

Mr JUSTIN FIELD: Okay, so that is what you were talking about? Is there a potential that the Narrabri project could be referred to the Information and Privacy Commission before that is finalised? Is the Government able to give an undertaking that that will not occur and that the framework will be finalised before any—

The Hon. TREVOR KHAN: These witnesses cannot give that undertaking. You know that.

Mr JUSTIN FIELD: Fair enough. What is the time line for the finalisation of that framework?

Ms MACKEY: As I said, it is currently with Government for consideration.

The Hon. ADAM SEARLE: You say the issue of insurance is with Government. Is there any estimated timeframe for the response?

Ms MACKEY: I have indicated that the response to recommendation 9, which goes to environmental liabilities, goes to the insurance issue to which you refer.

The Hon. ADAM SEARLE: Do you have any estimated timeframe as to when there may be some outcome?

Ms MACKEY: It is with Government for consideration.

The Hon. ADAM SEARLE: Mr Wright, is this the same as the issue of the rehabilitation bond scheme being with Government since 2017?

Mr WRIGHT: It is currently under active consideration by the department. We would hope to complete those investigations by the middle of the next calendar year.

The Hon. ADAM SEARLE: Going back to the accumulative risk management and prediction tool, the Namoi Catchment Management Authority did commission and develop a tool to assess the accumulative risk of mining on land in the catchment. It says that it has a tool that would be appropriate for this task in terms of building risk layers for environmental assets and looking at the impacts on groundwater, vegetation and all the other risks that might be associated with any project, whether it is gas or mining more generally. Is that one of the risk management tools that the Government is using?

Mr WRIGHT: Sorry, I am not aware of that tool.

Ms MACKEY: I am not aware of that tool.

The Hon. ADAM SEARLE: What tool is the Government using to improve prediction capability in terms of risk assessments and the like? What particular tool are you using in that space?

Ms MACKEY: We would refer back to our risk-based licencing approach. It is a robust and well-developed tool that goes across a range of sectors. We are absolutely using that in the gas space.

Mr WRIGHT: I would also refer back to the Environmental Planning and Assessment Act, where matters of environmental risk are also properly considered.

The Hon. ADAM SEARLE: I understand that, but the Chief Scientist made a very particular recommendation, even in light of all those existing mechanisms. I am struggling to see what is new and postdates that report in what you have described as your response to "implementing the Chief Scientist's recommendations".

Mr WRIGHT: I would also probably refer back to my previous statement about the strategic release framework for petroleum, which requires a Preliminary Regional Issues Assessment [PRIA]. That is an initiative that was not in place prior to the Chief Scientist's report.

The Hon. ADAM SEARLE: Shall we move on to recommendation 12?

Mr JUSTIN FIELD: Yes. The Government's submission makes clear that despite accepting recommendation 12 in 2014—for reference, that is the recommendation that deals with the establishment of an expert standing advisory body on CSG—the Government has since decided not to implement a standing advisory body but to work closely with the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development [IESC], which is the Federal body. When was that decision made?

Mr WRIGHT: I would have to take that on notice. It was obviously post the report of the Chief Scientist.

But I would have to take the question on notice and get back to you.

Mr JUSTIN FIELD: Thank you. Can you also take on notice whether the independent expert scientific committee was consulted before that decision was undertaken and how the IESC was advised of that decision? It is quite a distinct role for them. Are you aware of whether the role of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development as an advisory body relates only to water impacts?

Answer 24:

In its response to Recommendation 12, the government agreed there is a need for expert advice on gas activities and said it would consider the best way to harness this advice. In 2015, the government published a progress report on its response to the Chief Scientist and Engineer's recommendations. In that report, the government announced its decision to work closely with the Independent Expert Scientific Committee (IESC) on Coal Seam Gas and Large Coal Mining Development, rather than duplicate these functions in NSW. Based on searches conducted in the time available, the Department of Planning, Industry and Environment is unable to confirm if the IESC was consulted before this decision or how the IESC was advised of the decision.

Mr WRIGHT: The way that that committee is engaged by New South Wales means that all gas proposals are referred to that committee as part of our gateway process and before going into the planning process, with a particular focus on, as you indicated, potential water impacts, as well as potential impacts on agricultural land. It is an expert input into the planning assessment process.

Mr JUSTIN FIELD: No, that it just the agricultural impacts as they relate to water. Recommendation 12 is fairly robust. It recommended an expert advisory body on CSG, with the functions being: to advise on the overall impact; to publish annual statements on processes for characterising and modelling the sedimentary basins for New South Wales; updating and refining risk-management prediction tools; advising on the implications of CSG impacts in New South Wales for planning where CSG activity is permitted—in particular that deals with all the other land use issues that have been a feature of the public debate on CSG—advising on specific research that needs to be done and how to best work with the research; and advising on whether or not it should even be allowed to proceed in the first place.

Mr WRIGHT: The other source of expert advice that the Government draws on is the Gas Industry Social and Environmental Research Alliance [GISERA], which has a specific New South Wales research stream.

Mr JUSTIN FIELD: That alliance is funded by the gas industry.

Mr WRIGHT: Mr Ruming, do you want to talk about what GISERA does?

Mr RUMING: As I understand it, GISERA was established in 2011 and New South Wales became a part of the organisation in 2015. It provides a lot of research around water impacts, agricultural impacts and things like that that are related to the onshore gas industry. In New South Wales quite a bit of its recent work has been focused in the Namoi region and around the Narrabri Gas Project. With those research projects that are undertaken there is a New South Wales body that makes the recommendations about what should be pursued. On that body there will be representatives from the public, universities, CSIRO and Santos.

The Hon. ADAM SEARLE: What is this body?

Mr RUMING: GISERA is—

The Hon. ADAM SEARLE: I know what GISERA is.

Mr RUMING: I will get you the name of the New South Wales body.

Mr WRIGHT: We will take the name of that body on notice.

Answer 25:

The name of the NSW-subgroup of GISERA is New South Wales Regional Research Advisory Committee (NSW RRAC).

For more information see: <https://gisera.csiro.au/research-independence/new-south-wales-regional-advisory-committee/>

Mr RUMING: The body identifies a project that should be undertaken and then the body votes on what should proceed, in terms of undertaking research. CSIRO basically oversees that whole process to ensure that the research is of a very high quality, is reputable and has integrity, as you would expect.

Mr JUSTIN FIELD: But you can confirm that GISERA is at least part funded by the gas industry?

Mr RUMING: Yes, it is.

The Hon. ADAM SEARLE: In 2015 the Government said this recommendation 12 was essentially fulfilled by the Government's participation in GISERA and then I think it was in this year's estimates that the Deputy Premier said the Government's commitment to the recommendation was now fulfilled by using the independent expert scientific committee. That is a new development. I think you have already taken on notice when this decision to rely on the independent expert scientific committee occurred, but can you tell me whether there was in fact a policy switch between 2015 and 2019 and when that switch occurred? The Government's submission on page 10 says this decision was taken to use an existing body, "rather than to establish a duplicate body in New South Wales". To be very clear, is it now your evidence that all of the things the Chief Scientist said this independent expert scientific committee should do in relation to CSG is now actively being undertaken by the independent expert scientific committee?

Mr WRIGHT: That is one of the inputs in terms of expert advice on gas projects. We have talked about GISERA as well. Then obviously when projects proceed through the Environmental Planning and Assessment

Act typically the department will engage a range of experts to get additional advice in terms of what the environmental, social and economic impacts of a proposal, including a gas proposal, might be. I know this is the case for the currently in train Santos Narrabri gas proposal.

The Hon. ADAM SEARLE: Which body is doing the detailed analysis of the data held in the data repository? I think you call it the SEED portal. Where is that advice to Government coming from?

Mr WRIGHT: Are you talking about an individual project? What is your question?

The Hon. ADAM SEARLE: Just to be clear, if you look at the Chief Scientist's recommendation 12, one of the tasks of this independent expert scientific committee, this independent body, was to provide to Government advice on the overall impact of CSG on New South Wales through a published annual statement, but that would also in turn draw on a detailed analysis of the data held in the data repository and whether or not it was adequate and whether or not it was fulfilling all of the needs. Basically, if you like, to maintain advice to Government about whether the data repository was actually doing the work it needed to do.

Your advice to this Committee, or your evidence through this submission, is that this recommendation has been completed and it sounds like—this is just my judgement from asking you questions—it has in fact been abandoned and you are sourcing different parts of the information from different places. I am just wondering where the Government is getting its detailed analysis about the adequacy of the whole-of-environment data repository?

Mr WRIGHT: I just go back to what I have said in terms of the Government's position on this particular recommendation, which is that it does rely on, in terms of that gateway assessment, the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development. The range of reports are prepared by the Gas Industry Social and Environmental Research Alliance. When it comes to considering individual gas projects, stepping through the Environmental Planning and Assessment Act and obviously the Environment Protection and Biodiversity Conservation Act 1999 [EPBC] Act for that matter as well in terms of the Commonwealth procuring a range of expert advices in relation to individual proposals.

Mr JUSTIN FIELD: But those things existed before the Chief Scientist's review, so if they were adequate there would be no need for this recommendation. The Chief Scientist made a very specific recommendation to establish a standing expert advisory body on CSG. The question is: Why didn't the Government just admit it does not accept that recommendation and it is going to do it a different way?

Mr WRIGHT: The Government accepts the need for expert advice, which is why it is relying on those mechanisms to provide that advice. The Government accepts the need for expert advice and has put in place or is utilising—

Mr JUSTIN FIELD: But not in the way that was recommended.

Mr WRIGHT: —either existing bodies or the environmental planning and assessment process.

The Hon. ADAM SEARLE: What I am getting at is this: Your submission says the Government has decided to do this rather than create a duplicate body, but what we are getting from your evidence is the fact that there is no duplicate body, because the independent expert scientific committee might ad hoc do some of these things on request, but there is no systematic provision of advice that the Chief Scientist said was necessary for

Mr WRIGHT: I have probably exhausted my response to this question. The Government's response is as I have said.

The Hon. ADAM SEARLE: We have had a bit of a discussion about the risk management and prediction tool recommended by the Chief Scientist. I have not heard any evidence from any of you that post the recommendations, other than the licensing scheme put in place by the EPA, whether or not there is any other risk management predictive tool that is currently used. I am happy for you to take that on notice and come back to us. But what body is providing advice to the Government on an ongoing basis about whether and how you would update and refine the risk management prediction tools that are available to the Government in this space?

Ms MACKEY: I think I have probably talked to the risk-based licensing several times.

The Hon. ADAM SEARLE: Yes, but the Chief Scientist said there is a whole lot of work that is not being done and the Government needs to get ongoing advice about all of these matters and this is how the Government should get that advice, from a standalone expert scientific committee, possibly for all extractive industries, but certainly for CSG. I have not yet heard any evidence from anybody here today that all of that information is being regularly accessed by Government on a systematic basis. It sounds like it is ad hoc, it is from a variety of disparate sources and sometimes—

Ms MACKEY: Certainly the inter-agency gas working group has been a key tool across the Government to be able to come together and share not only information but get down to the detail of what is actually happening on the ground and how it has been operationalised and how they are regulating it and what kind of decisions and tools the Government needs. It has met six-weekly now for a number of years. It is a well-used and practised forum. That is one of the key tools the Government is using in terms of getting that cross-agency engagement.

The Hon. ADAM SEARLE: I apologise if I missed it but who is on that body?

Ms MACKEY: I did talk through that previously.

The Hon. ADAM SEARLE: Are there scientific experts?

Ms MACKEY: There are agencies from across the Government. I can take on notice a list of membership for you.

Answer 26: I am advised by the EPA:

The members of the Gas Working Group are as follows:

- Resource Regulator
- NSW Health
- Department of the Environment and Energy (Commonwealth - DOEE)
- Department of Planning, Industry and Environment (DPIE) - Division of Resources and Geoscience (DRG); Planning and Assessments Group; Environment, Energy and Science Group; and the Water Group
- NSW Environment Protection Authority (EPA)
- NSW Treasury
- Natural Resource Access Regulator (NRAR)
- Department of Premier and Cabinet

Representatives sit on the working group, with referral to other scientific experts if required.

The Hon. ADAM SEARLE: Again, does it look like the kind of membership the Chief Scientist recommended in her recommendation 12?

Ms MACKEY: I do not think it is going to recommendation 12. I think it is one of the activities that the Government has taken away to ensure that we have a joined-up approach to how we consider and regulate gas in New South Wales.

The Hon. ADAM SEARLE: Whose job is it to provide ongoing advice to Government about whether

Ms MACKEY: I can only talk to risk-based licensing.

The Hon. ADAM SEARLE: I think we have been stepped through that. Mr Wright?

Mr WRIGHT: In terms of the regulatory end of the spectrum around gas, I think Ms Mackey's response covers the field at this point in time.

The Hon. ADAM SEARLE: Who is advising the Government on science and technology developments relative to managing CSG to make sure that industry is actually maintaining a contemporary approach to the latest scientific methods? This was one of the tasks to be given to this scientific expert panel. That panel does not exist. Does the Commonwealth independent expert scientific committee fulfil the task, would you say?

Mr WRIGHT: As I said earlier, that committee provides advice to New South Wales on water and ag impacts.

The Hon. ADAM SEARLE: Who is providing information to the State Government about science and technology developments relevant to managing CSG?

Mr WRIGHT: As I have stated, we access the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development, we draw on the expertise of GISERA and when it comes to individual gas developments there is an extensive assessment process under the environmental planning and assessment framework and under the EPBC Act at the Commonwealth level to ensure that appropriate expert advice is procured to inform any decision, including managing risks, obviously.

The Hon. ADAM SEARLE: But all of this is ad hoc in relation to specific projects. It is not on an ongoing, systematised way as recommended by the Chief Scientist. You would make that concession, would you not?

Mr WRIGHT: I am just going to restate what the Government's response to this recommendation is.

Mr JUSTIN FIELD: To be a bit more specific, because I think there is a hole here, there has been quite a lot of scientific analysis that has been done and other States have had public inquiries. Two areas that have been particularly well covered in some of the research, not just in Australia but globally, on unconventional gas are health impacts and emissions, in particular methane leakage. Who, within Government, is identifying updated research and feeding that into the assessment process, whether to ensure the whole of environment data repository contains that information, it is being fed into the working group that you have mentioned, or that GISERA is doing analysis on how that might change the regulatory framework in New South Wales?

Ms MACKEY: Certainly from the EPA's point of view there are a couple of things happening, I think. We have engaged a number of technical experts in this particular space to build up capacity within Government to be able to provide advice and keep abreast of current research and best practice in the space.

Mr JUSTIN FIELD: Is that in emissions in particular, or health as well?

Ms MACKEY: A range of different technical experts have been appointed to particularly focus on gas within the EPA.

Mr JUSTIN FIELD: So you have employed new staff?

Ms MACKEY: Additional staff, yes, with particular expertise. Some of that expertise did not exist in the EPA previously.

Mr JUSTIN FIELD: When were they employed?

Ms MACKEY: I would have to take that on notice.

Mr JUSTIN FIELD: But in the last 12 months or two years?

Ms MACKEY: I would have to take that on notice; it was before my time at the EPA.

Mr JUSTIN FIELD: How are they feeding into the process, because obviously these meetings are happening and the reviews of the codes of practice are still ongoing since 2012?

Ms MACKEY: We certainly work quite closely with our colleagues in the Division of Resources and Geoscience in terms of feeding in any information that we are aware of. We also feed into the planning process that has been underway and we have also been providing advice as required from a range of other agencies across Government.

Mr RUMING: In reference to methane emissions, in September 2017 GISERA released its final report entitled *Regional Methane Emissions in New South Wales Coal Basins*. They assessed where the emissions were

Mr JUSTIN FIELD: Why was GISERA assessing agricultural methane emissions?

Mr RUMING: It just provides the context. If you think about trying to set a baseline for methane emissions over a region, you have to consider all of the sources so that then you can identify, if you think about, say, CSG wells, what their contribution may be to the regional emission dataset, if you like, or the total emissions in a region.

Mr JUSTIN FIELD: The overseas analysis particularly of unconventional gas emissions is that the industry standards that traditionally have been applied have significantly underestimated a leakage in the production process. Ms Mackey, I understand that recently, in the annual report, you purchased some equipment to be able to identify leakage on site and you identified a number of leaks. Did that feed into that analysis that GISERA did?

Ms MACKEY: I would have to take that on notice.

Answer 27: I am advised by the EPA:

No

The Hon. ADAM SEARLE: One of the important roles for this body recommended by the Chief Scientist was to advise Government about whether or not unconventional gas extraction should be allowed to proceed in New South Wales and, if so, under what conditions. Can you point to any body that the Government has reposed that function in, or are you just leaving that to the planning system more generally?

Mr WRIGHT: In terms of the detailed analysis of impacts, the planning system definitely, obviously working in conjunction with the EPBC Act at the Commonwealth level.

The Hon. ADAM SEARLE: Nothing beyond that?

Mr WRIGHT: That is the regime for considering development applications in New South Wales more generally, and also for gas, and as I said before—and I will say it again—the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development, and our access to GISERA resources.

Ms MACKEY: Can I just come back to a couple of things that we were talking to?

The Hon. ADAM SEARLE: Please.

Ms MACKEY: I can confirm that, in terms of the specialists around the gas team, they were appointed in the 2015-16 financial year, so they have been on board for a number of years. Included in that round of appointments is a scientific officer who has a particular responsibility, amongst a range of others, for reviewing academic publications and scientific research that is available in the space, so it is quite an active part of what they are doing.

Mr JUSTIN FIELD: How do they feed that work in to the various processes that are underway? You might need to take it on notice.

Ms MACKEY: I will take it on notice.

Answer 28: I am advised by the EPA:

Through a variety of formal and informal mechanisms, including:

- The government gas working group (membership provided above)
- An interagency cost recovery feasibility study working group
- An interagency working group to review the well integrity code of practice
- Regular meetings between relevant agencies to discuss specific operational, policy and technical matters.

Mr JUSTIN FIELD: I would like to move on to recommendation 14. The recommendation was for the Government to ensure that all CSG industry personnel, including subcontractors working in operational roles, be subject to ongoing mandatory training and certification requirements. How do you ensure that that is up to date?

Mr WRIGHT: This is a matter which falls into the purview of the resources regulator, but I can give you a short answer and am happy to take any questions on notice. The Government has established a duties based framework to ensure that personnel in the petroleum industry, including subcontractors, are appropriately trained and competent to perform work safely. The key elements for this framework commenced on 1 February 2016 with the commencement of the Work Health and Safety (Mines and Petroleum) Legislation Amendment (Harmonisation) Act 2015. I am happy to take any further questions on notice.

Mr JUSTIN FIELD: My questions are these: How do you ensure on an ongoing basis that the people working for companies, including subcontractors—because how many people might be in an operational role at any given point in time must get a little bit complicated—hold whatever is deemed the appropriate certification requirements and have undertaken the mandatory training? I would like to know how many workplace checks have happened around this since it was implemented. I think it occurred in February 2016. Have there been any breaches identified since that time?

Mr WRIGHT: I will take all of those questions on notice.

Answer 29: I am advised by the Resources Regulator:

Resources Regulator inspectors undertake inspections of petroleum sites as part of a planned program of work to assess operator's compliance with work health and safety obligations. Since February 2016 Resources Regulator inspectors have undertaken 299 inspections of petroleum sites. No breaches of statutory function or training obligations have been identified.

The Hon. ADAM SEARLE: In relation to recommendation 13, whose job is it to examine all the relevant environmental data relating to a region or a sedimentary basin that goes into the SEED portal? Whose job is it to review all of that data to make sure it is adequate, up to date and comprehensive? Is it anyone's job to check that?

Mr ISAACS: We can speak in relation to some of the water data. The Government does collect a range of water data from a lot of new data. We have installed a number of new groundwater monitoring wells since the Chief Scientist's report. That data is collected automatically and at a later date goes through a review and quality assurance process.

The Hon. ADAM SEARLE: One of the recommendations of the Chief Scientist in recommendation 13 was that the independent expert advisory body review all of this data on a frequent basis and use that information to check for any factors signalling problems in the region and, if there were emerging problems, to develop recommendations to address them. As that body has not been created, which body or person is charged with undertaking that function which in your submission you say is complete?

Mr ISAACS: There is only really one project that has come about or has been proposed since the Chief Scientist's report. We have made a number of recommendations in relation to monitoring and modelling in relation to that, including through independent reviews.

The Hon. ADAM SEARLE: The Chief Scientist also recommended that the Government should commission, construct and maintain a variety of models that address cumulative impacts in relation to areas that are being subject to coal seam gas development. Admittedly there is only one, but what has the Government done in that space in relation to the existing projects?

Mr ISAACS: As outlined in the Government's submission, the Commonwealth's bioregional assessment program—

The Hon. ADAM SEARLE: That is the Commonwealth's program. What has the New South Wales Government done?

Mr ISAACS: As our submission outlines, the Commonwealth bioregional assessment program has developed a number of models with input from the New South Wales Government and other bodies. It makes more sense, if you are building a regional model, to pool resources and develop a model rather than all developing different models. In relation to the Narrabri and Namoi area, I believe that they drew on some of the work that was done in the earlier Namoi water study.

The Hon. ADAM SEARLE: The Chief Scientist also recommended that the New South Wales Government should commission formal scientific characterisation of the sedimentary basins, starting with the East Coast basins and then particularly looking at the impacts on groundwater. What scientific research has the New South Wales Government commissioned on this, as set out in the Chief Scientist's recommendation 13, since the Chief Scientist delivered this report?

Mr ISAACS: Before I hand over to my colleagues in relation to some of the physical characterisation, the New South Wales Government has invested \$22.8 million in additional groundwater monitoring infrastructure, so new groundwater monitoring bores. That gives you geological data as well as water data at a number of levels and that is specifically for coal basins in New South Wales. There is additional data being collected and that data is available online in real time. I might just see if my colleagues have any information on some of the geological characterisation.

Mr RUMING: In terms of the geological work, as part of the work that the geological survey does we have created some subsurface models with the basins in the broad layering, in the broad structure. With those models we workshop with our Office of Water colleagues to help locate the monitoring networks they are putting in—for example, the ones in Gunnedah and southern coalfield areas like that. Those geological data then can also help inform the groundwater models that act as a bit of a predictive tool about what might happen as you start the change parameters. So, for example, in the Namoi region the main groundwater model that is used is in a predictive sense to identify that as you start to extract water from, say, the Narrabri Gas Project, what the drawdown effects may be in the Great Artesian Basin. The predictive tools show that the impacts will basically be negligible.

With those models as a predictive tool, as you get more geological data you can refine your model and, importantly, as you get the monitoring, if the project proceeds and drawdown occurs you can monitor it and then refine your model and then repredict it to see how it is. So you can use the monitoring to ensure your predictions are accurate. If your predictions and your monitoring do not align, you then have a look at what your inputs are into the model, rerun the model to make sure that your predictions and your results match, and you can then be confident that what it is predicting in eight years' down the track is likely to be relatively accurate.

The Hon. ADAM SEARLE: One of the other recommendations of the Chief Scientist was that, before activities start, companies seeking to extract CSG should, working with the regulator—and I assume this means the EPA—identify the impacts to water resources, the likelihood and the consequences of those impacts as well as the baseline conditions and their trigger thresholds. It is to identify all of those things before activities commence. Has that happened with Santos and the EPA?

Ms MACKEY: I have to take that on notice.

Answer 30: I am advised by the EPA:

All CSG projects undergo a thorough assessment process prior to activity commencing. For example, multiple agencies, including the EPA and DPIE – Water have provided detailed advice to DPIE – Planning Assessment Group throughout the Narrabri Gas Project assessment process. This advice has covered a range of topics including potential water impacts. As such, DPIE – Planning have requested further information from Santos as part of the assessment process.

Mr ISAACS: In relation to the assessment of the water impacts I am not sure who the—I think the Chief Scientist was talking about a generic regulator. In relation to the Narrabri—

The Hon. ADAM SEARLE: But that job has been given to the EPA now under the legislation.

Mr ISAACS: Sure. But in terms of a regulatory sense, the Narrabri Gas Project is currently undergoing assessment under the Environmental Planning and Assessment Act. In terms of a regulatory sense there is still an assessment and approval process that needs to be done. There is a lot of work that is being undertaken through a number of agencies and the public submission and assessment process. I believe that there is likely to be independent expert advice also sought on that. Certainly DPIE Water and its predecessors have provided detailed advice on that project and its likely impacts on water resources and steps that should be taken. That advice is a matter of public record online.

Mr RUMING: Further to the broader impacts and the Bioregional Assessment Program that the Federal Government undertook several years ago, there is a report on the Namoi region that talks about the potential impacts of the coalmining and CSG on the water resources with a range of scenarios. Last year in March 2018 GISERA also released a report entitled *CSG-induced groundwater impacts in the Pilliga region: prediction uncertainty, data-worth and optimal monitoring strategies*, again using these models to predict what would happen to the important aquifers above the project if the project was approved and the water began to extract.

Mr JUSTIN FIELD: That followed the late 2017 IESC report which was quite critical of the modelling. They had no confidence in the modelling and predicted drawdowns could be quite significant in the Great Artesian Basin.

Mr RUMING: I am not sure about those details. That would have to be a question on notice.

Answer 31:

The Department of Planning, Industry and Environment notes that the Independent Expert Scientific Committee made a submission on the Narrabri Gas Project in 2017 which commented on the proponent's analysis of water impacts in the proposal's environmental impact statement.

This submission, and the proponent's response to it, are both available on the Department's Major Project's website. Since then, the Department notes that both GISERA and the Bioregional Assessment project have published further studies related to the potential impacts of coal seam gas activities on water resources in the region. These reports are also publicly available.

Mr JUSTIN FIELD: Mr McTavish, thank you for being here today. I know you are a busy bloke at the moment. This may be related: How are you engaged in the question of coal seam gas impacts? I assume it relates to impacts on water that may be vital supplies for regional towns.

Mr McTAVISH: I have not been engaged in conversation in relation to the impact of coal seam gas. I have been involved in conversations about ongoing supply availability for communities right across regional New South Wales including in some of the areas that have been discussed today.

Mr JUSTIN FIELD: Are any of your contingencies for town water supply reliant on water that is also subject to potential coal seam gas activities?

Mr McTAVISH: In the areas where the activity that is being discussed today impacts on town water supply the total amount of water that is required for town water is very small compared to the total requirement for other extractive uses across those areas and I have not been engaged in the conversation in relation to the possible impact. At the moment there is no concern from a drought response point of view for any of those communities.

Mr JUSTIN FIELD: Ms Mackey, you mentioned the legacy wells program as it relates to coal seam gas. I could not find information on the web link that was provided in the submission about petroleum wells that were included in the Legacy Mines Program. Were any new staff brought on in 2014 when the petroleum wells were incorporated into the Legacy Mines Program?

Mr WRIGHT: I can respond to that question. In 2014 the legacy wells initiative was incorporated into the existing Legacy Mines Program. The Legacy Mines Program is focused on rehabilitating mine and petroleum sites generally where the operator of those sites no longer exists or cannot be found and there is an ongoing remediation risk. Typically these are historic sites which were worked prior to the robust regulatory frameworks we now have in place.

Mr JUSTIN FIELD: These do not relate to any wells that were involved in the licences that were cancelled, those sites being deemed 100 per cent rehabilitated—that is separate to the legacy wells program that relates to historic wells that we probably did not have the right regulatory approach in place for at the time.

Mr WRIGHT: That is my understanding but can I take that on notice to make absolutely certain that is the correct answer?

Answer 32:

In response to the question, "Were any new staff brought on in 2014 when the petroleum wells were incorporated into the Legacy Mines Program?", the answer is No. The answer provided was correct.

Mr JUSTIN FIELD: Absolutely.

In answers to budget estimates questions the Deputy Premier indicated expenditure on the program had been \$4 million. What does this figure represent? Is that an annual spend or is that the entire spend over a period of time?

Mr WRIGHT: That is an annual spend.

Mr JUSTIN FIELD: Is that the legacy wells and mines together or the legacy wells component?

Mr WRIGHT: That is the legacy wells and mines together.

Mr JUSTIN FIELD: Do you have a breakdown of the legacy wells versus the Legacy Mines Program?

Mr WRIGHT: I do not but I could give you that. I can tell you that under the legacy wells initiative, which is part of the Legacy Mines Program, 900 petroleum wells were assessed with 350 wells found to be legacy or abandoned. Of these, following a triage approach and risk assessment, 36 were identified as requiring further action. To date action has been taken on 28 of those 36 wells. All works for the full set of wells are planned to be finalised by 2021, subject to ongoing funding, obviously.

Answer 33

The following table provides actual expenditure for the years 2017-18 and 2018-19.

Financial year	2017-18	2018-19
Total Legacy Mines Program Spend (excl. GST)	\$4,277,694	\$3,623,349
Legacy Wells Initiative Spend (excl. GST)	\$723,646	\$1,553,923

The Hon. ADAM SEARLE: Where are those wells located?

Mr WRIGHT: I will take that on notice.

Answer 34

The remediated legacy wells, and wells planned for remediation, are located across NSW with aggregations in the Sydney Basin, Hunter Valley and to a lesser extent the North Coast. The Department will provide a state-wide map showing the location of legacy wells that are remediated and ones that require further action.

The Hon. ADAM SEARLE: Who is ostensibly responsible for them?

Mr WRIGHT: I will also take that on notice.

Answer 35

Individual land holders or land managers are ultimately responsible for legacy sites. The Legacy Mines Program assists landholders by delivering and managing works to reduce or eliminate risks to public health, safety and the environment from legacy mine sites.,

Mr JUSTIN FIELD: If you could as well give us an idea of which of those wells related to petroleum exploration, because I assume some of them could have been related to other—

Mr WRIGHT: I would think so, but we can do.

Mr JUSTIN FIELD: You might need to take this on notice as well. That is obviously some time to finalise 36 wells so there must be some substantial issues at some of these sites. Can you give us a sense of the sort of work that needs to be done at these sites?

Mr WRIGHT: I am happy to take that on notice unless Mr Ruming can comment.

Mr RUMING: I can comment only very generally, and then I would have to provide some more details. But basically if you put a methane meter over some of the holes they may have been leaking some methane because back in the 1970s or 1980s they may not have sealed the holes properly. For those that were not sealed properly you need to bring a drill rig in, drill them out and re-cement them properly so they are fully sealed in a

Answer 36.

In addition to the 'plug and abandonment' works described by Mr Ruming, other types of more minor works might include 'cut and caps' and cleaning up surface infrastructure in line with relevant Department codes.

Mr JUSTIN FIELD: Have any of those costs been able to be recovered or are they so legacy that any ability to recover costs has been lost?

Mr WRIGHT: The costs are not recovered from whoever the operator was at the time. The Legacy Mines Program is funded through the administration levy on mining and petroleum. That is the levy I talked about previously. In that sense it is fully funded by the current industry, rather than the historic industry.

The Hon. ADAM SEARLE: How much money is raised through that levy annually?

Mr WRIGHT: I would have to take that on notice for an exact figure, but I think it is about \$27 million.

Answer 37

The Annual Administrative Levy raised \$674,710 from petroleum titles in the financial year 2018 – 2019. The levy raised a total of \$23,172,345.72 in the financial year 2018 – 2019.

Mr JUSTIN FIELD: Of the remaining wells, I think you mentioned that about 350 of them had been identified as legacy or abandoned, 36 as requiring action and 28 as done. What is the status of the other 350-odd wells?

Mr WRIGHT: Based on the risk assessments our legacy mines team have done, there is no further action required on those sites at this point in time. We will continue to monitor the condition of those sites.

Mr JUSTIN FIELD: I guess that is where I was going to. What does that monitoring program look like? They could be all over the place. It is quite a process to get around to.

Mr WRIGHT: I do not have the detail on the operation of how that team does its site-based work, but I am happy to take that on notice.

Answer 38

The Legacy Wells Assessment project identified around 350 legacy wells of the total population of 893 wells drilled in NSW. Of these, only relatively few require works. Sites requiring works were mostly left suspended or simply abandoned by former operators.

The risk assessment project determined that the majority of legacy wells do not require further monitoring or action given the confidence in the existing decommissioning data or based on site inspection. In addition, the risks from any sites addressed through the works program require no further monitoring or action, due to confidence in the decommissioning methodology. Since the initial assessment, the Legacy Mines Program has established a program to inspect a number of additional sites to refine data. As new information or data becomes available, the program completes due diligence assessments of sites to inform its future work program, which could include both desktop and field-based monitoring and/or assessment.

Mr JUSTIN FIELD: If you could that would be great. What is the engagement with landholders about the ongoing management of those sites?

Mr WRIGHT: Anecdotally, my understanding is that the engagement with landholders is extremely good. In fact, a lot of those landholders are very happy to see that team arrive to deal with some of those abandoned well sites.

Mr JUSTIN FIELD: The industry is not that old. I think some of the initial exploration was conducted quite a few years ago, but most of it has been conducted since the mid-1990s. How is it that we came to have so many legacy wells? Mr Ruming mentioned that only 14 odd wells have been drilled in the last five years. We are talking about 350 abandoned wells. How did that happen?

Mr WRIGHT: I am not in a position to give you the history of petroleum exploration in New South Wales. My understanding is that some of those wells go back to the 1930s. Are you asking for some additional

Mr JUSTIN FIELD: It would be useful to get a sense of how many of those 350 wells are really legacy and how many—

Mr WRIGHT: An age profile for the 350?

Mr JUSTIN FIELD: Yes, that would be useful.

Mr WRIGHT: Insofar as we have that information, we can provide that. We will not necessarily know precisely when all of those wells were drilled.

Answer 39.

The first petroleum legacy wells in NSW were drilled in 1885, while the most recent legacy well was drilled in 2011. The majority of what are now legacy wells were drilled between 1960 and 1989 (237 wells). The table below provides a breakdown of when the legacy wells were drilled by decade.

Decade	Number of petroleum wells drilled in NSW now considered legacy
1880-1889	3
1890-1899	0
1900-1909	1
1910-1919	4
1920-1929	13
1930-1939	8
1940-1949	0
1950-1959	26
1960-1969	116
1970-1979	38
1980-1989	83
1990-1999	31
2000-2009	25
2010-2019	4

The Hon. ADAM SEARLE: In relation to recommendation 12, the Chief Scientist recommended that the Government have a think about the application of buffer zones for gas production. Where is the Government up to in relation to that?

Mr WRIGHT: As I indicated earlier, the Government harmonised the onshore petroleum mining Acts in 2015. As part of that process it considered whether there needed to be an alignment of legislation and regulation governing the extraction of methane as part of coal mining and the application of buffer zones for gas production and coal seam gas. The Government's determination on that matter was that the risks are managed consistently across the resources types under harmonised work health and safety mines and petroleum legislation, which I referenced earlier in response to recommendation 15. In relation to buffer zones, any future petroleum exploration licences will be subject to the strategic release framework, meaning that the Government will consider local and regional environmental, social and economic impacts before determining whether an area should be released for petroleum exploration.

The Hon. ADAM SEARLE: In relation to the proposal to explore for gas in the Pondie Range Trough and Bancannia Trough in the Far West of New South Wales, the Government's submission states that the Government is awaiting recommendations from the advisory board in its strategic release. What is that advice expected?

Mr WRIGHT: That is really a matter for the advisory body. I cannot give you a timeframe.

The Hon. ADAM SEARLE: I think Mr Wright took on notice questions from Mr Field about the enforcement of the ongoing mandatory training and certification requirements. Going back to recommendation 14, the Chief Scientist also made similar recommendations for public sector staff working in compliance, inspections and audits. The report recommended that they should be given suitable training and, where appropriate, accreditation. In relation to the implementation of that recommendation, what has the Government done for its

own staff? I note that your submission states that recommendation 14 is complete. What accreditation or training has been provided for your own inspectors and staff who are responsible for doing this work?

Mr WRIGHT: I will take that on notice.

Answer 40: I am advised:

Staff within the EPA have undertaken internal and external training including:

- Authorised Officer
- Noise Monitoring
- Sampling
- 360° Theatre coal seam gas training modules
 - CSG Introduction
 - CSG and Groundwater
 - Drilling and Well Integrity
- Gas Test Atmosphere
- Air Pollution and Control
- Certificate IV in Government Investigations
- Drafting Statutory Documents
- Investigative Interviewing
- Sediment and Erosion Control

Resources Regulator work health and safety inspectors who are to be appointed for petroleum exploration and production are required to hold qualifications in petroleum, process safety or mechanical engineering from an Australian university. Inspectors also participate in an induction and undertake certificate IV training in government inspections and/or government investigations when appointed, as well as ongoing training in relation to compliance and enforcement activities.

Mr JUSTIN FIELD: It would be remiss of me not to ask what the status of the Narrabri Gas Project is in the planning system while we are here?

Mr WRIGHT: That is a matter for the planning assessment division of the department.

Mr JUSTIN FIELD: Fair enough. I do not have too many other specific questions about the recommendations, but the Government's submission suggests that the Chief Scientist's recommendations have been fully implemented. I am looking for some acknowledgement from the Government that there are some critical elements that have not been implemented. Do you acknowledge that?

The Hon. TREVOR KHAN: You cannot ask them what the Government's position is. You can ask witnesses—

Mr JUSTIN FIELD: Mr Wright, do you agree that the recommendation around a single Act has not been met?

Mr WRIGHT: I would say that the Government's response to the Chief Scientist's recommendation in terms of a single Act has been completed.

Mr JUSTIN FIELD: Would you agree that the recommendation around the establishment of a standing expert advisory body on CSG to perform all of those function that were laid out has not been met?

Mr WRIGHT: The Government's response to that recommendation has been implemented.

The Hon. ADAM SEARLE: He was very careful. He did not say the Chief Scientist's recommendation was implemented.

Mr JUSTIN FIELD: That is right. I picked up on that. Would you agree that no-one in government is doing detailed analysis of the data that is held in the whole-of-environment data repository to assess the accumulative impacts of this industry?

Mr WRIGHT: We have taken that on notice.

The Hon. ADAM SEARLE: Mr Wright, while you are taking things on notice, when we were asking about the accumulative management and risk tool you said you were not aware of the tool that the Namoi

Catchment Management Authority developed. If we provide you with some information about that will you go away, have a look at it and come back to us about what the department's attitude is to that tool and whether it has a role in supporting the assessment of risks going forward?

Mr WRIGHT: We would be happy to have a look at that in more detail. I am sure there are other people in the department who are aware of that tool. I am just not personally aware of it.

Answer 41.

The Namoi Cumulative Risk Assessment Tool (NCRAT) in 2012 was an output of a scoping study into cumulative mining and coal seam gas (CSG) impacts commissioned by the then Namoi Catchment Management Authority (now North West Local Land Services). The NCRAT used geographical information systems (GIS) to identify and map major impacts associated with mining and CSG according to mine type and size.

NCRAT was useful in establishing methodologies and processes to inform the assessments of the impacts of gas and mining operations on natural resources. NCRAT is not currently being used to assess the potential risks of specific CSG or mining projects within the Namoi catchment as it has been superseded. More up to date, quality-controlled datasets are now available, including those contained in the SEED portal and those produced by the Bioregional Assessments and GISERA. Experienced GIS-users, informed by appropriate subject matter experts and the latest available data and science, can use similar predictive GIS-based tools to generate a similar form of modelling. Predictive GIS-based tools are an important part of environmental impact assessments for extractive industry projects and are well established. They are generally conservative in nature and include sensitivity and uncertainty analysis.

The Hon. TREVOR KHAN: Can I just say at this stage that I do not want members to feel that because we have not asked our voluminous Dixers they have to press on until 12.30 p.m. I want everyone to feel comfortable that we are all being cooperative.

The CHAIR: I also recognise the resolution that this is going to be free flowing. So Government members can feel free to jump in with their Dixers.

The Hon. TREVOR KHAN: No, I am happy to remain quiet.

Mr JUSTIN FIELD: I was going to read line by line how the submissions of Santos, APPEA and the Government are all the same. You do not want me to do that?

The Hon. ADAM SEARLE: That is a matter of record.

The Hon. PETER PRIMROSE: In response to that, part of the dilemma is that so many questions have been taken on notice by the witnesses, which is obviously causing issues. Normally in a free-flowing committee you would continue to ask questions that flow out of the answers. But we cannot really continue if the questions are all taken on notice.

The Hon. TREVOR KHAN: Again, I am not making any criticism of anyone. But I understand the position we are in. I am not sure if we passed the resolution on the seven days—

The Hon. ADAM SEARLE: We did.

The Hon. TREVOR KHAN: I just wonder if, in the context of some of the material that has been taken on notice, seven days is going to be adequate. Again, it is not a criticism of the witnesses.

The Hon. ADAM SEARLE: We can revisit that.

Mr JUSTIN FIELD: I do have one last question about the renewals. The indication was that the Government's policy was not to make a decision on the renewals of the currently expired PELs until some sort of decision had been arrived at on the Narrabri Gas Project. Obviously there are some conditions on those exploration licences. There are some minimum standards. Are all of the requirements required to be met by the companies holding those licences while they remain expired or have there been exemptions or grace given by the Government?

Mr WRIGHT: No exemptions given. Those authorisations obviously continue on foot. As I indicated earlier, the Government's position is that a determination on those renewals will not be made until there is a final decision taken on whether the Narrabri gas project does or does not proceed, at which time a decision on whether

those exploration licences are renewed will be subject to all of our guidelines in terms of assessing renewals.

Mr JUSTIN FIELD: But they will not be required to meet the Strategic Release Framework, which would only apply if they were new applications?

Mr WRIGHT: That is correct.

Mr JUSTIN FIELD: Thank you for that clarification.

The Hon. PETER PRIMROSE: My colleague the shadow Minister and others have asked detailed questions. I only have one in relation to recommendation 15. I know we have looked at legacy issues, but as I understand it one of the projects that was completed is the Petroleum Wells Investigation Project. Are you familiar with that?

Mr WRIGHT: I am familiar with—legacy was an issue under the Legacy Mines Program. That may well be the same thing.

The Hon. PETER PRIMROSE: As part of the Derelict Mines Program there was a Petroleum Wells Investigation Project that completed a report on the status and potential issue of legacy petroleum wells across the State. Has that been made public?

Mr WRIGHT: I am not sure. I can take that on notice.

The Hon. PETER PRIMROSE: If it has not, can you please indicate why it has not been made public in your response? Thank you.

Answer 42

The findings of the Legacy Wells Stage 1 / Stage 2 Report have not yet been released publicly, however the intention of the NSW Government is to do so in the new year with an update on progress to date.

The primary purpose of the report was to inform government decision-making regarding the ongoing management and remediation of legacy petroleum wells across the state. To ensure there was an open and transparent process in the management of legacy wells, the report was released to government agencies involved in the process.

These agencies include the Environmental Protection Authority, Office of Chief Scientist and Engineer, Crown Lands and WaterNSW.

The report will be made public via the Division of Resources and Geoscience's website at www.resourcesandgeoscience.nsw.gov.au.

The CHAIR: Thank you for attending this hearing. The Committee has resolved that answers to questions taken on notice be returned within seven days. The secretariat will contact you in relation to those questions that you have taken on notice.

The Hon. ADAM SEARLE: I have one further question on notice. Is it best to direct questions about the SEED portal to any of you here, or is that really an environment and science division responsibility?

Ms MACKEY: That is in the Energy, Environment and Science division, which the EPA sits under the umbrella of. I am happy to take them and make sure that information comes back to you.

The Hon. ADAM SEARLE: How much has been spent on developing and implementing it? What is the ongoing annual cost of that?

Ms MACKEY: Sure, okay.

Answer 43: SEED was approved in 2014 and to date the NSW Government has invested almost \$9.5 million in developing and implementing the system.

The forecast costs for running and further development of the SEED portal is approximately \$8 million over the four years from 2019/20 to 2022/23.

The Hon. ADAM SEARLE: Mr Wright, in relation to the risk management and assessment tools, who else in your agency might have better firsthand knowledge of that? If you could let us know on notice, that would be useful. Thank you.

Answer 44:

NSW Government agencies use various risk prediction, assessment and management methods and tools to evaluate proposals, analyse risk and inform compliance activities.

These include:

- risk-based codes of practice to assist proponents to mitigate risks
- risk-based licencing
- risk prediction and analysis as part of the environmental impact assessment process
- the application of approval conditions that require proponents to undertake ongoing risk assessment, management and public reporting, including requirements to:
 - comply with relevant criteria and performance measures
 - prepare detailed management plans and monitoring programs
 - update and verify model predictions
 - undertake periodic independent audits
 - report monitoring results and audit findings
 - make a wide range of information publicly available, including management plans and monitoring programs, monitoring results, annual review reports, and audit reports
- Applicable standards and guidelines, such as Australian Standard AS/NZS 31000:2009 Risk Management – Principles and Guidelines, inform these practices.

The key agencies include:

- the Department of Planning, Industry and Environment (DPIE) - Division of Resources and Geoscience (DRG); Planning and Assessments Group; Environment, Energy and Science Group; and the Water Group
- NSW Environment Protection Authority
- Resources Regulator
- Natural Resource Access Regulator.

All of these agencies are represented on the Gas Working Group.

The CHAIR: Thank you very much.

(The witnesses withdrew.)

The Committee adjourned at 11:22.