

The Honourable Justice
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By email: fracking.inquiry@nt.gov.au

Dear Justice Pepper,

Thank you for the opportunity to assist the panel for the Scientific Inquiry into Hydraulic Fracturing in accordance with your letter dated 6 July 2017. The Department has sought to address the request and provided the information we believe is relevant for the panel's deliberations. Additional information is provided on a data disk which has been submitted to the Inquiry's taskforce.

The information is being provided in good faith to the best of the Department's knowledge and in compliance with the *Inquiries Act*. There are no disclosure impediments with any of the information provided in association with our response to your referenced request.

1.1 Which "regulated activities" require a weed management plan (WMP) under the Petroleum Environment Regulations?

All regulated activities require a weed management plan or as mentioned in the DPIR submission (on page 193) weed management must be addressed in the Environment Management Plan. A list of regulated activities can be found in section 5 – Regulated Activity of the Petroleum (Environment) Regulations.

5 Regulated activity

- (1) A **regulated activity** is an activity or a stage of an activity:
 - (a) carried out, or proposed to be carried out, in connection with a technical works programme for a petroleum interest; and
 - (b) that has, or will have, an environmental impact or environmental risk.
- (2) Without limiting subregulation (1), a **regulated activity** includes the following operations or works:
 - (a) land clearing;
 - (b) earthworks (for example, cutting, filling, excavating or trenching);
 - (c) the construction, operation, modification, decommissioning, dismantling or removal of a well, pipeline or other facility;
 - (d) establishing seismic lines or drill pads;
 - (e) conducting seismic surveys;
 - (f) drilling;
 - (g) hydraulic fracturing;
 - (h) the release of a contaminant or waste material;
 - (i) the storage and transportation of petroleum and hazardous substances.

1.2 Is a WMP required any time the interest holder or its employees enter onto the permit area?

No. if the activity isn't a regulated activity a Weed Management Plan is not required. A list of activities that are not a regulated activity can be found in section 5, subsection (3)

- (3) None of the following is a regulated activity:
- (a) taking water samples;
 - (b) taking rock samples without the use of heavy machinery;
 - (c) walking or driving on existing roads or tracks in connection with an activity mentioned in paragraph (a) or (b);
 - (d) airborne surveys.

Any person accessing a pastoral lease must however give notice of access to the pastoralist and comply with any requirements (as may be agreed in a land access agreement).

1.3 I note in this regard that a WMP appears to be required for drilling and hydraulic fracturing activities; 1 DPIR submission, page 193.

Yes a weed management plan will be required for drilling and hydraulic fracturing activities as they are regulated activities.

2.1 How does DPIR determine whether or not a WMP under the Petroleum Environment Regulations has reduced the risk of weeds spreading to "acceptable" levels?

Flora identified by the Commonwealth Department of the Environment and Energy as Weeds of National Significance (WoNS) and the Northern Territory Department of Environment and Natural Resources' regional weed management plans and statutory weed management plans for specific weeds of concern must be included in a WMP. A regulated activity must identify weeds within the operational area and the risk of introducing and/or spread of weeds, and develop appropriate avoidance and mitigation plans to prevent the spread or introduction of weeds to the area. The operator must monitor the spread of weeds and take all reasonable efforts to eradicate the weed from the operational area if detected.

In the process of determining whether or not a WMP has reduced the risk of weeds spreading to an acceptable level, many criteria must be met including but not limited to:

- **Description of the environment;** This section should demonstrate the operators knowledge and understanding of environmental receptors that may be affected by the proposed activity (including any WoNS or specific statutory weeds identified).
 - **An assessment of the environmental impacts and environmental risks;** To demonstrate that an operator has systematically identified all the environmental risks and impacts likely to directly or indirectly arise from the activity, whether arising from normal operations or potential emergency conditions (incidents), accidental or otherwise.
 - **Common risks and impacts;** To demonstrate that an operator has systematically evaluated all of the environmental impacts likely to directly or indirectly arise from the activity, and has assessed their causes, likelihood, consequences and control measures.
- Note: Each risk/impact section below must have the following information within the EMP:
- Identification of all potential risks and impacts
 - Assessment of risks and impacts in terms of likelihood and consequence

- List the management measures that will be applied to reduce the risks and impacts to ALARP
 - Provide some justification that these risks and impacts will be managed to ALARP, and provide a commitment to manage these ongoing to ALARP
 - Provide residual risk ratings appropriately to the activity taking into consideration all factors and management measures.
- **Performance objectives, standards and measurement criteria**, Performance objectives define what is intended. Performance standards relate to the quality of performance:
 - Environmental Performance Objectives, to define objectives that an operator will be required to achieve to ensure environmental protection;
 - Environmental Performance Standards, to define standards that an operator will be required to achieve to ensure environmental protection;
 - Measurement Criteria, to define the measurement criteria for determining whether the objectives and standards have been met for the activity.
- **Requirement for implementation strategy**, a plan must include an implementation strategy, in accordance with this Part, for the regulated activity described in the plan. The goal of an implementation strategy is to direct, review and manage activities so that environmental risks and impacts are continually being reduced to ALARP and performance objectives and standards are met over the life of the activity, including:
 - Internal Monitoring and Auditing, measures to ensure environmental performance objectives and standards are met;
 - Systems Practices and Procedures;
 - Chain of Command including roles and responsibilities for specific personnel;
 - General Personal Awareness and Responsibilities;
 - Competencies and Training.
- **Recording and monitoring arrangements**, to ensure than an operator keeps a systematic auditable record of the results of the monitoring and auditing of the environmental performance of the activity against the objectives, standards and measurement criteria.
- **Reporting arrangements**, to ensure that the EMP identifies the system in place for routine environmental performance reporting to the Department (as determined appropriate for the activity between the operator and the Department). (Note: Depending on the duration and type of activity being conducted, different reporting strategies for routine activities can be implemented – these must be adequately identified in the EMP)
- **Rehabilitation**, to ensure that an operator undertakes the final step in linking processes and procedures together to the end of lifecycle of the project:
 - Rehabilitation criteria clearly defined;
 - Implementation strategy for decommissioning of equipment and facilities and environmental rehabilitation;
 - Rehabilitation security calculated and lodged;
 - Third party auditing as part of the Environmental Closeout procedures for Petroleum Activities is required.

The determined WoNS and Statutory weeds will form the focus of the above assessment in which risks and impacts of weed spread and introduction will be reduced through the implementation strategies put forward by the operator to meet the performance objectives, standards and measurement criteria that are measured, monitored and recorded through the plans in the above process.

The final conditions of the rehabilitated sites are surveyed for weeds by third party environmental consultants against the criteria laid out in the WMP to confirm objectives have been met. This must be complete before the DPIR will consider following the Environmental Closeout procedures for Petroleum Activities. (see Attachment 1 for the Environmental Closeout Procedure for Petroleum Activities)

2.2 My understanding is that the WMP, which will often form part of the EMP, is assessed using the checklist at page 203 of DPIR's submission.

Since the implementation of the new Petroleum Environment Regulations a new EMP assessment checklist is being created that is in line with legislation. On current and past projects, the checklist at page 203 of DPIR's submission was used for assessment by DPIR.

2.3 The assessment criteria appears to be whether the WMP is "consistent with DENR guidelines".

DENR guidelines include the weed management approaches for regional weed management plans and statutory weed management plans.

The 2016 Southern Amadeus 2D Seismic program was an application for an extensive 1300km to 2500km seismic survey in the Amadeus basin. The Santos EMP raised concerns for three Weeds of National Significance (WoNS), which are also declared weeds in the Amadeus Basin area, and an additional 28 Territory declared weeds (DLRM 2014b). These weeds formed the foundation of the WMP within the approved EMP.

2.4 Please provide a copy of these guidelines to the Inquiry and explain how compliance with the guidelines means that the WMP is approved under the Petroleum Environment Regulations.

The Australian government department of the Environment and Energy outlines the thirty-two Weeds of National Significance (WoNS) see:

<http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html>

Compliance with the WoNS works in with the strategic plan to define responsibilities and identify strategies and actions to control weed species. Coordination of these plans at a national level improves linkages between research and on-going control, and encourages commitment from a wide range of stakeholders. By outlining the WoNS in each application area weed management can be focused on weeds on a specific national risk basis to reduce the level of weed spread or introductions to as low as reasonable applicable.

The Northern Territory Department of Environment and Natural Resources manages the regional weed management plans and the statutory weed management plans for specific weeds of concern. See:

<https://nt.gov.au/environment/weeds/weed-management-planning#heading0>

Compliance with regional weed management plans help to prioritise weed management investments to get the best results based on surrounding land type, land uses and weed populations.

The regional weed management plans:

- Identify the region's priority weeds and associated pathways of spread to inform management priorities;
- Identify priority landscapes that may need prioritised protection from weed impacts like river corridors or sacred Aboriginal sites;

- Contain information on alert weeds that are not yet found in the region, but could become major issues if they establish.

Statutory weed management plans apply to ten weeds in the Northern Territory. Statutory Weed Management Plans form part of a strategic approach to flora management in the Northern Territory (NT) with the overall aim being to mitigate the damage caused by pest species in relation to, environmental, cultural and agricultural production values. Weed management plans are in place for:

- athel pine;
- bellyache bush;
- mimosa;
- gamba grass;
- chinee apple;
- prickly acacia;
- mesquite;
- cabomba;
- neem; and
- grader grass.

3. Further, please describe the consultation process, if any, between DENR and DPIR with respect to the assessment and approval of WMPs under the Petroleum Environment Regulations.

Before a program is submitted to DPIR, proponents have the option to contact DENR to understand weed management requirements or to discuss particular areas of concern with DPIR. Once a plan has been submitted to DPIR, the plan must meet the required federal and Territory weeds requirements before sending the application under a Notice of Intent (NoI) to NT EPA.

The NT EPA sends Nols to DENR (and other NT Government agencies) as part of their consultation process. DENR then has another opportunity to comment on the NoI. These comments are collated with all other areas of government consultation and are provided to DPIR by the NT EPA.

DPIR requires the operator to incorporate comments in the EMP as required prior to recommending the Environment Management Plan for approval to the Minister or delegate.

4.1 How does DPIR monitor interest holders' compliance with WMPs under the Petroleum Environment Regulations?

DPIR wishes to respond with the following recent example:

The 2016 Southern Amadeus 2D Seismic program conducted by Santos was monitored in accordance with the approved Environment Management Plan (EMP). This plan was approved under the *Petroleum Act* and the Schedule of onshore petroleum exploration and production requirements 2016.

Compliance monitoring for this seismic program included Petroleum Inspector site inspections, data requests and third party environmental rehabilitation site inspections.

This site was visited during a 2016 inspection by DPIR staff, where documentation and practices were verified in relation to weed management. Below are extractions from Santos's EMP in relation to documentation examined by DPIR staff including registers and records relating to weed management.

Table 1: Santos's Performance Objectives, Measurement Criteria, Operational Controls and Performance Standards, pg53-54 of the EMP.

Performance Objective	Operational Controls	Performance Standards	Measurement Criteria
Avoid the introduction or spread of exotic species and implement control measures as necessary	<ul style="list-style-type: none"> All vehicles, plant and equipment shall be cleaned and inspected prior to arrival at the project area. A register of vehicle / equipment / machinery cleaning is kept. Records of detection, monitoring or eradication of exotic weed or other pest or noxious species introduced by activities are kept. 	<ul style="list-style-type: none"> EHS09 – Pest Plants and Animals HSHS02 – Land Transportation 	<ul style="list-style-type: none"> A register of machinery / vehicle wash down or cleanliness prior to arrival at the project site is available. Weeds were not introduced into, or spread through project area as a result of seismic operations.

Table 2: Environment Plan Commitments Summary, APPENDIX B page 101/108 of the EMP:

Commitment	All	Planning	Line and Access Track Preparation	Seismic Operations	Camp sites and associated supplies	Line & Access Track Restoration	Monitoring of Selected Locations
Where relevant, weed management strategies are developed by Santos to ensure that vehicles and equipment are washed down if moving from areas of known weed infestations. Weed control measures are implemented as required.	✓	✓	✓	✓	✓	✓	✓
Records of detection, monitoring or eradication of exotic weed or other pest or noxious species introduced by activities are.	✓	✓	✓	✓	✓	✓	✓

As part of DPIRs Environmental Closeout Procedures for Petroleum Activities, the DPIR reviews all documentation submitted by the operator and verifies obligations with the approved EMP. A final third party site inspection and rehabilitation report is required one year after final (rehabilitation) works to compare site conditions with EMP rehabilitation requirements. Closeout procedures may also require the DPIR to inspect the site, again checking all EMP criteria are met and there are no further concerns from the pastoralist or landholder.

4.2 Please indicate whether DENR officers are involved in the monitoring and compliance process.

During the preparation and review of an Environmental Management Plan (EMP) either the proponent and/or DPIR's assessment and compliance team engage with the Department of Environment and Natural Resources (DENR).

Once an EMP is submitted to DPIR, it is forwarded as a Notice of Intent (NoI) to the NT EPA after assessment (and in most cases revision) incorporating comments and requirements from various government bodies including the weeds branch, rangelands, water branch (DENR), transport (Department of Infrastructure Planning and Logistics), Central Land Council/Northern Land Council and or the Aboriginal Affairs Protection Authority.

The NT EPA assess whether the proposal requires assessment under the *Environmental Assessment Act*. In doing so the NT EPA send out an e-mail to all government departments, including DENR, inviting comments on the proposal. Any comments received are then forwarded to DPIR.

While no exploration activity has required assessment under the *Environmental Assessment Act* (either through a Project Environment Report or an Environmental Impact Assessment), DPIR require that the proponent addresses the comments received prior to approving an EMP which is a pre-requisite for approval of any regulated activity.

Following the Environmental Closeout Procedure for Petroleum Activities the Department of Primary Industry and Resources (DPIR) will undertake an environmental site inspection. DPIR will require a report about the project rehabilitation. This report examines site conditions and compares environmental outcomes with what was laid out in the approved EMP. This report is shared with DENR as well as the NT EPA for comment, which is taken into consideration by DPIR in its assessment on site closeout and rehabilitation bond refund.

5. Please indicate whether there has been a prosecution, successful or otherwise, under s 117AAC of the Petroleum Act in relation to the spread of weeds. In other words, is the spread of weeds considered an environmental offence?

- The spread of weeds is considered an environmental offence. The Petroleum (Environment) Regulations Part 2, Division 8, section 32

31 Compliance with current plan

- (1) A person who carries out a regulated activity in a manner that contravenes the current plan for the activity commits an offence.

Maximum penalty: 200 penalty units.

- (2) An offence against subregulation (1) is a regulatory offence.
- (3) Subregulation (1) does not apply if the activity is being carried out in a manner that is consistent with a modification notified under regulation 22.

32 New or increased environmental impact or environmental risk

- (1) A person commits an offence if:

- (a) the person carries out a regulated activity; and
- (b) either of the following circumstances occurs:
- (i) a significant new environmental impact or environmental risk results from the activity;
 - (ii) a significant increase in an existing environmental impact or environmental risk results from the activity; and

- (c) the circumstance is not provided for in the current plan.

Maximum penalty: 200 penalty units.

- (2) Subregulation (1) does not apply in relation to an activity if the interest holder submits a proposed revision of the environment management plan in respect of the circumstances mentioned in subregulation (1)(b) and the Minister has not refused to approve the plan.

- Under section 31 the spread of weeds as a result from the activity would contravene an Environmental Management Plan. This impact as a result of the activity on the environment would be considered an offence.
- Under section 32 if the spread of weeds occurs as a result of the activity and the circumstance is not provided for in the current plan this is also considered an offence.
- No prosecution has been undertaken for any petroleum or energy pipeline activity in relation to weed management to date. There are no known infestations of weeds caused by onshore petroleum or energy pipeline operations.
- The return of environmental bonds has been withheld until appropriate processes and procedures in relation to weed management have been undertaken.

In 2014 Statoil Australia Pty Ltd (Statoil) adopted 3 suspended PetroFrontier Australia Pty Ltd well sites that were drilled and suspended in 2012 in the Georgina Basin. To ensure appropriate weed management and in consultation with pastoralists on the stations, Statoil hired local environmental consultants to work with the pastoral stations to effectively manage weed manifestations as described below:

- Argadargada station has been managing the manifestation of Acacia Georginae and was cautious that the spread of this weed (although not confirmed) could be a result of Petro Frontier's activities in 2012. This species of tree was removed and monitored by Statoil's third party consultants to the satisfaction of the pastoralist and DPIR. In 2016, DPIR produced a closeout report which has been endorsed by various departments including DENR.

6. Does DENR currently work (either directly or through DPIR) with interest holders under the Petroleum Act regarding the management of weeds both on and off their tenements?

The work that DENR does with interest holders is currently limited to providing advice to consultants developing weed management plans and commenting on Notices of Intent (NOI), environmental and weed management plans and other documents associated with development applications. This depends on these documents reaching DENR from DPIR either directly or through the NT EPA.

DPIR sends all environmental closeout reports to the DENR for consultation on the rehabilitation of sites. Comments are sent back to DPIR to then be taken into consideration prior to closeout of sites and refund of any environmental bond or security held by DPIR. This process started in January 2016 and every rehabilitated site has had a report written and shared with both the DENR and NT EPA.

7. Assuming a petroleum permittee or licensee is an "occupier" under the Weeds Act, how does DENR monitor and enforce compliance by an occupier?

Currently DENR does not monitor and enforce compliance by occupiers within the petroleum industry. However DENR can provide comment on all rehabilitation reports written by DPIR during the Environmental Closeout Procedures for Petroleum Activities,

8. How does the NT Government manage a weed infestation on an exploration permit site that was legally accessed and utilised by multiple parties, or multiple "occupiers"?

Weed management is the responsibility, under the *Weeds Management Act*, of the owner and occupier of land. Consequently the NT Government does not manage weed infestations except in emergency situations. Enforcement of compliance is problematic where multiple occupiers exist for the same site, as it is currently difficult or impossible to overcome technical and legal obstacles to establishing responsibility for a breach.

These problems could be significantly reduced through statutory improvements that provide for establishing responsibility, prior to commencement of works, for weed management over extended periods of several years. One possible mechanism for achieving this could be through agreements, including funding, between project proponents and the permanent occupiers of the land, such as land owners, pastoral lease holders or Aboriginal communities.

Under the petroleum environment regulations, petroleum and pipeline 'occupiers' must submit surveys of the project area identifying any pre-existing weeds. Should there be any infestation of weeds on the petroleum lease or pipeline easement or any weeds infestation that may be traced back to a petroleum lease or pipeline easement or access road, the proponent shall be held accountable under the petroleum, pipeline and weed management legislation.

Access agreements between land holders and proponents are mandated but do not contain specific government endorsed liability and indemnity provisions. Consideration may be given to indemnity provisions or principles to be considered by industry, pastoralists and traditional owners.

I trust that you will find the information provided comprehensive and useful. Should you require any further information please do not hesitate to contact the department through

Yours sincerely



Alister Trier
Chief Executive

Department of Primary Industry and
Resources

8 August 2017



Joanne Townsend
Chief Executive

Department of Environment and
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8 August 2017