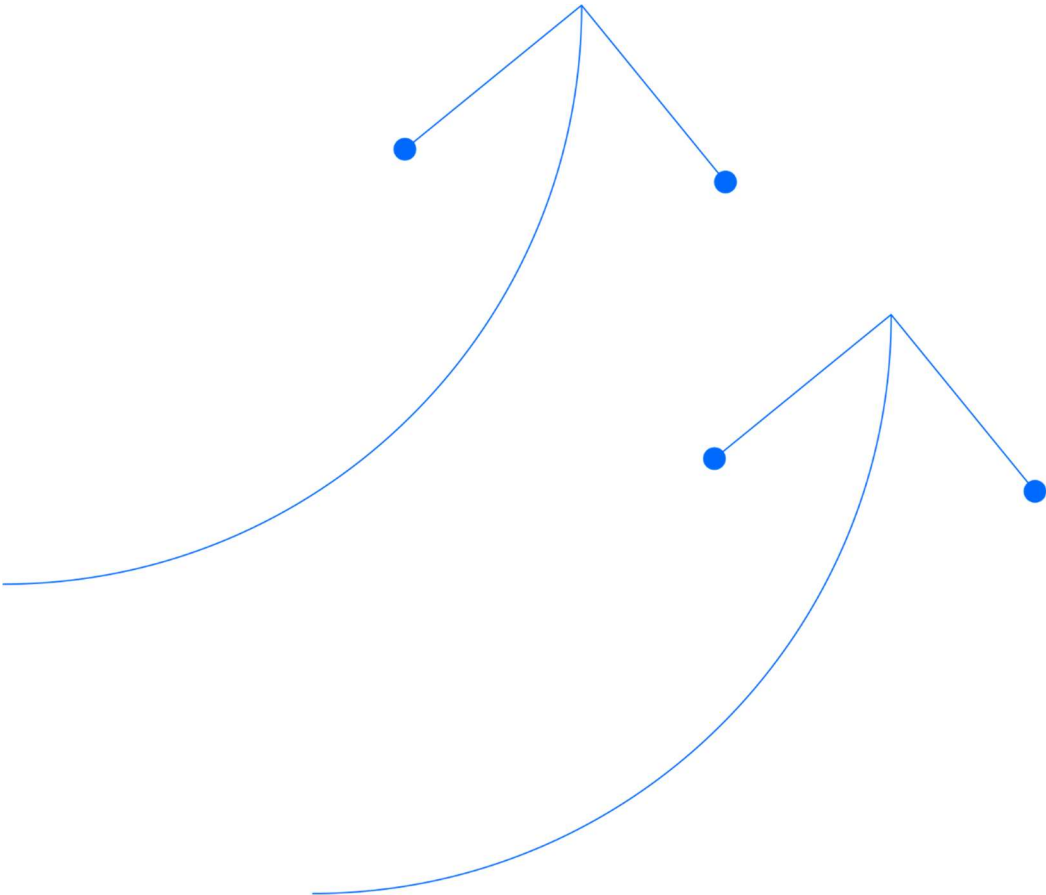


# APPENDIX E – SPILL MANAGEMENT PLAN

April 2026



# Contents

<b>Abbreviations and units</b>	<b>1</b>
<b>1. Purpose</b>	<b>3</b>
1.1. Consolidation of Previously Approved EMP	3
<b>2. Legislation</b>	<b>3</b>
<b>3. Potential spill materials</b>	<b>4</b>
3.1. Diesel and fuels	5
3.2. Drilling fluid	6
3.3. Residual drilling and completions fluids, cuttings and cement returns	6
3.4. Hydraulic fracture stimulation fluids	6
3.5. Chemical tracers	6
3.6. Flowback fluids	7
3.7. Grey water and sewage	7
<b>4. Spill risk assessment</b>	<b>7</b>
4.1. Potential spill scenarios	7
4.1.1. Environmental Spill Fate Analysis	8
<b>5. Potential impact to the environment</b>	<b>12</b>
5.1. Groundwater	12
5.2. Surface water	12
5.3. Soil	12
<b>6. Risk assessment process</b>	<b>12</b>
<b>7. Mitigations</b>	<b>13</b>
7.1. Minimising the risk of a spill	13
7.1.1. Santos Management System (SMS)	13
7.1.2. Well Operations Management Plan	13
7.2. Control measures	13
7.3. Assessment of spillage risk during transport	14
7.4. Contingency plan for bogged vehicles transporting chemicals and wastewater	14
7.5. Spill detection	15
<b>8. Spill response strategy</b>	<b>16</b>
8.1. Spill response actions	16
8.2. Contaminated material	17
8.3. Communication plan	17
8.3.1. Communication to personnel	17
8.3.2. Wellsite emergency response numbers	18
<b>9. Incident reporting</b>	<b>18</b>

9.1. Petroleum (Environment) Regulations incident reporting and recording	18
9.1.1. Reportable incidents	18
9.1.2. Recordable incidents	18
9.2. Waste Management and Pollution Control Act incident reporting	19
9.3. Notifiable incidents	19

**10. Chemicals and additive risk assessment** **19**

## Figures

Figure 1: Conceptual tank design .....	7
--	---

## Tables

Table 1 Estimate volumes and storage of chemicals and fuels .....	4
Table 2: Quality and quantity of spill scenarios .....	9
Table 3: Estimated fate analysis.....	12
Table 4: Environmental fate analysis.....	13
Table 5: Minimum detectable spill volumes .....	15

## Abbreviations and units

Acronym / Abbreviation	Description
ALARP	As low as reasonably practicable
ALRA	Aboriginal Land Rights Act
AAPA	Aboriginal Areas Protection Authority
APPEA	Australian Petroleum Production and Exploration Association
CLA	Cambrian Limestone Aquifer
Code	Code of Practice
CPESC	Certified Professional in Erosion and Sediment Control
DENR	Department of Environment and Natural Resources
DoEE	Department of Environment and Energy
DFIT	Diagnostic Fracture Injection Test
DPIR	Department of Primary Industry and Resources
D&C	Drilling and Completions
EC	Electrical Conductivity
EMP	Environmental Management Plan
EP	Exploration Permit
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPS	Environmental Performance Standards
ERA	Environmental Risk Assessment
EWCRP	Emergency Well Control Response Plan
ESD	Ecologically Sustainable Development
ha	Hectares
HFS	Hydraulic Fracture Stimulation
GISERA	Gas Industry Social and Environmental Research Alliance
km	Kilometre
LACA	Land Access Compensation Agreement
LWD	Logging While Hydraulic fracture program
NLC	Northern Land Council
m	Metres
MD	Measured Depth
MoC	Management of Change
ML	Megalitres
NRM	Natural Resource Management

NT	Northern Territory
NT EPA	Northern Territory Environmental Protection Authority
NVIS	National Vegetation Information System
Panel	Independent Scientific Panel
PL	Petroleum Lease
PMST	Commonwealth Protected Matters Search Tool
PPL	Petroleum Pipeline Licence
SEAAOC	South East Asia Australia Onshore Conference
SMS	Santos Limited's Santos Management System
SSCC	Sacred Site Clearance Certificate
TOC	Total Organic Content
TPWC Act	Territory Parks and Wildlife Conservation Act 2014
TVD	True Vertical Depth
TVDSS	True Vertical Depth referenced to sea-level (Australian Height Datum)
WOMP	Well Operations Management Plan
WoNS	Weed of National Significance

# 1. Purpose

This Spill Management Plan has been developed to support the Activity covered in Santos QNT Pty Ltd's (the Interest holder) Beetaloo Basin Appraisal Environmental Management Plan (EMP) (EP 161).

This plan has been developed following the *Code of Practice: Onshore Petroleum Activities in the Northern Territory – 2025*, herein referred to as the Code.

## 1.1. Consolidation of Previously Approved EMP

This Spill Management Plan applies to activities undertaken under the consolidated Environmental Management Plan (EMP) within EP161. It provides an overarching framework for spill prevention, response, monitoring and reporting for the Jibera South and Newcastle South well pads and associated civil works, and for any works on previously approved disturbance areas where ongoing obligations remain.

This SMP also applies to ongoing obligations associated with previously approved Santos EMPs within EP161, including activities limited to monitoring, maintenance and rehabilitation of legacy disturbance areas:

- STO7-4: EP161 2D Seismic and Ground Gravity Survey Program
- STO1-4: McArthur Basin Civil and Seismic Program. (including areas originally established via STO2-7: EP161 McArthur Basin Drilling Program)

For legacy disturbance areas covered by these earlier EMPs, activities are limited to routine monitoring, maintenance and rehabilitation. No additional disturbance is proposed under these consolidated scopes, and chemicals stored on-site will be limited to minimal quantities required for routine maintenance activities. This Spill Management Plan is the current controlling spill management document for all activities undertaken under this consolidated EMP, including works on previously approved disturbance areas where ongoing obligations remain.

Refer to Section 3.14 of the consolidated EMP for a full list of activities being undertaken under the consolidated EMP and incorporated approvals.

## 2. Legislation

Key legislation and documents that have been consulted in developing this plan are provided below:

- *Petroleum (Environment) Regulations 2016*: requires the Interest Holder to assess the environmental impacts and risks of the regulated Activity regarding any action proposed, including the prevention of a spill of the chemical or other substance
- *Code of Practice: Onshore Petroleum Activities in the Northern Territory*: covers the management of chemicals and wastewater on-site, including the use of secondary containment and the Interest Holder's spill management plan.
- *Code of Practice for Wastewater Management (2020)*: provides standards and guidance to ensure the management of wastewater.
- *Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act 2010*: covers the transportation of goods by road in the NT and licence requirements for vehicles and drivers carrying dangerous goods.
- *Workplace Health and Safety (National Uniform Legislation) Act 2011*: covers the storage and handling of chemicals on-site.
- *Waste Management and Pollution Control Act 1998*: covers the requirements for the transportation and disposal of waste within the Northern Territory, including the requirements for contractors, vehicles and facilities managing listed wastes to be licenced.

### 3. Potential spill materials

All chemicals used in Australia must be approved for use by the Commonwealth Government, Department of Health and listed on the Australian Inventory of Chemical Substances which is maintained under the National Industrial Chemicals Notification and Assessment Scheme.

Table 1 provides information about how fluids, chemicals and wastewater will be stored, transported and transferred during the Activity.

**Table 1 Estimate volumes and storage of chemicals and fuels**

Item	Est. volumes on site	Storage location	Containment	Management
Diesel Fuel	50,000 L	Fuel storage tanks	Secondary containment (double-skinned tanks)	<ul style="list-style-type: none"> <li>Bulk fuel will be stored within tanks equipped with safety features such as double skins or temporary bunding.</li> <li>Spill, leak, and drip trays will be used to address the immediate risk associated with refuelling operations.</li> <li>Any unused fuel at the end of the program will be transported from the site.</li> </ul>
General Equipment Maintenance Chemicals: <ul style="list-style-type: none"> <li>Hydraulic oil</li> <li>Lubricants</li> <li>Degreasers, etc.</li> </ul>	2,000 L	Storage tanks and drums	Secondary containment (double-skinned tanks or bunded containment area or bunded pallet storage)	<ul style="list-style-type: none"> <li>General equipment maintenance chemicals, including lubricants and liquid chemicals, will be transported, and stored within their original containers or in tankers equipped with safety features such as double skins (or temporary bunding).</li> <li>Spill, leak, and drip trays will be used to address the risk of minor drips and spills associated with filling operations.</li> <li>Any unrequired general equipment maintenance chemicals will be removed from the site at the end of the program.</li> </ul>
Drilling, Completions, and Cementing Additives	25,000 L	Storage tanks, drums, and bags	Secondary containment for liquid additives (bunded storage)	<ul style="list-style-type: none"> <li>Drilling and completions additives will be transported in their original containers.</li> <li>Liquid drilling and completions additives will be stored in/on temporary bunding, with a volume greater than 110 per cent of the largest container.</li> <li>Drilling fluids shall not contain benzene, toluene, ethylbenzene, or xylene (BTEX) above the levels prescribed in section B.5 of the Code.</li> <li>Any unrequired additives will be transported from the site at the end of the program in suitable containers.</li> </ul>
Drilling By-products: <ul style="list-style-type: none"> <li>Drilling fluids</li> <li>Completions fluids</li> <li>Cuttings</li> <li>Cement</li> </ul>	3,300 m <sup>3</sup>	Mud Tank System	Engineered tanks	<ul style="list-style-type: none"> <li>Drilling and completions rigs have open-topped tank systems designed to mix and circulate fluids. Tank volumes are monitored by rig crews during operations and emptied into sumps on-site at the completion of the Activity.</li> <li>Drilling and completions fluid will be made up of groundwater and drilling additives, and the residual drilling fluids (fluids no longer required for drilling purposes) will be stored in engineered, lined pits.</li> </ul>

				<ul style="list-style-type: none"> <li>• Drilling and completion fluids may be transferred between well pads for beneficial reuse.</li> <li>• Drill cuttings are brought to the surface during drilling works and will be stored in lined pits along with the residual drilling and completions fluids.</li> <li>• Residual drilling by-products will be tested for on-site disposal or be transported by HV for off-site disposal.</li> </ul>
Produced Fluid/ Flowback	14-28 ML per well	Above-ground tank	Secondary containment (double-lined/walled tanks or bunded containment area as per the Code)	<ul style="list-style-type: none"> <li>• Management will be done in accordance with Appendix F Wastewater Management Plan.</li> <li>• Produced Fluid generated during Extended Production Test (EPT) will be stored in tanks.</li> <li>• If produced fluid is recovered, above-ground tanks will be available for storage.</li> <li>• Volume of produced fluid in above ground open topped treatment tanks will be reduced by evaporation, when suitable conditions prevail, see Appendix F Wastewater Management Plan.</li> <li>• Produced fluids will be evaporated on-site, recycled or reused where possible (in accordance with this EMP) or transported off-site for disposal.</li> <li>• 1:1000 freeboard determined and maintained in line with Appendix F Wastewater Management Plan.</li> </ul>
Other Chemicals (excluding hydraulic fracture program additives)	10 m <sup>3</sup>	Laydown area	Oil storage skid or mechanics shack	<ul style="list-style-type: none"> <li>• Secondary containment (double skinned tank or bunded containment area or bunded pallet storage)</li> </ul>
Condensate and Oil	50,000 L	Condensate storage tanks	Secondary containment. (e.g. bunds or double-skinned tanks)	<ul style="list-style-type: none"> <li>• Appropriately transported and disposed of as required.</li> </ul>
Greywater and Sewage	Assumed that each worker requires 200 litres per day (while camp is operational)	Treatment system	Secondary containment (e.g., bunds or double-skinned tanks)	<ul style="list-style-type: none"> <li>• Santos will utilise a suitably qualified third-party contractor to design, install and operate the irrigation system in accordance with the <i>Code of Practice for Wastewater Management (2020)</i>.</li> <li>• Irrigation on-site within a designed and designated wastewater irrigation area as per the requirements of <i>Code of Practice for Wastewater Management (2020)</i>, or will be otherwise transported off site.</li> </ul>

### 3.1. Diesel and fuels

Hydraulic fluid and fuel drums are stored within portable bunding and bulk fuel is stored within tankers equipped with safety features such as double-skins (or temporary bunding), safety cut-off valves, top accessing etc. Spill leak and drip trays will be used to address the risk of minor drips and spills associated with re-fuelling operations.

## 3.2. Drilling fluid

No hydraulic fracture stimulation fluids that are used in the process contain benzene, toluene, ethylbenzene and xylene.

The proposed drilling fluid is comprised of predominately water with the remaining made up of salts and fluid additives. It is anticipated that approximately 60 megalitres of water will be required per well. A list of fluid additives potentially used in the Activity, including an assessment as to whether any materials (solid and liquid) used in, or produced from activities at a well site could be considered to be, or to contain, hazardous chemicals or those that may cause environmental harm are provided in Appendix D *Chemical Risk Assessment*. The Safety Data Sheets (SDS) for all products are available electronically on Santos Limited servers and will be located on the site and the location of them discussed during site inductions.

## 3.3. Residual drilling and completions fluids, cuttings and cement returns

Drilling and completions fluid will be made up of groundwater and drilling and completions additives, and the residual fluids (fluids no longer required) will be transferred by the rig equipment for storage and management in engineered, lined pits or tanks under the supervision of the Site Supervisor.

Residual drilling and completions fluids, cuttings and cement returns are described in the EMP as drilling by-products. Drilling by-products can cause environmental harm if released to the ground or water. Additives used in drilling and completions fluids can be considered hazardous, but as the resulting waste is primarily water and cuttings, the resulting waste is not considered to be hazardous.

Reduction, reuse, recycling and treatment options for the fluids and solids components of the by-products are described in Appendix F *Wastewater Management Plan*.

## 3.4. Hydraulic fracture stimulation fluids

All chemicals used in Australia must be approved for use by the Commonwealth Government, Department of Health and listed on the Australian Inventory of Chemical Substances which is maintained under the National Industrial Chemicals Notification and Assessment Scheme. Hydraulic fracturing fluids must not contain benzene, toluene, ethylbenzene, or xylene (BTEX) above the levels prescribed in Section.B.5 of this Code.

Hydraulic fracture stimulation (HFS) involves the injection of hydraulic fracturing fluids at high pressure into a cased wellbore, it is usually conducted over a number of intervals or stages along the production zone of the well. In hydraulic stimulation treatments, water accounts for more than 90 per cent of the mixture and sand or proppant accounts for about five to nine per cent. Chemicals generally account for less than one per cent of the mixture. A list of fluid additives potentially used in the activity are provided in the Appendix D *Chemical Risk Assessment*.

It is anticipated that approximately 145 megalitres of stimulation fluid will be required per horizontal well. This will be stored in engineered tanks within a bunded tank pad. The tank pad has been designed to have sufficient freeboard to contain rainfall inflow to an annual exceedance probability (AEP) of one in 1,000 (0.1 per cent) over the duration of the Activity. Figure 1 demonstrates freeboard allowances that will be maintained as per Appendix F *Wastewater Management Plan*. The *Wastewater Management Plan* contains a climate assessment to determine freeboard and other management requirements.

## 3.5. Chemical tracers

Chemical tracer tests will be applied at each fracture stimulation stage to determine the effectiveness and contribution of each stage. The chemical tracers are water soluble and are added to the stimulation fluid at the wellhead. Once the well has been cleaned out and commissioned, the concentration of chemical traces detected during flowback can be measured.

### 3.6. Flowback fluids

Hydraulic fracture stimulation occurs in stages and is a completion technique conducted after a well integrity assessment has been completed. At the completion of each stage (it is anticipated that between 20-75 stages may be stimulated) the well is plugged while the next stage is perforated and fractured. This creates an increase in pressure, at completion of all stages the well is allowed to flowback to the surface, generating flowback fluid. The flowback of stimulation fluid, now mixed with products in the shale formation, is conducted through a separator which separates and captures liquids and flares produced gas through the approved flare system in accordance with the EMP.

All flowback fluids will be stored in accordance with the *NT Code of Practice for Petroleum Activities*. The flowback period of wastewater collection will last up to 300 days after initial hydraulic stimulation. The anticipated flowback fluid volumes are approximately 14-28 megalitres per horizontal well, based off previous appraisal campaigns and a conservative assumption of 20 per cent returns.

Flowback fluids will be stored in engineered storage tanks held within a bunded tank pad that has been designed to hold sufficient freeboard, to contain rainfall inflow to an annual exceedance probability (AEP) of one in 1,000 (0.1 per cent) over the duration of the Activity. Figure 1 demonstrates freeboard allowances.

### 3.7. Grey water and sewage

Camp wastewater from laundry, showers and kitchen facilities is proposed to be piped to a designated irrigation area. Treated sewage is sewage that has passed through a sewage treatment system. The liquid component of the sewage treatment is either disposed of using an irrigation system or transported with the solid waste to an approved disposal facility. Macerated sewage is not treated sewage.

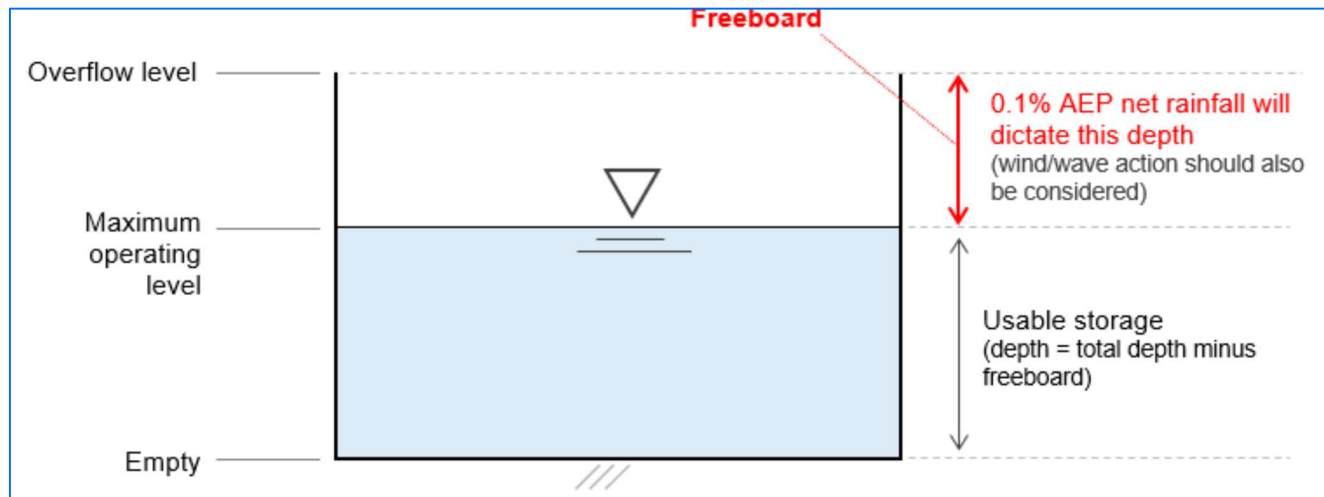


Figure 1: Conceptual tank design

## 4. Spill risk assessment

### 4.1. Potential spill scenarios

Spill scenarios have been assessed via a lifecycle assessment of chemicals used during the Beetaloo Basin Activity Appraisals program. This includes the following general categories:

- Transportation of chemicals – from the supplier warehouse to the well lease and between well leases
- Drilling Activities – containment of fluids both stored and within the drilling area

- Hydraulic fracturing activities – storage, usage (e.g. blending, injecting) and subsequent recovery of fluids (including storage) at the well lease and associated vendor chemical additives
- Disposal and Management – recovered vendor chemical additives in wastes and hydraulic fracturing flowback.

A lifecycle assessment has been conducted to evaluate the potential hazards associated with chemicals and the potential for exposures to human and environmental receptors from a number of pathways and spill scenarios. This is attached in Appendix A of the *Chemical Risk Assessment* (Appendix D). Potential sources of spills during hydraulic fracture activities are shown in Table 2.

Release of a volume larger than the capacity of the bunded area is considered unlikely given that water is being transferred between tanks to support evaporation and as such the maximum operational volume of water in the largest tank is not anticipated to be more than approximately 12 megalitres.

#### 4.1.1. Environmental Spill Fate Analysis

A spill modelling and environmental fate analysis has been conducted and is attached as Attachment B of Appendix D *Chemical Risk Assessment*. The modelling considers a worst-case scenario, where all management controls fail and the full extent of a spill event is realised. The demonstration of ALARP (As Low as Reasonably Practicable) is achieved when the management controls are applied to the scenario and site monitoring and any remediation can be anticipated.

The spill fate assessment considers the primary processes that control the extent of a liquid release on a permeable soil surface, including overland flow (runoff), evaporation and infiltration. In this assessment, overland flow is assessed along with infiltration. Infiltration into the unsaturated zone was assessed using a Green–Ampt based infiltration approach to estimate infiltration capacity and the potential for ponding/runoff to occur, with saturated infiltration assessed using Darcy-based flow where relevant. For instantaneous releases on flat surfaces, an analytical pooling approach was used to estimate the potential area of pooling/spreading on flat ground. The assessment adopts conservative assumptions for soil conditions and moisture state for the Project area, including relatively low permeability shallow lithology (siltstone/claystone) overlying karstic limestone.

The analysis also incorporates site-specific containment assumptions for the proposed tank pad layout. Using the proposed layout as a basis, it assumes a bund wall placed around the tank pad and sumps within the well pad area. In accordance with standard engineering practices, a conservative initiating event is assumed to involve a release from the largest tank within the compound (e.g. a leak from the base or wall). In this contained scenario, the liquid level in the tank is assumed to equilibrate with the liquid level within the compound, with a maximum ponded depth controlled by the bund wall height. These parameters are used to assess potential containment performance and, where relevant, infiltration from within the bunded area.

To demonstrate how spill outcomes change with increasing spill volume and to support the basis for worst-case outcomes, the assessment considers a range of release volumes and scenarios, including both contained and uncontained cases. Small scale releases of 1,000 L and 100,000 L were assessed as representative of releases occurring outside the bunded area (noting these are considered improbable based on the design of the well pad and containment). In addition, 1 ML and 12 ML releases were assessed as conservative uncontained scenarios (i.e. assuming containment structures are not present) to demonstrate the reduction in consequence achieved by the proposed bunding and tank pad containment design.

The results indicate that a 1,000 L release is predicted to be highly localised (approximately 0.1 ha), while a 100,000 L release may affect a larger but still localised area (up to approximately 4.8 ha). A catastrophic uncontained release from the largest tank could affect a substantially larger area (order up to ~220 ha), whereas with the proposed bunding the release is intended to be contained within the well pad footprint (approximately 2 ha). In the contained scenario, infiltration is the primary residual pathway; however, the analysis indicates vertical migration is constrained by low-permeability siltstone/claystone and finite fluid volume, with maximum vertical infiltration estimated to be less than 2.5 m for a contained 12 ML release over a 22-year timeframe.

Outcomes of this spill fate analysis have been summarised in Table 3 and Table 4 below and provided in greater detail in Attachment B of Appendix D *Chemical Risk Assessment*.

**Table 2: Quality and quantity of spill scenarios**

Potential spill scenario	Mechanisms	Location	Expected activity duration	Estimated quantity	Worst case quantity	Maximum time to locate spill	Quality of spill	Key controls
Diesel Refuelling	Coupling/hose failure Overfill fuel tank Storage tank failure.	Well pad	During active site works (mobilisation, civil works, drilling, HFS/testing and demobilisation) Apr 2026 – Mar 2027	<1,000 L	1,000 L	Immediate	Combustible C1	<ul style="list-style-type: none"> <li>• Drip trays</li> <li>• Spill kits</li> <li>• Secondary containment.</li> </ul>
Diesel Storage Tank	Tank failure.	Well pad	During periods when bulk fuel is stored onsite for active works Apr 2026 – Mar 2027	<50,000 L	50,000 L	2 hr	Combustible C1	<ul style="list-style-type: none"> <li>• Secondary containment</li> <li>• Routine inspections</li> <li>• Removed from site at end of Activity.</li> </ul>
Transport of Diesel	Loss of load Traffic accident Container failure.	Access tracks	During delivery/transport periods for active works Apr 2026 – Mar 2027	<25,000 L	25,000 L	Immediate	Combustible C1	<ul style="list-style-type: none"> <li>• Transport companies licenced</li> <li>• Spills cleaned up ASAP.</li> <li>• Vehicles maintained to the Original Equipment Manufacturer (OEM)'s specifications</li> <li>• Transport on unsealed roads during wet weather must be risk assessed and approved by the Site Supervisor.</li> </ul>
Handling of Chemicals	Coupling/hose/valve failure Overfill working tank.	Well pad	During periods of chemical use/handling for drilling and HFS/testing May 2026 – Jan 2027	<1,000 L	1,000 L	Immediate	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>• Secondary containment</li> <li>• Routine inspections</li> <li>• Spill kits.</li> </ul>
Storage of Chemicals	Container failure.	Well pad	During periods when chemicals are stored onsite for drilling/HFS/testing May 2026 – Jan 2027	<1,000 L	1,000 L	2 hr	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>• Secondary containment</li> <li>• Routine inspections</li> <li>• Spill kits</li> <li>• Removed from site at end of Activity.</li> </ul>

Potential spill scenario	Mechanisms	Location	Expected activity duration	Estimated quantity	Worst case quantity	Maximum time to locate spill	Quality of spill	Key controls
Transport of Chemical	Loss of load Traffic accident. Container failure.	Access tracks	During delivery/transport periods for drilling and HFS/testing May 2026 – Jan 2027	<25,000 L	25,000 L	Immediate	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>All transport companies licensed</li> <li>Spills cleaned up ASAP</li> <li>Transport vehicles maintained to OEM specifications</li> <li>Transport on unsealed roads during wet weather must be risk assessed and approved by the Site Supervisor.</li> </ul>
Handling Drilling By-Products	Spills during fluids transfers from the rig to the drilling pits.	Well pad	During drilling and well evaluation 4–8 weeks per well; May 2026 – Nov 2026	<5,000 L	<5,000 L	Immediate	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>Transfers completed under supervision</li> <li>Clean up equipment on-site.</li> </ul>
Handling Produced Fluid	Coupling, hoses, or valve failure Overfill container Tank Failure.	Well pad	During HFS/flowback/testing (3–6 weeks per well; Nov 2026 – Jan 2027) Production testing (Q1 2027 – ongoing)	<5,000 L	12ML <sup>1</sup>	Immediate	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>110% Secondary containment of largest tank within bunded tank pad</li> <li>Daily inspections during ongoing activities</li> <li>Compacted tank pads</li> <li>Leak detection monitoring</li> <li>0.1% AEP freeboard maintained during wet season.</li> </ul>
Transporting Drilling By-Products, Produced Fluid, Wastewater	Loss of load Traffic accident. Container failure.	Well pad	During drilling and well evaluation (May 2026 – Nov 2026); HFS/flowback/testing (Nov 2026 – Jan 2027); As required during production testing (Q1 2027 – ongoing)	<25,000 L	25,000 L	Immediate	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>All transport companies licensed</li> <li>Spills cleaned up ASAP</li> <li>Transport vehicles maintained to OEM specifications</li> <li>Transport on unsealed roads during wet weather must be risk assessed and approved by the Site Supervisor.</li> </ul>

<sup>1</sup> This assumes an unmitigated case, which is unlikely.

Potential spill scenario	Mechanisms	Location	Expected activity duration	Estimated quantity	Worst case quantity	Maximum time to locate spill	Quality of spill	Key controls
Drilling Rig Tanks overflow / failure	Overfill of drilling tanks.	Well pad	During drilling and well evaluation (4–8 weeks per well; May 2026 – Nov 2026)	<5,000 L	0.1 ML	Immediate	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>Tanks engineered and designed to mix, hold and manage drilling fluids</li> <li>Drilling tanks ongoing daily monitoring during operations, rig tank active system has live monitoring and fluid level alarms</li> <li>Rig crew member trained and competent in tank/fluid transfers.</li> <li>Spill kits available for spills</li> <li>Ability to transfer fluids to drilling pit with freeboard based on a 1–1,000-year rainfall event.</li> </ul>
Drilling Pit Overflow or Failure	Overfilling of a pit Structural failure of the embankment.	Well pad	During drilling and until pit is closed/reinstated 4–8 weeks per well; May 2026 – Nov 2026	<5,000 L	~2.5 ML	~12 h	Potentially hazardous chemicals	<ul style="list-style-type: none"> <li>Daily inspections during activities (via telemetry or in person)</li> <li>Drilling sump (Cuttings/fluid) freeboard based on a 1–1,000-year rainfall event as per Appendix F Waste Water Management Plan.</li> </ul>
Fugitive Gas	Well integrity failure.	Well pad	During drilling, HFS/testing and production testing; and during well surveillance/long-term build-up test where applicable May 2026 – up to 2 years post-testing	3 MMscf	3 MMscf	Immediate	Flammable gas	<ul style="list-style-type: none"> <li>Monitoring of well integrity</li> <li>Leak Detection Surveys.</li> </ul>
Hydraulic Fluid	Failure of storage container and/or hydraulic systems Spill.	Well pad	During periods when hydraulic equipment is in use (civil works, drilling, HFS/testing and demobilisation) Apr 2026 – Jan 2027	<1,000 L	3,800 L	2 hr	Not hazardous and not a Dangerous Good	<ul style="list-style-type: none"> <li>Secondary containment</li> <li>Removed from site at end of the Activity.</li> </ul>

**Table 3: Estimated fate analysis**

Potential spill scenario	Worst case quantity	Fate unmitigated	Extent unmitigated (upper bound) <sup>2</sup>	Extent mitigated
Diesel Refuelling	1,000 L	<1m deep surface soil.	≤0.1 ha	<ul style="list-style-type: none"> <li>• Contained within bunded area; recover and remove impacted material.</li> </ul>
Diesel Storage tank	50,000 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Contained within bunded area; recover and remove impacted material</li> </ul>
Transport of Diesel	25,000 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Immediate containment to prevent entry to drainage lines/soil; recover and remove impacted material.</li> </ul>
Handling of Chemicals	1,000 L	<1m deep surface soil.	≤0.1 ha	<ul style="list-style-type: none"> <li>• Contained within bunded area; recover and remove impacted material.</li> </ul>
Storage of Chemicals	1,000 L	<1m deep surface soil.	≤0.1 ha	<ul style="list-style-type: none"> <li>• Contained within bunded area; recover and remove impacted material as required.</li> </ul>
Transport of Chemical	25,000 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Immediate containment to prevent entry to drainage lines/soil; recover and remove impacted material.</li> </ul>
Handling Drilling By-Products	5000 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Immediate containment to prevent entry to drainage lines/soil; recover and remove impacted material.</li> </ul>
Handling Produced Fluid	100,000 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Within compacted tank pad, overland flow contained within bunded area; recovery/transfer to tanks as required.</li> <li>• Appendix D – Chemical Risk Assessment – Attachment B provides an assessment of hypothetical water tank release.</li> </ul>
Transporting Drilling By-Products, Produced Fluid, Wastewater	25,000 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Immediate containment to prevent entry to drainage lines/soil; recover and remove impacted material.</li> </ul>
Drilling Pit Overflow or Failure	~2.5 ML	<1m deep surface soil (uncontained)	Not explicitly modelled; bounded ~30.9 ha (1 ML) and ~220.9 ha (12 ML)	<ul style="list-style-type: none"> <li>• Freeboard controls and inspections reduce likelihood; if overtopping occurs, isolate/contain and recover impacted material; prevent migration to drainage lines/soil.</li> </ul>
Fugitive Gas	3 MMscf	Escape to atmosphere.	N/A	<ul style="list-style-type: none"> <li>• Negligible if well integrity maintained.</li> </ul>
Hydraulic Fluid	3,800 L	<1m deep surface soil.	≤4.8 ha	<ul style="list-style-type: none"> <li>• Contained within bunded area; recover and remove impacted material.</li> </ul>

<sup>2</sup> Unmitigated extent upper bounds are based on the CRA analytical comparator scenarios and are provided as order-of-magnitude extents for uncontained liquid releases.

**Table 4: Environmental fate analysis**

Potential spill scenario	Volume of spill (m <sup>3</sup> )	Extent of spill unmitigated area (m <sup>2</sup> )	Fate of spill unmitigated	Extent of spill mitigated
Loss of containment of flowback fluids storage tank – Scenario 1	1	121	Surface Soil <1m depth	Max extent of the spill would be contained within the bunded tank pad; recovery/transfer to tank as required.
Loss of containment of flowback fluids from storage tank - Scenario 2	100	47,954	Surface Soil <1m depth	Max extent of the spill would be contained within the bunded tank pad.
Loss of containment of flowback fluid from storage area - Scenario 3	1,000	308,569	Surface Soil <1m depth	Max extent of the spill would be contained within the bunded tank pad.
Loss of containment of flowback fluid- from storage area – Scenario 4 (unmitigated scenario only)	12,000	2,208,865	Soil to ~1.5-2.5m depth; if a continuous flow was available it would take 22 years to reach groundwater	Max extent of the spill would be contained within the bunded tank pad. In the context of leakage from the largest tank a total of 15,300m <sup>3</sup> could be contained within the bunded area.

## 5. Potential impact to the environment

Potential impacts to the environment as a result of a spill event include reduction in quality of groundwater, surface water or soils. These are discussed in more detail below.

### 5.1. Groundwater

Chemicals and fuels used during the hydraulic fracture program and flowback fluid stored in above ground engineered tanks have the potential to overflow or leak to surface, infiltrate the ground and migrate to shallow groundwater. This may affect groundwater quality, however the potential risk to groundwater from hypothetical water tank releases were assessed in Attachment B of Appendix D of the EMP. This assessment demonstrates that impacts to groundwater are extremely unlikely.

The only mode of potential impact is infiltration to groundwater identified is in the context of containing releases to the bunded area. Infiltration modelling provided in the Appendix D of the EMP was conducted using highly conservative assumptions and determined that a single release was unlikely to infiltrate to groundwater.

Under the worst-case scenario where the sumps maintained a water level of three metres (the maximum depth of the sump), it would take 130 days to move through the first one metre of siltstone and approximately 22 years to reach the water table. This is considered highly unrealistic as this would assume a three metre head is maintained for 22 years. Considering a transition from saturated (with head) to unsaturated infiltration modelling, it is considered that the maximum vertical penetrate of fluids would be less than two point five metres.

### 5.2. Surface water

Spills to surface have the potential to migrate to surface waters such as ephemeral watercourses. This has the potential to effect surface water quality and ecological values of that habitat.

### 5.3. Soil

For smaller spills and leaks (less than one metre squared), migration is likely to be contained within the surface soils and would be readily removed or remediated. If a larger spill were to occur, such as that from a bulk tanker, or a loss of containment from a flowback storage tank, there is the potential that product could infiltrate.

Shallow lithology obtained from exploration well Tanumbirini-1 reveals two main hydrogeological units; a relatively impermeable siltstone/claystone followed by limestone which has highly variable hydrogeological properties, but the potential for high permeability.

The modelling provided in Attachment B of Appendix D indicates that a worst-case spill scenario. based on the area of the bunded area (20,000 metres squared) and a porosity of point four, a total of eight megalitres of water will be contained within each one metre of the soil column. In this context, a release of 12 megalitres would only be sufficient to fully saturate one point five metres of the soil column.

## 6. Risk assessment process

An assessment of environmental impacts and environmental risks posed by a spill event has been carried out. For completeness and consistency with the environmental risk assessment of all activities, this is presented in Section 6 and Appendix O of the EMP.

## 7. Mitigations

### 7.1. Minimising the risk of a spill

#### 7.1.1. Santos Management System (SMS)

Santos manages the environmental impacts and risks of its activities through the implementation of SMS. The SMS provides a formal and consistent framework for all activities of Santos employees and contractors. This SMP and Appendix M *Emergency Response Plan* have been developed in consideration of the SMS.

In addition to this, the Santos

Limited Emergency Response Plan (ERP) and the Contractors ERP provide additional processes and procedures to minimise the risks of a spill.

#### 7.1.2. Well Operations Management Plan

A Well Operations Management Plan (WOMP) will be submitted to the regulator in line with the *Northern Territory's 2025 Code of Practice – Well Integrity*, for approval prior to spud of the first well activity to which the plan would apply. The WOMP will provide details on:

- Description of the well and well activities.
- Well integrity risk management process.
- Design, construction, operations and management of wells.
- Performance outcomes.
- Well lifecycle control measures.
- Performance standards for control measures.
- Performance objectives measurement criteria.
- Monitoring, audit and well integrity assurance (including Induced Seismicity Management Plan (ISMP)).
- Well Abandonment and suspension considerations.
- Responsibilities and competencies of contractors service providers.
- Source control and blowout contingency measures.

Fundamentally, the risks of spills associated with the activity are managed effectively through the implementation of the mitigation measures described in Section 6 of the EMP. The impacts and risks associated with chemical spills and wastewater leaks are well-understood and there are established practices in place to manage these risks. With the application of mitigation and management measures described in Section 6 of the EMP, the potential for chemical spills and fluid leaks is reduced to an acceptable level.

### 7.2. Control measures

The key control measures to manage spills associated with the Activity in the EMP are summarised in the list below. The key management controls include but are not limited to:

- All contaminated materials/waste stored on the well pad or at the campsite in appropriate containers or bunds to prevent off-site release.
- Bunds/drip trays must be used when re-fuelling and placed under hose connections and valves.
- Refuelling to occur in designated areas and minimise fuel transfer where possible, including no refuelling near riparian buffers.
- Secondary containment used at fluid additive, oil and fuel storage areas. Secondary containment will have the capacity to hold 110 per cent of the volume of the largest container stored in the area.
- During operations daily inspections of chemical storage area and secondary containment.

- Materials that escape primary containment or are otherwise spilled onto secondary containment shall be removed as soon as possible.
- Spill kits stocked and available on-site.
- Training and induction covering the importance of notifying of all spills and locations of spill kits.
- Fuel and lubricants will be stored and managed in accordance with AS1940.

### 7.3. Assessment of spillage risk during transport

The Code requires that during the wet season (1st October to 30th April), the transport of chemicals and wastewater on unsealed roads must not be undertaken unless the risk of spills is demonstrated to be ALARP and acceptable.

The risk of a chemical spill during the wet season may occur if a vehicle becomes bogged, tips over, or is damaged during extraction from a bogged position.

To demonstrate that the risks of a chemical or wastewater spill are reduced to ALARP and acceptable in these circumstances, the following key controls are to be put in place (as reflected in the Appendix O of the EMP):

During the wet season, chemicals or wastewater is not to be transported during a significant rain event (greater than 300 millimetres over four days forecast as per Appendix F of the *Wastewater Management Plan*).

Transport of chemicals and wastewater will not occur if water crossings have greater than 30 centimetres of flowing water at the time of proposed transport.

During the wet season, if chemicals or wastewater is to be transported, a Santos Road Status Report will be completed for unsealed roads within the Project Area. This report details which roads are open, closed, and the hazards and controls based on site-specific conditions as assessed by the site supervisor.

In the event of a chemical or wastewater transport vehicle becoming bogged, the contingency plan for bogged vehicles (Section 7.4) is to be followed so extraction works are conducted safely and prevent loss of contents and the *Emergency Response Plan* (Section 5 – common scenarios) is implemented in case of a release of chemicals.

With these controls in place, the transport of chemicals is deemed to be reduced to ALARP and acceptable in the wet season.

### 7.4. Contingency plan for bogged vehicles transporting chemicals and wastewater

If a vehicle becomes bogged, extraction activities must be conducted safely and in a manner that prevents loss of contents.

Vehicle extraction must be conducted as follows:

- If anyone requires medical attention or the incident cannot be rectified using existing resources, contact Emergency Services 000.
- Notify the line manager of incident and ask for assistance. Never attempt extraction without assistance.
- Ensure rescue vehicles can safely reach the incident location. Stop traffic or divert away from the incident if required.
- Complete Job Hazard Analysis before attempting extraction. Take action to mitigate hazards identified.
- If safe, removal of chemicals from the bogged vehicle may be necessary before extraction.
- Chemicals and wastewater may have escaped from containment on the bogged vehicle
- If safe, use vehicle placarding and HAZCHEM code to identify chemical spill.
- Refer to Safety Data Sheets for safety and environmental risks that must be managed.
- Ensure all personnel are safe from fumes, smoke, and other chemical hazards.

- Use safety equipment, if required, to extract personnel from bogged vehicle.
- Be aware of potential for fires. Keep ignition sources and personnel away if there is a risk of fire from flammable or combustible chemical spills.
- If safe, activate chemical containment action:
  - Wear appropriate PPE, consult the SDS.
  - If safe and possible, stop spill at source. Shut off valves.
  - If spill pooling, try to contain with spill kit, soil, or other bunds to prevent it escaping to drainage and waterways.
- Clean up:
  - Retrieve as much as possible at source with absorbents.
  - Remove contaminated soil. Seal in labelled containers and transport by licensed contractor to licensed facility for disposal.

## 7.5. Spill detection

Monitoring measures used to manage risk during the proposed Activity are presented in Table 66 and Table 67 of the EMP. Spill monitoring includes:

- Weekly visual inspections in person or remotely with telemetry of secondary containment, when in use, during the dry season.
- Daily visual inspections of secondary containment in person or remotely with telemetry, when in use, during the wet season.

The minimum spill volume likely to be detected between monitoring events will vary depending on the monitoring method and the containment configuration. The indicative minimum detectable volumes for monitoring events have been detailed in Table 5 below.

**Table 5: Minimum detectable spill volumes**

Monitoring method / asset	Frequency during operational phases	Minimum spill volume likely to be detected between monitoring events
Secondary containment (bunds) – visual inspection (in person or remotely)	Daily wet season / weekly dry season	Any visible pooling/accumulation within bund (no fixed volume)
Chemical/fuel storage area (within bund) – visual inspection	Daily wet season / weekly dry season	~5 – 10 L (visible pooling/staining within bund/hardstand)
Tanks/sumps/pits – level monitoring	Daily wet season / weekly dry season	Detectable by abnormal level trend relative to operating condition; practical detection threshold depends on sensor configuration and storage geometry

During non-operational periods where no personnel are on site, non-essential hazardous chemicals are to be moved off-site at the completion of each operational phase where practicable. Any hazardous materials required to be retained on site will be contained in suitable chemical storage areas (e.g. bunded). Chemical storage will be inspected pre/post wet season.

## 8. Spill response strategy

### 8.1. Spill response actions

Construction, drilling, completions and EPT contractors working under this EMP will follow their company procedures that supplement the requirements of this plan. The listed actions below are to guide spill containment and response.

Small spills are localised spills that can be contained and cleaned up using onsite resources (e.g. spill kits) do not leave the immediate work area and material can be disposed of in segregated waste bins. For the purposes of this SMP, small spills are defined as:

- Hydrocarbons or environmentally hazardous chemicals  $\leq 20$  L; and
- Wastewater, drilling fluids or produced fluids  $\leq 200$  L.

Large spills are spills that exceed the small spill thresholds and/or have the potential to spread beyond the immediate work area, enter drainage lines, or impact sensitive environments. For the purposes of this SMP, large spills are defined as:

- Hydrocarbons or environmentally hazardous chemicals  $> 20$  L; and/or
- Wastewater, drilling fluids or produced fluids  $> 200$  L; or any spill of any volume that leaves secondary containment or is likely to enter a drainage line.

For larger spills utilise Appendix M *Emergency Response Plan*, and:

- Move all people out of harm's way.
- Prevent people, livestock, and wildlife access to hazardous materials through fencing or other barriers.
- Alert others nearby.
- Assess the situation:
  - Determine what substances are involved. The substance must be known before taking any action (refer to Material Safety Data Sheet).
  - Assess the potential receptors (people and the environment) and identify if additional support is required.
- Where applicable, remove any possible risk-escalating factors (e.g., ignition hazards for inflammable/combustible spills).
- Approach the spill from up-wind to reduce fume risks and isolate the spill source (close containment valve or similar).
- Ensure appropriate control requirements are met (e.g., Personal Protective Equipment, first aid support) before conducting spill clean-up.
- If it is safe and possible to do so, stop the source of the leak and contain the spill using on-site equipment to prevent the spill from exiting the site boundary or entering a waterway or sensitive feature.
- Recover any free liquid and contaminated material as soon as practicable to mitigate infiltration.
  - Store contaminated material in a manner to minimise the risk of additional contamination.
  - For level two spills and higher, the Site Supervisor shall be notified as soon as it is safe to do so, but within two hours of the spill.
  - The Interest Holder is to ensure that appropriate regulatory incident reporting requirements are actioned in accordance with Section 9 of this document and Section 8.5 of the EMP.
- For level two spills and higher, the Interest Holder will seek expertise on whether additional testing and remediation are required upon completion of the initial containment and clean-up. This consideration will be undertaken following the *National Environment Protection Assessment of Site Contamination Measure* [ASC NEPM, 1999]. Spill levels are defined in Section 3.1 of Appendix M *Emergency Response Plan*.

- Upon rectifying a reportable spill, an incident investigation shall be completed as per the Petroleum (Environment) Regulations; this shall include:
  - An investigation into the incident.
  - Actions taken to mitigate the impact.
  - Ongoing monitoring and maintenance to ensure the site is stable and non-polluting.
  - Actions taken to prevent future similar incidents from occurring again.

## 8.2. Contaminated material

Contaminated material disposal will consider the following principles while being completed:

- The storage of contaminated material must be undertaken in a manner that minimises additional contamination.
- Off-site disposal must be undertaken following the NT Waste Management and Pollution Control Act 1998.
- All listed waste transportation shall be undertaken by licenced contractors and be tracked and disposed of at approved waste management facilities.

## 8.3. Communication plan

### 8.3.1. Communication to personnel

Spill prevention and monitoring strategies will be communicated to personnel working on the Beetaloo Basin Appraisal program via:

- This Plan.
- The EMP.
- Site Inductions.
- Safety Meetings.
- Toolbox Talks.
- Daily Meetings.
- Communications about a spill will be undertaken in accordance with the Emergency Communications section of the *Emergency Response Plan*. This includes the following steps:
  - Incident Management Team Leader (IMTL) informed of incident and establishes contact with affected site to be provided with details of the incident, understanding of severity and response resource requirements.
  - Assessment of the emergency and severity is made (based on information from the affected site) and an emergency/incident response level determined.
  - IMT activated to provide support to the affected site or facilities.
  - D&C Superintendent attends the Incident Management Team (IMT) (where practicable) and liaises with IMTL to provide technical input and guidance.
  - IMTL maintains open communications with the affected site - On-Scene Commander (OSC).
  - Affected site OSC supervises the Field Response Team (FRT).
  - Other D&C personnel (roles) may be conscripted into the IMT as required.

### 8.3.2. Wellsite emergency response numbers

Maintaining key well information and contact details is critical to ensure a timely response to an emergency. The aid in this Wellsite's Emergency Response Number (ERN) are provided for and available at each wellsite location include the following details:

- Name of the well.
- Wellsite and camp site location coordinates and driving route.
- Estimated travel distance to the nearest medical support.
- Contact details for contractor personnel (mobile phone and satellite phone).
- Contact details of local Santos base (if relevant) and nearest emergency response support facilities.

## 9. Incident reporting

Incidents may require reporting under the *Petroleum (Environment) Regulations* and the *Waste Management and Pollution Control Act*. Refer to Section 8.5 – Incident reporting in the EMP.

### 9.1. Petroleum (Environment) Regulations incident reporting and recording

#### 9.1.1. Reportable incidents

The *Petroleum (Environment) Regulations* define a reportable incident as an incident arising from a regulated Activity that has caused, or has the potential to cause, material environmental harm or significant environmental harm as defined under the Petroleum Act. An interest holder must notify (this may be verbally or in writing) the Minister of a reportable incident as soon as practicable, but no later than two hours after the first occurrence of the incident or after the time the interest holder becomes aware of the incident.

The notification must specify matters set out in regulation 33(3)(c). If notification is given verbally, this must be followed by written notification within 24 hours, also specifying matters set out in regulation 33(3)(c).

A written initial report must be given to the Minister as soon as practicable, but no later than within three days after the reportable incident first occurs. A final report must be given to the Minister as soon as practicable, but no later than 30 days after the clean up or rehabilitation is complete. Interim reports must be given to the Minister at 90-day intervals from when the initial report was given or as agreed in writing with the Minister. All reports must include the information set out in regulation 34.

#### 9.1.2. Recordable incidents

The *Petroleum (Environment) Regulations* define a recordable incident as an incident arising from the regulated Activity that has resulted in one or more of the following:

- has resulted in an environmental impact or environmental risk not specified in the current plan for the Activity; or
- has resulted in a contravention of an environmental performance standard specified in the current plan for the Activity; or
- is inconsistent with an environmental outcome specified in the current plan for the Activity and is not a reportable incident

For each reporting period, the Interest Holder must give the relevant Minister a written report about recordable incidents as soon as practicable, but no later than 15 days after the end of the reporting period. The reporting period is as agreed in writing with the Minister or every 90 days after the day on which the EMP is approved. Reports must contain the information set out in regulation 35(3)(c).

## 9.2. Waste Management and Pollution Control Act incident reporting

Following the *Waste Management and Pollution Control (WMPC) Act*, where contaminants or waste is not confined within the land on which the Activity is undertaken (i.e., the approved disturbance areas where the Activity is occurring), the Interest Holder will notify the EPA of any incident causing or threatening to cause pollution as soon as practicable, but no less than 24 hours after becoming aware of the incident.

## 9.3. Notifiable incidents

Under the WMPC Act, a notifiable incident is defined as an incident that causes, threatens, or may threaten to cause pollution resulting in material environmental harm or serious environmental harm. The notification must include the following details:

- The incident causing or threatening to cause pollution.
- The place where the incident occurred.
- The date and time of the incident.
- How the pollution has occurred, is occurring or may occur.
- The attempts made to prevent, reduce, control, rectify or clean up the pollution or resultant environmental harm caused or threatening to be caused by the incident.
- The identity of the person notifying.
- The notification shall be made to the NT EPA Pollution Hotline 1800 064 567 as soon as practicable, but no later than 24 hours after the first occurrence of the incident or after the time the interest holder becomes aware of the incident.

# 10. Chemicals and additive risk assessment

Drilling and Completions fluids are selected and used in accordance with their designed function, the manufacturer's recommendations, and relevant SDS. Drilling fluid requirements are covered in the WOMP. The WOMP will be submitted to the regulator in line with the Northern Territory's 2025 Code of Practice – Well Integrity, for approval prior to spud of the first well activity to which the plan would apply.

Appendix D of the EMP *Chemical Risk Assessment* provides a list of additives that may be used on the wells being drilled under this EMP, to enable an assessment of what chemicals may be hazardous or have the potential to cause environmental harm. The hazardous chemical analysis was conducted by reviewing representative SDS for chemical additives within a primary function/description category. If a functional group contains additives that were deemed hazardous to the environmental, considerations were added along with the recommended handling and storage considerations to enable safe use on-site.

It is to be noted that Appendix D *Chemical Risk Assessment* comprise the best available information as at the time of submission of the EMP, but aspects may change depending on available supply and sub-contractor preferences.

As per the Code, additives will be selected and managed to ensure they are used in accordance with the manufacturer's recommendations and relevant SDS and the names and volumes will be recorded.

Drilling and Completions additive names, to achieve the described function, may change based on the sub-contractor or supplier of the additives, and availability.

Any change to the list of chemicals or and their hazardousness will need to be formalised through a modification or revision to the EMP in accordance with the PER, before the change is enacted.