Interest Holder	Imperial Oil and Gas Pty Ltd	EMP Title	Environment Management Plan Imperial Oil & Gas 2021-2025 EP187 Work Program NT Exploration Permit (EP) 187	Unique EMP ID No.	IMP4-3	Mod No.		Date	Revised submission 14/12/2023
Brief Description	Imperial seeks to modify how flowback fluid storage and transportation will occur in IMP4-3. The proposed modification is to allow the transfer of flowback fluid from the Carpentaria 1 above ground tank to the Carpentaria 2 above ground tank, both of which are on in the same Exploration Permit, but on different well pads. Transferring fluid will be completed by transferring fluids with hoses and pipes to and from the tanks of a heavy vehicle / tanker. The approved IMP 4.3 details controls and outlines potential spill scenarios tied to the handling and transfer of wastewater. Given the comparable environmental risks linked with the handling and transfer of wastewater —be it from the wellhead, flowline, or a truck — this Reg 22 proposal seeks to allow for transfer of wastewater into the Carpentaria 2 above-ground tank. Importantly, this change does not introduce any new environmental risks or impacts beyond what the approved EMP already addresses and is consistent with the Code of Practice: Onshore Petroleum Activities in the Northern Territory (the Code) as per Section A of this Reg 22 submission. To enhance the clarity of this notice, we have re-assessed the risks associated with the activity and provided additional control to the spill scenario. It has been confirmed with Cirqa (writer of Appendix 13 Traffic Impact Assessment) that 20 additional truck movements per annum transferring wastewater will have no impact on the outcome of the original Traffic Impact Assessment. Furthermore, we have incorporated an additional auditable measurement criterion into the environmental outcomes, performance, and measurement standards. This amendment will facilitate more efficient fluid management by allowing the above-ground tank at Carpentaria 2 & 3 to receive fluid for evaporation and lessen the need for long-distance interstate fluid transportation, and consequently reduce environmental risk and impact.							
Geospatial Files Included?	Not applicable								

Does the proposed change result in a new, or increased, potential or actual environmental impact or risk?	If an INCREASE in an existing potential or actual environmental impact or risk is it provided for in the approved EMP?	Does the proposed change require additional mitigation measures to be included?	Has additional stakeholder engagement been conducted?	Does it require additional environmental performance standards and measurement criteria?	Does it affect compliance with Sacred Site Authority Certificates?	Does it affect current rehabilitation, weed, fire, wastewater, erosion and sediment control, spill or emergency response plans?	Will the environmental outcome continue to be achieved and will the impacts and risks be managed to ALARP and acceptable?
No	Not Applicable	Yes. See below for detail.	No	Yes. See below for detail.	No	Yes. Spill Management Plan and Emergency Response Plan.	Yes. See Section C of this submission.

<table>
<tr><th>Current EMP Text</th><th>Amended EMP Text</th></tr>
<tr><td>

EMP Section 3.1 Overview of the activities proposed
Table 5: Key components of the regulated activity

Component	Proposed
Truck load -out: Wastewater Transport	Average 8 trucks per well

</td><td>

EMP Section 3.1 Overview of the activities proposed
Table 5: Key components of the regulated activity

Amend EMP table to insert an additional line item under 'Traffic Movements':

Component	Proposed
Truck load -out: Wastewater Transport	Average 8 trucks per well
Wastewater transfer	20 truck movements per annum

</td></tr>
<tr><td>

EMP Section 3.3 Vehicle Movements and traffic
Table 9: Estimated operational trucking requirements

Activity	Total Truck Movements (per Activity)	No Weeks per Activity	Average Truck Movements per Week-During that Activity
HF Materials	130	2	65

</td><td>

EMP Section 3.3 Vehicle Movements and traffic
Table 9: Estimated operational trucking requirements

Amend EMP table to insert an additional line item:

Activity	Total Truck Movements (per Activity)	No Weeks per Activity	Average Truck Movements per Week-During that Activity
HF Materials	130	2	65
Wastewater transfer	20	2	10

</td></tr>
<tr><td>

EMP Section 7.7
Table 31: Environmental Outcomes, Performance & Measurement – Terrestrial Fauna and Flora

Environmental Performance Outcome: Ensure that sensitive receptors, significant conservation areas, or listed species or their habitat are not permanently affected by the conduct of the regulated activity

Activity: Waste handling and disposal

Environmental Performance Standard: *Waste transported appropriately*

Measurement criteria:
• *All listed waste transported by licensed waste contractors*
• *Listed waste transfer records show Environment Protection Licence (EPL) number of waste contractor*
• *Waste records show the volume of wastewater removed from the well site for off-site disposal by a licensed waste contractor*
• *Waste records show removal of all putrescible waste from site*

</td><td>

EMP Section 7.7
Table 31: Environmental Outcomes, Performance & Measurement – Terrestrial Fauna and Flora

Environmental Performance Outcome: Ensure that sensitive receptors, significant conservation areas, or listed species or their habitat are not permanently affected by the conduct of the regulated activity

Amend EMP text to include:

Additional **Measurement criteria:**

• *Record of completed 'Transport of Wastewater or Chemicals Checklist' demonstrates that wastewater transported in the wet season has been assessed as appropriate.*

</td></tr>
</table>

•*No putrescible waste is disposed of on-site* **Responsibility:** *Project Manager*	
Appendix 04 Risk Assessment – Row 1 **Risk Source:** Vehicle and machinery movements. **Potential Impact:** Soil compaction. **Risk Management Controls:** **Preventative** • Seismic acquisition will occur only in the dry season to reduce the potential for compaction • Drive only on designated access roads or tracks • Preference to use previously disturbed areas, and align linear infrastructure along a common alignment • Access tracks will be assessed daily during periods of site activity for the impacts of wet weather • Access tracks will be closed to Imperial heavy vehicles, light vehicles or both, based on this assessment • Load Bearing capacity of access tracks will be assessed after rain events **Mitigative** • Areas to be rehabilitated to reduce impacts associated with damage and compaction	**Appendix 04 Risk Assessment – Row 1** **Risk Source:** Vehicle and machinery movements. **Potential Impact:** Soil compaction. **Risk Management Controls:** Amend EMP text to remove control: • Load Bearing capacity of access tracks will be assessed after rain events Modify EMP text to detail daily assessment process of access tracks : • Access tracks will be assessed daily during periods of site activity for the impacts of wet weather. Assessment includes inspection of: o Visual check that ESC measures are in place and functional o Visual check for potholes, ruts, cracks in the tracks. o Visual check of any flowing water across the tracks.
Appendix 04 Risk Assessment – Row 47 **Risk Source:** Transport vehicle accident or stuck due to mechanical or weather events. **Potential Impact:** Reduction in surface and groundwater quality. **Risk Management Controls:** • Road conditions for heavy vehicle transport will be assessed before mobilization on unsealed roads • If the conditions are assessed to be unsuitable for heavy vehicle transport, there will be no transport of chemicals or wastewater • Only licenced waste transporters to be used to transport listed wastes, • In the event of a truck being stuck due to mechanical or weather reason, transfer or recovery will only occur once safe, and the risk of spills are ALARP. • Chemical Risk Assessment of all chemical used in the proposed HF (Appendix 06.01). Risk assessment report on hydraulic fracturing flowback wastewater at Santos Tanumbirini well site concluded: - There are no degradants of the HF chemicals that would require additional analytical testing beyond the chemistry analyte specified in the Code - There were no unacceptable risks to the birds from potential ingestion of chemicals in the wastewater over a one year period - No chemicals detected in the wastewater, at their maximum concentration, under a hypothetical maximum release scenario, would result in soil levels above soil screening criteria for the protection of terrestrial plants and animals	**Appendix 04 Risk Assessment – Row 47** **Risk Source:** Transport vehicle accident or stuck due to mechanical or weather events. **Potential Impact:** Reduction in surface and groundwater quality. **Risk Management Controls:** Amend EMP text to include additional controls: • Transport of chemicals or wastewater on unsealed roads during the wet season is only approved by the supervisor when the road is assessed to be in suitable condition, and when no significant rainfall events are forecast. A record of this transport assessment will be kept. Modify EMP text to include reference to the Emergency Response Plan in the control: • Implementation of the Waste Management Plan (Appendix 06), Spill Management Plan (Appendix 07) and the Emergency Response Plan (Appendix 14) to reduce potential consequences. Modify EMP text to include reference to Job Hazard Analysis in the control: • In the event of a truck being stuck due to mechanical or weather reason, transfer or recovery will only occur once safe, and the risk of spills are ALARP. A Job Hazard Analysis will be undertaken prior to extraction as per ERP Table 4.1-1 Response Scenarios.

• Implementation of the Waste Management Plan (Appendix 06) and the Spill Management Plan (Appendix 07) to reduce potential consequences.	
Appendix 04 Risk Assessment – Row 48 **Risk Source:** Transport vehicle accident or stuck due to mechanical or weather events. **Potential Impact:** Localised contamination of soil. **Risk Management Controls:** • Road conditions for heavy vehicle transport will be assessed before mobilization on unsealed roads • If the conditions are assessed to be unsuitable for heavy vehicle transport, there will be no transport of chemicals or wastewater • Only licenced waste transporters to be used to transport listed wastes, • In the event of a truck being stuck due to mechanical or weather reason, transfer or recovery will only occur once safe, and the risk of spills are ALARP. • Chemical Risk Assessment of all chemical used in the proposed HF (Appendix 06.01). Risk assessment report on hydraulic fracturing flowback wastewater at Santos Tanumbirini well site concluded: - There are no degradants of the HF chemicals that would require additional analytical testing beyond the chemistry analyte specified in the Code - There were no unacceptable risks to the birds from potential ingestion of chemicals in the wastewater over a one year period - No chemicals detected in the wastewater, at their maximum concentration, under a hypothetical maximum release scenario, would result in soil levels above soil screening criteria for the protection of terrestrial plants and animals • Implementation of the Waste Management Plan (Appendix 06) and the Spill Management Plan (Appendix 07) to reduce potential consequences.	**Appendix 04 Risk Assessment – Row 48** **Risk Source:** Transport vehicle accident or stuck due to mechanical or weather events. **Potential Impact:** Localised contamination of soil. **Risk Management Controls:** Amend EMP text to include additional control: • Transport of chemicals or wastewater on unsealed roads during the wet season is only approved by the supervisor when the road is assessed to be in suitable condition, and when no significant rainfall events are forecast. A record of this transport assessment will be kept. Modify EMP text to include reference to the Emergency Response Plan in the controls: • Implementation of the Waste Management Plan (Appendix 06) and the Spill Management Plan (Appendix 07), Emergency Response Plan (Appendix 14) to reduce potential consequences. Modify EMP text to include reference to Job Hazard Analysis in the control: • In the event of a truck being stuck due to mechanical or weather reason, transfer or recovery will only occur once safe, and the risk of spills are ALARP. A Job Hazard Analysis will be undertaken prior to extraction as per ERP Table 4.1-1 Response Scenarios.

Appendix 07 – Spill Management Plan Table 2: Potential Spill ScenariosSpill Scenario	Activity Duration	Mechanisms	Quantity	Quality of spill	Location	Key management controls
Spills from chemical and wastewater during transportation off-site	• Drilling chemical; transfer- 7 days of bulk chemical transfer, generally pre-drilling • HF chemical; transfer four truckloads of chemical per week for – 2 weeks • Wastewater; disposal over 4 weeks – up to 50 truck movements total over the duration	• Transport spill • Traffic accident (total or partial release)	25m^3	• Saline wastewater • Various chemicals, as listed in Table 6 to Table 8	• Off-site along the highway	• All transport companies to be appropriately licenced to transport chemicals and waste (Dangerous goods and Waste Management and Pollution Control Act). • Access tracks will be assessed daily during periods of site activity for the impacts of wet weather. • WWMP in place.

Appendix 07 – Spill Management Plan Table 2: Potential Spill Scenarios

Under "Spill Scenario"

Modify 'Spills from chemical and wastewater during transportation off-site' to:
'Spills from chemical and wastewater during transportation.'

Under "Activity Duration"

Add
- Wastewater transfer –up to 20 truck movements per annum

Under "Location"
add
- Well pads within EP 187
- Unsealed access tracks within EP 187

Under "Key management controls"
Add
- Transport of Wastewater or Chemicals Checklist completed

Spill Scenario	Activity Duration	Mechanisms	Quantity	Quality of spill	Location	Key management controls
Loss of containment during transfer on-site (leakage from pipes, hoses, fittings etc.)	• Drilling – 30 days per well • HF – 25 days per well • Testing – 90 days per well	• Coupling, hoses or valve failure	<5000L	• Saline drilling fluids • Saline Flowback Fluids and Produced Water • Saline wastewater • Various chemicals, as listed in **Error! Reference source not found.** to **Error! Reference source not found.**	• Chemical mixing and transfer areas on the drilling rig • Production test equipment • Wastewater storage equipment • Wastewater treatment equipment	• Secondary containment to be deployed under high-risk spill/leak storage and handling areas • Spill kits available • Daily inspection of all chemicals stored, handling areas, including wastewater transfer point and chemical mixing areas during operations • Sites are manned during operations • Wastewater management Plan (WWMP)

Amendment to Spill Scenario: Loss of containment during transfer on-site (leakage from pipes, hoses, fittings etc.):

Under "Activity Duration"
Add

- Operations Management – As required for the duration of the project

Under "Location"
Add

- Well pads within EP 187

Under "Key Management Controls"

Add

- Transfer to cease in the event of a leak being identified.

Appendix 07 – Spill Management Plan Table 3: Worst Case Scenarios

Leak	Total volume that could be lost	Maximum likely time to locate the leak	Risk
Flowline leak	859,000L	~24h for a slow leak – overnight with the system, not under pressure. ~2h for a high-pressure leak - flowline volume constantly monitored while the system is in use.	This is a theoretical scenario as a whole flowline network would not drain to a single point, and irrespective would be found via the leak detection system before this.

Appendix 07 – Spill Management Plan Table 3: Worst Case Scenarios

Amend to add an additional leak scenario:

Leak	Total volume that could be lost	Maximum likely time to locate the leak	Risk
Loss of wastewater from a truck (transfer or transport)	75m³ (NB: Standard truck volume is ~25m3, however there is the possibility of a road-train being utilised which could involve a triple configuration truck)	~ 20 mins – truck inspected during transfer and prior to departure Immediately for a catastrophic loss of containment	There is a risk that wastewater is lost during transit or transfer within proximity to a sensitive receptor. This is mitigated by: • Road conditions for heavy vehicle transport will be assessed before mobilisation on unsealed roads during the wet season. • Only licenced waste transporters to be used to transport • In the event of a truck being stuck due to mechanical or weather reasons, transfer or recovery will only occur once safe, and the risk

					of spills are ALARP as per the EP 187 Emergency Response Plan. • Implementation of the WWMP and mitigation controls in the Risk Assessment to reduce potential consequences
Appendix 07 – Spill Management Plan Section 8 Control Measures The key management controls include: • The transport off-site of hydraulic fracturing chemicals and wastewater during the wet season will be avoided unless a site-specific risk assessment indicates the risk is equal to or below moderate.					**Appendix 07 – Spill Management Plan Section 8 Control Measures** Amend EMP text to remove reference to off-site: • The transport of hydraulic fracturing chemicals and wastewater during the wet season will be avoided. If deemed necessary, it needs to be approved by the supervisor after the road is assessed to be in suitable condition, and when no significant rainfall events are forecast via the transport of Wastewater or Chemicals Checklist. .

Section A - Code of Practice: Onshore Petroleum Activities in the Northern Territory (the Code)

The proposed modification is consistent with the requirements of the Code of Practice: Onshore Petroleum Activities (the Code) in the NT.
Environment Management Plans are required by law to demonstrate how the Code will be complied with in the proposed activities. This modification to IMP4-3 aligns with the Code which states:

A.3.8 Containment of contaminants:
(b) During the wet season, 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. This assessment must be included in the EMP and established through a specific assessment of spillage risks in the circumstances. Where it has been determined that wet season transport is ALARP and acceptable and included in the EMP, the outcomes of the risk assessment must be reflected in an emergency contingency plan.

The risk profile has been assessed in IMP4-3, as well as Section B of this Reg 22 submission. The impact and risk remain at ALARP through meeting requirements of the Code and implementing all reasonably practicable site-specific controls as per Section C and D (Transport Assessment) below. An updated emergency response plan for EP 187 is included in Section E of this submission with an updated emergency contingency plan in Table 2: Response Scenarios to include 'Transport of Chemicals and Wastewater in the wet season.'

Section B – Risk Profile

The proposed modification does not inadvertently change the risk profile.
Imperial has assessed the potential or actual change to the impacts and risks and provides the following evidence to demonstrate that the risk profile (ie likelihood and consequence ratings) does not increase as transport of wastewater and assessment before transport is already stated in the EMP.

Current risk profile of risks in IMP4-3 Appendix 04 – Risk Assessment which relates to wastewater transfers:

Risk #	Risk Source	Potential Impact	Risk Management Controls	Consequence	Likelihood	Residual Risk
47	Transport vehicle accident or stuck due to mechanical or weather events	Reduction in surface and groundwater quality	*As per existing Appendix 04 text*	II (Minor)	C (Possible)	2
48	Transport vehicle accident or stuck due to mechanical or weather events	Localised contamination of soil		II (Minor)	C (Possible)	2

Profile of relevant risks in IMP4-3 Appendix 04 – Risk Assessment when applying the proposed modification of flowback and produced water to be transferred from Carpentaria 1 wastewater tank to Carpentaria 2 wastewater tank via truck transport:

Risk #	Risk Source	Potential Impact	Risk Management Controls	Consequence	Likelihood	Residual Risk
47	Transport vehicle accident or stuck due to mechanical or weather events	Reduction in surface and groundwater quality	Amended EMP text to include control: • Transport of chemicals or wastewater on unsealed roads during the wet season is only approved by the supervisor when the road is assessed to be in suitable condition, and when no significant rainfall events are forecast. A record of this transport assessment will be kept. Modified EMP text to include ERP control: • Implementation of the Waste Management Plan (Appendix 06) and the Spill Management Plan (Appendix 07), Emergency	II (Minor)	C (Possible)	2
48	Transport vehicle accident or stuck due to mechanical or weather events	Localised contamination of soil		II (Minor)	C (Possible)	2

				Response Plan (Appendix 14) to reduce potential consequences.				

Section C – ALARP Demonstration
The proposed modification maintains the risk to ALARP with the addition of risk controls based on good industry practice: - Transport of chemicals or wastewater on unsealed roads during the wet season is only approved by the supervisor when the road is assessed to be in suitable condition, and when no significant rainfall events are forecast. A record of this assessment will be kept. - The method of approval is based on the completion of the checklist in Section D.

EP187 | Transport of Chemicals or Wastewater Checklist

Must be completed every day for each unique vehicle

Transport of chemicals or wastewater checklist			
Date:		Transporting Company Name:	
Vehicle Licence Plate:		On-site Company Representative Name:	

Transport Assessment – All answers must be YES before transport – Please Circle Answer		
Is the vehicle driver licensed and suitably experienced for the task?	**Yes**	**No**
Is the chemical or wastewater hazardous or environmentally damaging if spilled?	**Yes**	**No**
Is the vehicle licensed to carry the chemical or wastewater?	**Yes**	**No**
Has a consignment note or a transfer certificate* been provided by the transport company?	**Yes**	**No**
Have all on-site unsealed tracks on the planned route, including any turnarounds/pull-overs that could be used (**the route**), been visually inspected and are in good condition (e.g. no major ruts, holes, or washouts)?	**Yes**	**No**
There are no crossing of flowing creeks or watercourses on **the route.**	**Yes**	**No**
Has there been less than 20mm of rainfall in the past 24 hours?	**Yes**	**No**
Has the Weather forecast been checked and is there no significant rainfall forecast during transport on **the route**?	**Yes**	**No**
Are emergency response measures (e.g., spill kit, communication tools) available and functional?	**Yes**	**No**
Is the Emergency Response Plan readily available?	**Yes**	**No**

*The transfer certificate must, specify the vehicle Environmental Protection Licence. Additionally, it should provide a brief description and volume of the chemical or waste being transferred, as well as its origin and destination.

Transport of chemical or wastewater sign-off		
Have all Transport Assessment questions been circled **'Yes'**	**Yes – Transport is permitted**	**No – Transport is NOT permitted**
On-site Company Representative Signature:		

Form must be submitted to [redacted] upon completion.

Transport of Chemicals or Wastewater Checklist _ Version 1 _ 2023

Section E – Updated EP 187 Emergency Response Plan

The Emergency Response Plan has been updated and included in the following pages of this Reg 22 submission.

Table 4.1-1 Response Scenarios has been updated to include 'Transport of Chemicals and Wastewater'.

Table 4.1—1 Response Scenarios

Category	Response	
Basic Emergency Response	Remove yourself and others from danger.	❑
	Raise the alarm – notify the Site Supervisor through the available channels of communication (e.g., radio): • Report location. • type and extent of the incident.	❑
	Stop all work and makes sure the area is safe.	❑
	Activate emergency shutdown devices/isolate equipment as necessary if safe to do so.	❑
	Provide First Aid to any injured persons (DRSABCD).	❑
	Account for people.	❑
	Escalate incident to Site Supervisor.	❑
	Contact emergency services if required.	❑
	Follow the directions of emergency services or response personnel and assist as required if you feel safe and capable to do so.	❑
	Follow the Emergency Response Plan and gather information	❑
	Emergency Response Team Leader to notify appropriate stakeholders (Imperial contacts and contractors).	❑
	Determine the recovery strategy and resources required: • Check for equipment integrity. • Ensure all protection systems are restored. • Replenish, replace, or return emergency equipment.	❑
Environmental Incidents (Hazardous Spill – Chemicals & Wastewater)	Notify Site Supervisor and advise situation and request assistance if needed.	❑
	Consider Emergency Shut Down, – depending on location, proximity, or safety need.	❑
	Ensure all personnel are safe and clear of the area -stay clear of vapour, fumes, smoke, and spills.	❑
	All necessary action should be taken to minimise the size and any adverse effects of the release. Different PPE (face shields, goggles, heavy gloves, gumboots) may be required to perform the task safely.	❑
	If adequate resources are not available to contain the release and if it threatens public health, property or the environment, the state fire brigades should be contacted for emergency assistance by the Site Supervisor as soon as possible- phone **000**.	❑
	Always pay attention to fire and health hazards. Remove all sources of ignition to reduce the potential fire hazard.	❑
	Establish the source of spill/leak and determine the extent of pollution.	❑
	Stop further leakage (e.g., stop pumping or in case of pipeline leak give warnings to stop the flow), close valves, attempt to stop leaks, move the object on its side.	❑

Category	Response	
	Activate containment operations immediately to Isolate spill or leak area for at least 100 metres (330 feet) in all directions to prevent the spread of spilled product (if the situation requires- i.e., block drains, dam ditches, boom watercourses, close water intakes).	❑
	Divert or stop traffic (do not start vehicles if a low flash-point product has been split).	❑
	<u>Clean Up</u>: • Refer to SDS for instructions (if available). • Retrieve as much as possible with sorbents or vac truck. • Remove contaminated subsoil to reduce spread of potential contamination.	❑
	<u>Points to Remember</u>: • Always consider safety of yourself and other during a response • Activate containment operations immediately. • Do not allow vehicles to run over any spill saturated areas. • Do not flush the spill down clean drains on areas or other inlets. • Do not use mechanical excavators on areas with free oil on the surface. • Contain & recover at the source. • Complete the spill register	❑
Transport of Chemicals and Wastewater (Spills / release, road haulage – during wet and dry seasons)	Ensure vehicles can safely navigate to and from areas of concern – provide alternate routes if possible.	❑
	Ensure all personnel are safe and clear of the area - stay clear of vapour, fumes, smoke, and spills. Use safety-related equipment as required to extract personnel if in immediate danger.	❑
	Always pay attention to fire and health hazards. Extricate personnel and team to a safe distance and clear of potentially hazardous fumes (upwind).	❑
	Notify Site Supervisor, advise the situation and request assistance if needed.	❑
	All necessary action should be taken to minimise the size and any adverse effects of the release. Shut valves – internal/external if safe to do so.	❑
	Activate containment operations immediately to prevent the spill from reaching a surface watercourse or groundwater.	❑
	Refer to the HAZCHEM code, truck placarding, driver, or Safety Data Sheet for methods of control/management.	❑
	Remove all sources of ignition to reduce any potential of fire	❑

Category	Response	
	If adequate resources are not available to contain the release and if it threatens public health, property or the environment, the state fire brigades should be contacted for emergency assistance - phone **000**.	❑
	Divert or stop traffic (do not start vehicles if a low flash-point product has been split) if tanker truck or chemical spill is on fire.	❑
	Remove all sources of ignition to reduce any potential of fire.	❑
	Clean Up: • Refer to Safety Data Sheets for instructions (if available). • Retrieve as much as possible with sorbents or vac truck • Remove contaminated subsoil to reduce spread of potential contamination.	❑
	Points to Remember: • Always consider safety of yourself and other during a response • Activate containment operations immediately. • Do not allow vehicles to run over any spill saturated areas. • Do not flush the spill down clean drains on areas or other inlets. • Do not use mechanical excavators on areas with free oil on the surface. • Contain & recover at the source. • Complete the spill register.	❑
Vehicle Extraction during Chemical and Wastewater Transportation	Initiate Medical Emergency Response if required.	❑
	First Responder: • Notify the Site Supervisor 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 a Job Hazard Analysis before attempting extraction. Take action to mitigate hazards identified.	❑
	Removal of chemicals or wastewater from the bogged vehicle may be necessary before vehicle extraction. Before chemical or wastewater transfer from a bogged vehicle confirm that: • Significant rainfall is not forecast • Tracks are accessible to the recovery vehicle • Appropriate spill kits are available on site	❑

<u>If Chemicals or wastewater have escaped from containment on the bogged vehicle:</u> ❑

- Advise Site Supervisor immediately and escalate to Emergency Response Team Leader
- If safe, use vehicle placarding.
- Refer to the Safety Data Sheet for safety and environmental risks that must be managed.
- Ensure all personnel are safe from fumes, fire, smoke, and chemical hazards.
- Use safety equipment, if required, to extract personnel from the bogged vehicle.
- Be aware of the 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:
    - Consult the Safety Data Sheet and wear appropriate PPE.
    - If safe and possible, stop the spill at the source. Shut off valves.
    - If the spill is pooling, try to contain it with a spill kit, soil, or other bunds to prevent it from escaping to drainage lines and waterways.

<u>Clean Up</u>: ❑

- Retrieve as much as possible with absorbents.
- Remove contaminated soil. Seal in labelled containers and transport by a licensed contractor to a licensed facility for disposal.

<u>Points to Remember:</u> ❑

- Recordable/ Reportable incidents must be communicated to DEPWS in accordance with Petroleum (Environment) Regulations 2016. This will be done as per Error! Reference source not found. Communication Flow.
- Extraction must be conducted safely and in a manner that prevents loss of contents.