Modification Notice - Regulation 22

Interest Holder	**Imperial Oil and Gas**	**EMP Title**	**Carpentaria Pilot Project** **Imperial Oil & Gas** **EP 187**	**Unique EMP ID No.**	**IMP 5-3**	**Mod No.**	**5**	**Date**	June 2026
Brief Description	This Reg 22 provides notification under the Petroleum (Environment) Regulations 2016 NT that a temporary installation and operation of an above-ground HDPE flowline is required as an additional modification to the approved Environmental Management Plan, IMP 5-3. It should be noted that the overall environmental risk profile for the Carpentaria Pilot Project remains unchanged. Currently, IMP 5-3 only indicates buried flowlines and trucking for brine transfer between tanks. This amendment adds "temporary above-ground HDPE flowlines" as an additional approved method. The flowline will be located within existing disturbance corridors requiring no additional clearing, any disturbance generated during installation will be rehabilitated after use. The temporary nature of the activity refers to removal and reuse of the flowline. All management controls identified in the approved EMP remain unchanged.								
Geospatial Files Included?	NA								

Does the proposed change result in a new, or increased, potential or actual	**If an INCREASE in an existing potential or actual environmental**	**Does the proposed change require additional mitigation**	**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**	**Will the environmental outcome continue to be achieved and will the impacts and risks be managed to**

environmental impact or risk?	impact or risk is it provided for in the approved EMP?	measures to be included?				sediment control, spill or emergency response plans?	ALARP and acceptable?
No	No	No	No. Not applicable.	Yes	No. Not applicable.	No.	Yes

Current EMP Text	Amended EMP Text
1 Introduction **1.1 Background and Motivation** The well pad design, the proposed location of the WHS, and the use of buried high-density polyethylene (HDPE) flowlines, constructed in compliance with the *Australian Polyethylene Gathering Network Code (PEGN)* [APGA, 2019] to transfer high volumes of HF flowback fluid and wastewater between the well pads and WHS, provides a high level of confidence in containment and integrity in managing wastewater and HF flowback fluid transfer. The flowlines will also be used to transfer water to well pads for use as make-up water for HF operations. In periods when the flowlines are out of service for maintenance or other operational reasons, HF Flowback may be transported by truck to the WHS for off-site disposal or transferred to an above-ground tank at a well pad within the CPP Area.	**1. Introduction** **1.1 Background and Motivation** The well pad design, the proposed location of the WHS, and the use of buried or temporary above-ground high-density polyethylene (HDPE) flowlines, constructed in compliance with the *Australian Polyethylene Gathering Network Code (PEGN)* [APGA, 2024] to transfer high volumes of HF flowback fluid and wastewater between the well pads and WHS, provides a high level of confidence in containment and integrity in managing wastewater and HF flowback fluid transfer. The flowlines will also be used to transfer water to well pads for use as make-up water for HF operations. In periods when the flowlines are out of service for maintenance or other operational reasons, HF Flowback may be transported by truck to the WHS for off-site disposal or transferred to an above-ground tank at a well pad within the CPP Area.
c. Table ii	**c. Scope p.6**

Current EMP Text

Component	**New** (ha) (includes contingency)
Flowline	56.7 ha

Definitions

Terminology	**Definition**
Activity	The Regulated Activity and associated works covered by this EMP include ○ Earthworks associated with excavating drilling sumps, turkey's nests, trenching for gas, and water flowline and MRGP connection.
Activity	The Regulated Activity and associated works covered by this EMP include: ○ The storage, transfer, reuse, use, and disposal of wastewater or hazardous substances via flowline and heavy vehicle.

Amended EMP Text

Component	**Size/ Capacity**
Flowline (including temporary above ground HDPE lines at approximately 5km length)	56.7 ha

Definitions

Terminology	**Definition**
Activity	The Regulated Activity and associated works covered by this EMP include: ○ Earthworks associated with excavating drilling sumps, turkey's nests, trenching for gas and buried water flowline, and MRGP connection. ○ The storage, transfer, reuse, use and disposal of wastewater or hazardous substances via flowline and heavy vehicle. This may include temporary installation and operation of above-ground HDPE flowlines. Add additional point: ○ Installation, operation and maintenance of temporary above-ground high-density polyethylene (HDPE) flowlines.

<table>
<tr><th>Current EMP Text</th><th>Amended EMP Text</th></tr>
<tr><td>Table 3.4—1 Indicative Activity Civil Construction and Maintenance Work

<table><tr><th>Work</th><th>Examples of Scope of Work</th></tr><tr><td>Project Infrastructure Construction and Maintenance</td><td>• Construct new flowlines and MRGP Connection with associated infrastructure.
• Maintain flowline and MRGP Connection right of ways.</td></tr></table></td><td>Table 3.4—1 Indicative Activity Civil Construction and Maintenance Work

<table><tr><th>Work</th><th>Examples of Scope of Work</th></tr><tr><td>Project Infrastructure Construction and Maintenance</td><td>• Construct new flowlines (including temporary above ground HDPE lines) and MRGP Connection with associated infrastructure.
• Maintain flowline (including temporary above-ground HDPE lines) and MRGP Connection right of ways.</td></tr></table></td></tr>
<tr><td>3.4.8 Flowlines and MRGP Connection

Flowlines and a MRGP Connection will be established for the Activity.

The MRGP is approximately 330 km long, running from Daly Waters to the MRM. The MRGP Connection will be from the from the CGP to the MRGP tie-in. The tie-in to the MRGP will be located approximately 200 km from Daly Waters. The flange set at the CGP fence line is the proposed designated battery limit between the Imperial-owned plant gas piping and the MRGP.

Flowlines will be connected between the CGP, the well pads and the WHS. [sic] engineered</td><td>3.4.8 Flowlines and MRGP Connection

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Flowlines will be connected between the CGP, the well pads and the WHS.</td></tr>
</table>

Current EMP Text	Amended EMP Text
These areas for these facilities have been chosen based on site selection criteria similar to those used for access tracks and will utilise a comparable construction methodology. The establishment of the flowlines and potentially the MRGP Connection will require a 16 m Right-of-Way (ROWs). However, where practical, these ROWs can be co-located alongside access tracks. In such instances clearing for the ROW would only need to be ~8 m wide. To accommodate the potential movement of infrastructure to avoid sensitive receptors, the clearing calculations for the MRGP Connection and flowlines include a contingency. The contingency has been calculated to account for the maximum amount of clearing that would be necessary if infrastructure was relocated to the farthest point within the Infrastructure Movement Zone from their current indicative location (refer to Section 3.3). Even though, it is unlikely that infrastructure would be moved a significant distance, the contingency calculations for clearing of MRGP Connection and flowlines are conservative. Therefore, the contingency calculations reflect a worst-case scenario. For the purpose of clearing contingency calculations, both MRGP Connection and flowline are assumed to have a width of ~16 m. Imperial will bury any flowlines outside of fenced areas to protect them from fire, flood, and damage from livestock and human activity; this aligns with industry best practice.	These areas for these facilities have been chosen based on site selection criteria similar to those used for access tracks and will utilise a comparable construction methodology. The establishment of the flowlines and potentially the MRGP Connection will require a 16 m Right-of-Way (ROWs). However, where practical, these ROWs can be co-located alongside access tracks. In such instances clearing for the ROW would only need to be ~8 m wide. To accommodate the potential movement of infrastructure to avoid sensitive receptors, the clearing calculations for the MRGP Connection and flowlines include a contingency. The contingency has been calculated to account for the maximum amount of clearing that would be necessary if infrastructure was relocated to the farthest point within the Infrastructure Movement Zone from their current indicative location (refer to Section 3.3). Even though, it is unlikely that infrastructure would be moved a significant distance, the contingency calculations for clearing of MRGP Connection and flowlines are conservative. Therefore, the contingency calculations reflect a worst-case scenario. For the purpose of clearing contingency calculations, both MRGP Connection and flowline are assumed to have a width of ~16 m. Imperial will bury any flowlines outside of fenced areas to protect them from fire, flood, and damage from livestock and human activity; this aligns with industry best practice. Temporary above-ground flowlines will be located within the access tracks right of way (ROW) corridor, fenced from public access, designed in accordance with APGA requirements, and subject to visual monitoring with a minimum of two inspections per 12-hour operating shift.
3.4.8.1 Trenching and Bedding Corridor	**3.4.8.1 Trenching and Bedding Corridor for Buried Flowlines**

Current EMP Text	Amended EMP Text
The flowlines will be installed in a trench excavated to a depth that will give 750 mm Depth of Cover (DOC). Where the flowline crosses an access track or watercourse, DOC will be increased to at least 1,200 mm. If the trench bottom cannot be cleared of angular material, bedding material will be applied in the trench. Flowlines that cross the Carpentaria Highway will be installed utilising horizontal directional drilling (HDD). Clause A.3.4(f) of *the Code* mandates that directional drilling under a watercourse must be preferred over trenching for all buried infrastructure unless geomorphic and hydrological investigations confirm that trenching will not adversely affect water flow patterns and waterhole water retention timing. Prior to crossing a watercourse, the decision tree in Figure 3.4—9 will be used to determine if trenching is safe or HDD is required.	Buried flowlines will be installed in a trench excavated to a depth that will give 750 mm Depth of Cover (DOC). Where the buried flowline crosses an access track or watercourse, DOC will be increased to at least 1,200 mm. If the trench bottom cannot be cleared of angular material, bedding material will be applied in the trench. Buried flowlines that cross the Carpentaria Highway will be installed utilising horizontal directional drilling (HDD). Clause A.3.4(f) of *the Code* mandates that directional drilling under a watercourse must be preferred over trenching for all buried infrastructure unless geomorphic and hydrological investigations confirm that trenching will not adversely affect water flow patterns and waterhole water retention timing. Prior to crossing a watercourse, the decision tree in Figure 3.4—9 will be used to determine if trenching is safe or HDD is required.
3.7.2.2 Installation As described in Section 3.4.8, flowlines will be installed in trenches in ROWs which follow access tracks where practicable to reduce the need for clearing. This design decreases clearing requirements by reducing the need for access tracks to inspect flowlines and a dedicated flowline ROW.	**3.7.2.2 Installation** As described in Section 3.4.8, flowlines will be installed in trenches in ROWs which follow access tracks where practicable to reduce the need for clearing. This design decreases clearing requirements by reducing the need for access tracks to inspect flowlines and a dedicated flowline ROW. In contrast, temporary above-ground HDPE flowlines are laid on the surface and do not require trenching.
Table 6.2—3 Risk Assessment Table. Add detail noted below in plum.	

Current EMP Text	Amended EMP Text

Risk #	Environmental Factor	Risk Code	Source	Potential Impact	Initial Risk Ranking			Key Controls and Code Reference		Residual Risk Ranking			Controls Reduce Risk to ALARP (Y/N)	Scientific Certainty Ranking
					L	C	R	Controls	Code of Practice Reference	L	C	R		
21	Terrestrial Environmental Quality	TE- 14	Wastewater Flowlines	Wastewater flowline leaks impact soil	C	IV	4	○ Flowline (may include temporary above-ground HDPE flowline) installation will be carried out in a manner to reduce the risks of loss of containment with the following controls: ○ The buried flowlines will be installed in a trench excavated to a depth that will give 750 mm Depth of Cover (DOC). Where the flowline crosses an access track or watercourse, DOC	Not applicable	d	IV	3	YES	Medium

Current EMP Text									Amended EMP Text					
									will be increased to at least 1,200 mm.					
57	Inland Water Environmental Quality	IW-4	Wastewater Flowline	Wastewater flowline leaks impacting inland surface water	C	IV	4		• Flowline (may include temporary above-ground HDPE flowline) installation will be carried out in a manner to reduce the risks of loss of containment with the following controls: • The buried flowlines will be installed in a trench excavated to a depth that will give 750 mm Depth of Cover (DOC). Where the flowline crosses an access track or watercourse, DOC will be increased to at least 1,200 mm. • Temporary above-ground HDPE flowline will have a low transfer volume	Not applicable	d	IV	3	YES	Medium

Current EMP Text	Amended EMP Text
	and installed with inlet/ outlet flow sensors with alarm logic.

6.3.4 Soil and Surface Water Quality

Table 6.3—7 Environmental Outcomes, Performance Standards and Measurement Criteria – Soil and Surface Water Quality

Add detail noted below in plum.

Environmental Outcome	EPS Number	Environmental Performance Standard	Measurement Criteria	Records
No significant long-term impact on soil stability, quality, or surface water.	**EPS-SS4**	No leaks from the flowback flowlines that cause serious environmental harm to the sub-soil.	• Records demonstrate that buried flowlines are buried to a depth of 750 mm or 1,200 mm where they cross an access track or flowline • Monitoring records confirm temporary above-ground HDPE flowlines are inspected for leaks at the beginning and end of	• Monitoring records

<table>
<tr><th>Current EMP Text</th><th>Amended EMP Text</th></tr>
<tr><td></td><td>each shift during operations.</td></tr>
<tr><td>8.2 Monitoring
Table 8.2—1 CPP Environmental Outcome, Objectives, and Performance Standards

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<tr><td colspan="2">8.2 Monitoring
Table 8.2—2 Summary of the Monitoring and Commitments Outlined in this EMP and its Appendices

Add detail noted below in plum.

<table><tr><th>Monitoring Requirement</th><th>Frequency</th><th>Monitoring #</th><th>EPS #</th></tr><tr><td>Temporary above-ground HDPE flowlines are inspected for leaks at the beginning and end of each shift during operations.</td><td>Twice per shift while in operation.</td><td></td><td>EPS-SS4</td></tr></table></td></tr>
</table>

Current EMP Text	Amended EMP Text
IMP 5-3 Appendix 3 Rehabilitation Management Plan **2 Scope** Key infrastructure and activities include: Access tracks, gas, and water flowlines	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **2 Scope** Key infrastructure and activities include: Access tracks, gas, and water flowlines (may include temporary above-ground HDPE flowlines).
IMP 5-3 Appendix 3 Rehabilitation Management Plan **Table 6—1 Rehabilitation Methodology Guidelines across RMZ** • Reinstatement: After the backfilling of flowline trenches, the excavation will be reinstated as soon as practicable, including pulling stockpiled timber back over the ROW to aid as a barrier for vehicle access and support surface stability. Flowlines rehabilitation is outlined further in Section 6.2.	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **Table 6—1 Rehabilitation Methodology Guidelines across RMZ** • Reinstatement: After the backfilling of buried flowline trenches, the excavation will be reinstated as soon as practicable, including pulling stockpiled timber back over the ROW to aid as a barrier for vehicle access and support surface stability. Flowlines rehabilitation is outlined further in Section 6.2.
IMP 5-3 Appendix 3 Rehabilitation Management Plan **Section 6.2 Flowline Abandonment** Flowlines will be left in situ to prevent subsidence of the excavated trench and re-disturbance of the ground. When a network is abandoned, the following work will be completed: • The cutting and removal of all sections of buried lines that come to the surface:	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **Section 6.2 Flowline Abandonment** Buried flowlines will be left in situ to prevent subsidence of the excavated trench and re-disturbance of the ground. Temporary above-ground HDPE flowlines will be removed and the area rehabilitated after use. When a network is abandoned, the following work will be completed: For buried flowlines:

Current EMP Text	Amended EMP Text
○ At a minimum of 750 mm below the natural surface, or ○ At the line depth, whichever is the lesser. • The entry and exit points to/from flowlines will be cut below ground and a pressure-rated cap welded on. • The removal of all surface equipment. • The removal of all signage associated with the network on completion of the rehabilitation. Upon completion of the flowline abandonment, records identifying and locating sections of the abandoned network shall be prepared as part of the final rehabilitation report. These records will be made publicly available (e.g., dial before you dig) to prevent possible mistakes in identifying an abandoned flowline as an operational flowline.	• The cutting and removal of all sections of buried lines that come to the surface: • At a minimum of 750 mm below the natural surface, or • At the line depth, whichever is the lesser. • The entry and exit points to/from flowlines will be cut below ground and a pressure-rated cap welded on. • The removal of all surface equipment. • The removal of all signage associated with the network on completion of the rehabilitation. For temporary above-ground HDPE flowlines: • The entire line will be removed from the surface. • Any surface equipment and signage will be removed. • The area will be rehabilitated as per the Rehabilitation Management Plan. Upon completion of the flowline abandonment, records identifying and locating sections of the abandoned network shall be prepared as part of the final rehabilitation report. For buried lines, these records will be made publicly available (e.g., dial before you dig) to prevent possible mistakes in identifying an abandoned flowline as an operational flowline.
IMP 5-3 Appendix 3 Rehabilitation Management Plan **Section 7.2 Aerial Surveys** Given the remoteness and extensive scale of some disturbance areas (e.g., access tracks and flowlines), aerial surveys will be employed where feasible using drone or helicopters. Helicopter surveys will be conducted at slow speed where larger weed species and areas of	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **Section 7.1 Aerial Surveys** Given the remoteness and extensive scale of some disturbance areas (e.g., access tracks and buried flowlines), aerial surveys will be employed where feasible using drone or helicopters. Helicopter surveys will be conducted at slow speed where larger weed species and areas of erosion or other concerns can be identified. If

Current EMP Text	Amended EMP Text
erosion or other concerns can be identified. If further on ground investigations are required, these areas may be accessed (where possible) via All-Terrain Vehicles (ATVs) or on foot, depending on the availability of nearby landing zones for helicopters. **7.2.1 Collection of Aerial Imagery** Aerial drone imagery is a practical, low impact and statistically robust method for monitoring rehabilitation success in large sample sizes by comparing to adjacent analogue sites, particularly for long, narrow corridors such as flowlines using photogrammetry and GIS analysis. Vegetation cover assessments can be made between impact areas and adjacent control (baseline) areas, enabling accurate assessments of rehabilitation progress.	further on ground investigations are required, these areas may be accessed (where possible) via All-Terrain Vehicles (ATVs) or on foot, depending on the availability of nearby landing zones for helicopters. **7.2.1 Collection of Aerial Imagery** Aerial drone imagery is a practical, low impact and statistically robust method for monitoring rehabilitation success in large sample sizes by comparing to adjacent analogue sites, particularly for long, narrow corridors such as buried flowlines using photogrammetry and GIS analysis. Vegetation cover assessments can be made between impact areas and adjacent control (baseline) areas, enabling accurate assessments of rehabilitation progress.
IMP 5-3 Appendix 3 Rehabilitation Management Plan **Table 7—1 Guidelines for Rehabilitation Monitoring and Reporting** **Rehabilitation Phases -** **Transitional Rehabilitation:** **Ongoing until Success Criteria are met** **Method –** • Inspect ESC measures and weed growth. • Inspect for subsidence of flowline.	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **Table 7—1 Guidelines for Rehabilitation Monitoring and Reporting** **Rehabilitation Phases -** **Transitional Rehabilitation:** **Ongoing until Success Criteria are met** **Method –** • Inspect ESC measures and weed growth. • Inspect for subsidence of buried flowline.

Current EMP Text	Amended EMP Text
• Survey (ground, air or drone imagery) to inspect re-growth in comparison to analogue sites if cleared land is being rehabilitated. • Photo monitoring, drone/aerial imagery. • Desktop assessment for fire management.	• Survey (ground, air or drone imagery) to inspect re-growth in comparison to analogue sites if cleared land is being rehabilitated. • Photo monitoring, drone/aerial imagery. • Desktop assessment for fire management.
IMP 5-3 Appendix 3 Rehabilitation Management Plan **Table 8—1 Rehabilitation Success Measurement Criteria** **Objectives –** **Rehabilitated areas are safe for continued land use.** **Success Measurement Criteria –** • Inspection and final assessment report demonstrate no subsidence associated with flowlines.	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **Table 8—1 Rehabilitation Success Measurement Criteria** **Objectives –** **Rehabilitated areas are safe for continued land use.** **Success Measurement Criteria –** • Inspection and final assessment report demonstrate no subsidence associated with buried flowlines.
IMP 5-3 Appendix 3 Rehabilitation Management Plan **Table 11—1 One-page Rehabilitation Management Plan** **Rehabilitation Success Criteria:** • Inspection and final assessment reports demonstrate no subsidence associated with flowlines	**IMP 5-3 Appendix 3 Rehabilitation Management Plan** **Table 11—1 One-page Rehabilitation Management Plan** **Rehabilitation Success Criteria:** • Inspection and final assessment reports demonstrate no subsidence associated with buried flowlines

Current EMP Text	Amended EMP Text
IMP 5-3 Appendix 4 Weed Management Plan **Section 1.2 2023 CPP EMP Initial Scope Field Assessment Zones** The proposed CPP initial scope areas include: • Five new well locations (BA, BB, BC, BD and BD Central) • Gas and wastewater flowlines • Infrastructure area which includes gas plant, water handling station and campsite	**IMP 5-3 Appendix 4 Weed Management Plan** **Section 1.2 2023 CPP EMP Initial Scope Field Assessment Zones** The proposed CPP initial scope areas include: • Five new well locations (BA, BB, BC, BD and BD Central) • Gas and wastewater flowlines (may include temporary above-ground HDPE flowline) • Infrastructure area which includes gas plant, water handling station and campsite
IMP 5-3 Appendix 05 Erosion and Sediment Control Plan **Section 2.2 Project Works** **Projects works will involve the following major activities:** Construction, operation, modification, decommissioning, dismantling/ removal of facilities, gas and wastewater flowlines used for the recovery of petroleum, treat water and produce gas	**IMP 5-3 Appendix 05 Erosion and Sediment Control Plan** **Section 2.2 Project Works** **Projects works will involve the following major activities:** Construction, operation, modification, decommissioning, dismantling/ • removal of facilities, gas and wastewater flowlines (may include temporary above-ground HDPE) flowlines used for the recovery of petroleum, treat water and produce gas
IMP 5-3 Appendix 05 Erosion and Sediment Control Plan **Section 5 Erosion Control** **Table 5 – Proposed minimum erosion control standards to be adopted above that in Table 4.4.7 of IECA (2008)** • Low-level watercourse crossings for access tracks and flowlines to be excavated and backfilled with rock to watercourse bed	**IMP 5-3 Appendix 05 Erosion and Sediment Control Plan** **Section 5 Erosion Control** **Table 5 – Proposed minimum erosion control standards to be adopted above that in Table 4.4.7 of IECA (2008)** Low-level watercourse crossings for access tracks and buried flowlines to be excavated and backfilled with rock to watercourse bed level

Current EMP Text	Amended EMP Text
level	
IMP 5-3 Appendix 06 Waste and Wastewater Management Plan **Table 4—2 Waste Management** Waste Stream - HF Flowback / CGP Flowback Reuse - Transferred via flowlines and/or trucks and potentially reused for HF operations.	**IMP 5-3 Appendix 06 Waste and Wastewater Management Plan** **Table 4—2 Waste Management** Waste Stream - HF Flowback / CGP Flowback Reuse - Transferred via flowlines (including temporary above ground HDPE lines), and/or trucks and potentially reused for HF operations.
IMP 5-3 Appendix 06 Waste and Wastewater Management Plan **4.2 Flowline Design** No traffic-impacting works are anticipated to be carried out on the Carpentaria Highway. Flowlines that cross the Carpentaria highway will be installed utilising horizontal directional drilled (HDD). Flowline installation will be carried out in a manner to reduce the risks of loss of containment with the following controls: • All operators carrying out welded pipe jointing will be trained by registered training organisations (RTOs) and be qualified to PMBWELD 301 standard. • The flowlines will be installed in a trench excavated to a depth that will give 750 mm Depth of Cover (DOC). Where the flowline crosses an access track or watercourse, DOC will be increased to at least 1,200 mm. Clause A.3.4(f) of *the Code* mandates that directional drilling under a watercourse must be preferred over trenching for all buried infrastructure. This	**IMP 5-3 Appendix 06 Waste and Wastewater Management Plan** **4.2 Flowline Design** No traffic-impacting works are anticipated to be carried out on the Carpentaria Highway. Buried flowlines that cross the Carpentaria highway will be installed utilising horizontal directional drilled (HDD). Flowline installation will be carried out in a manner to reduce the risks of loss of containment with the following controls: • All operators carrying out welded pipe jointing will be trained by registered training organisations (RTOs) and be qualified to PMBWELD 301 standard. • Buried flowlines will be installed in a trench excavated to a depth that will give 750 mm Depth of Cover (DOC). Where a buried flowline crosses an access track or watercourse, DOC will be increased to at least 1,200 mm. Clause A.3.4(f) of the Code mandates that directional drilling under a watercourse must be preferred over trenching for all buried infrastructure. This preference stands unless geomorphic and hydrological investigations

Current EMP Text	Amended EMP Text
preference stands unless geomorphic and hydrological investigations confirm that trenching will not adversely affect water flow patterns and waterhole water retention timing. Imperial will use a decision tree (**EMP Section 3.4.8.1**) for determination when crossing a watercourse. • A survey will be carried out to locate the flowlines and related infrastructure relative to permanent marks and benchmarks that conforms to Mapping Grid of Australia (MGA 94) or other approved datum. All buried flowlines will have a detectable tracer wire installed.	confirm that trenching will not adversely affect water flow patterns and waterhole water retention timing. Imperial will use a decision tree **(EMP Section 3.4.8.1**) for determination when crossing a watercourse. • A survey will be carried out to locate the flowlines and related infrastructure relative to permanent marks and benchmarks that conforms to Mapping Grid of Australia (MGA 94) or other approved datum. All buried flowlines will have a detectable tracer wire installed. For temporary above-ground HDPE flowlines, no tracer wire is required as the line is not buried.
IMP 5-3 Appendix 06 Waste and Wastewater Management Plan **4.8.1 HF Flowback Management** HF fluid will be transferred to above ground tanks at the WHS for reuse. Above ground tanks at the well pads will typically be interconnected through the HF flowline (subsurface HDPE pipework) to the WHS.	**IMP 5-3 Appendix 06 Waste and Wastewater Management Plan** **4.8.1 HF Flowback Management** HF fluid will be transferred to above ground tanks at the WHS for reuse. Above ground tanks at the well pads will typically be interconnected through the HF flowline (subsurface or temporary above-ground HDPE pipework) to the WHS.
IMP 5-3 Appendix 07 Spill Management Plan **Table 5—1 Summary of Quality and Quantity of Potential Spill Scenarios** Potential Spill Scenario - HF Flowback / Wastewater During Transfer, Treatment, Storage Mechanisms - Wastewater flowline leak.	**IMP 5-3 Appendix 07 Spill Management Plan** **Table 5—1 Summary of Quality and Quantity of Potential Spill Scenarios** Potential Spill Scenario - HF Flowback / Wastewater During Transfer, Treatment, Storage Mechanisms - Wastewater flowline leak. Controls –

Current EMP Text	Amended EMP Text
Controls – Flowline buried to 750 mm depth of cover (DOC) to reduce risks from fire and vehicle impacts. o DOC increased to 1,200 mm under access tracks and watercourses.	Buried flowline installed to 750 mm depth of cover (DOC) to reduce risks from fire and vehicle impacts. Temporary above-ground flowlines will be located within the access tracks right of way (ROW) corridor, fenced from public access, designed in accordance with APGA requirements, and subject to visual monitoring with a minimum of two inspections per 12-hour operating shift. o For buried flowlines, DOC increased to 1,200 mm under access tracks and watercourses.
IMP 5-3 Appendix 07 Spill Management Plan **Table 5—1 Summary of Quality and Quantity of Potential Spill Scenarios** Wastewater Flowlines (Large Scenario)	**IMP 5-3 Appendix 07 Spill Management Plan** Wastewater Flowlines (Large Scenario) – Buried Flowlines

IMP 5-3 Appendix 07 Spill Management Plan
Table 5—1 Summary of Quality and Quantity of Potential Spill Scenarios

Add detail noted below in plum.

Potential Spill Scenario	Approximate Duration	Mechanisms	Location	Maximum Typical Spill Quantity	Worst Case Quantity	Maximum Time to Locate Spill	Quality of Spill	Controls
Wastewater Flowlines (Large	Duration of the Activity	Flowline pierced by	Alongside Carpentaria 1 access track	21 kL	21 kL	Rapid – initiating event is an	As above	• Welded HDPE DN90 SDR11 pipe constructed and operated in accordance

Current EMP Text								Amended EMP Text
Scenario) – Temporary Above-Ground HDPE Flowline		mechanical means	(existing disturbed corridor)			above-ground pipeline strike with mechanical plant and the leak location.		with APGA PEGN Code [APGA, 2023]. • Signage located along the corridor in accordance with APGA requirements. • Low transfer volume (21 kL) limits spill consequence. • Fenced from public access by existing site fences and gates. • Personnel monitoring with a minimum of two inspections per 12-hour operating shift. • Inlet and outlet flow sensors with alarm logic. • Squeeze-off equipment in patrol vehicle for rapid isolation. • Freshwater flush capability if fire reported within 10 km. • Removed and area rehabilitation after use.

IMP 5-3 Appendix 07 Spill Management Plan **Section 7.1 Key Control Measures**	**IMP 5-3 Appendix 07 Spill Management Plan** **Section 7.1 Key Control Measures**

Current EMP Text	Amended EMP Text
• Weekly inspections of the wastewater and gas flowlines to detect leaks.	• Weekly inspections of the buried wastewater flowlines and gas flowlines to detect leaks. • For temporary above-ground HDPE wastewater flowlines, visual inspections will be conducted at the beginning and end of each shift during operations, supplemented by inlet/outlet flow sensors with alarm logic.
IMP 5-3 Appendix 07 Spill Management Plan **Section 7.2 Transport of Wastewater and Chemicals** HF flowback wastewater will be transferred and managed between well pads and the WHS by buried flowlines. Situations may arise where wastewater will be transported by heavy vehicles.	**IMP 5-3 Appendix 07 Spill Management Plan** **Section 7.2 Transport of Wastewater and Chemicals** HF flowback wastewater will be transferred and managed between well pads and the WHS by buried or temporary above-ground HDPE flowlines. Situations may arise where wastewater will be transported by heavy vehicles.
IMP 5-3 Appendix 12 Bushfire Management Plan **Section 5 Infrastructure Design, Construction and Operation** The well pads, CGP and WHS (facilities) are designed with a ring-fire access trail/fire break approximately 8 m wide, with approximately 4 m fire breaks around water bore pads.	**IMP 5-3 Appendix 12 Bushfire Management Plan** **Section 5 Infrastructure Design, Construction and Operation** The well pads, CGP and WHS (facilities) are designed with a ring-fire access trail/fire break approximately 8 m wide, with approximately 4 m fire breaks around water bore pads. Temporary above-ground HDPE flowlines will be located alongside precleared existing tracks.
IMP 5-3 Appendix 12 Bushfire Management Plan **Section 7.3 Fire Management Measures**	**IMP 5-3 Appendix 12 Bushfire Management Plan** **Section 7.3 Fire Management Measures**

Current EMP Text	Amended EMP Text
• Fire breaks and access trails for fire management will be ~ 8 m wide around facilities, except approximately 4 m wide around water bores. Access roads and tracks may also act as fire breaks.	• Fire breaks and access trails for fire management will be ~ 8 m wide around facilities, except approximately 4 m wide around water bores. Temporary above-ground HDPE flowlines will be located alongside precleared existing tracks. Access roads and tracks may also act as fire breaks.