Quarterly Recordable Incident Report



Please check the fo	Please check the following boxes if applicable to this report Nil Incident Report:				
Interest holder name:	Imperial Oil and Gas	Titleholder business address:	Level 19, 20 Bond Street Sydney NSW 2000	Title of environment management plan for the activity:	Imperial 2020-21 Drilling Program NT Exploration Permit (EP) 187 (IMP2-6.1)
Activity type: (e.g. drilling, seismic, HF, production)	Drilling	Quarter, Year:	Q1 July 2020 to September 2020.	Title details: (e.g. Exploration Permit no., Production License no.)	EP187
Incident date and time	All material facts and circumstances	Environmental outcome(s) and/or performance standard(s) breached OR Environmental impact or risk not specified in the approved EMP	Immediate action taken to avoid or mitigate any adverse environmental impacts or risks of the incident, including actions to stop or control the incident	Corrective action taken, o a similar incident o	
15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed and notified Schlumberger representatives of two rips in the mud sump liner. It was unknown from inquiries with site staff to the cause or initial reason for the rips in the mud sump liner.	From the EMP, Table 37. Environmental Values and Objectives – Asset Integrity Performance Standard; No asset integrity failures. As this observation is inconsistent with a Performance Standard specified in the EMP it has been classified as a recordable incident.	Immediate action Staff onsite committed to repair the liner and have photographic evidence supplied to DEPWS by 3pm on the 16/10/2020. The Liner was repaired and evidence was supplied to the DEPWS by 3pm on the 16/10/2020 Between the notification of the ripped liner and the repair works the mud sump was under hourly visual inspection. No mud was within the vicinity of the rips in the liner. Impacts No environmental impacts occurred as a result of this recordable incident.	To prevent this incident fror reoccurring Imperial intuice daily walk around wincluded as part of the situant The daily checklist for opeupdated to including liner for review. A copy of the checklist upprogram was provided to	itiated more regular rith liner verification e assessment. erations has been verification as an item dated and used in the

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed two mud sumps were in operation. The two mud sumps were not marked or lined to demonstrate the current freeboard threshold. The source of this nonalignment with the performance standard was unknown by staff on site.	From the EMP Table 38. Environmental Values and Objectives – Chemicals and Hazardous Materials. Performance Standard; No incorrect storage and use of chemicals and hazardous materials. Table 35 classifies drilling fluids as potentially hazardous to non-hazardous. As this observation is inconsistent with a Performance Standard specified in the EMP it has been classified as a recordable incident.	Immediate action Immediate action undertaken was for the lines to be remarked on the sump. This was undertaken by spray painting the liner with marks to indicate the 1.6m freeboard as required within the EMP. Lines were marked as soon as safely appropriate when the drill rig was pulling out of the hole. During this time in drilling no mud would be added to the sump and it was appropriately safe for staff to mark the sump. Between the lines being marked and awaiting for appropriate drilling operations the mud sump was under hourly visual inspection of freeboard levels. No mud was within the visually assumed 1.6m of the mandatory freeboard lines. Photos were sent to DEPWS of the lines being marked on the sumps. Impacts No environmental impacts occurred as a result of this recordable incident.	To prevent future recurrence of an absence of freeboard lines on mud sumps the following was undertaken; The pre-spud management checklist has been updated to include the explicit installation and mandatory review of installation prior to spudding of the well. Inclusion as an item to inspect in the daily check list

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the stockpile of surface soil and vegetative material appearing to be potentially over 1.5m – 2m height. This incident is reasonably assumed to have arisen from the relocation of the stockpile area due to the modification of the blooie line design. The new design required the stockpile to be relocated resulted in the potential height discrepancy not previously picked up in previous examinations.	EMP Table 40. Environmental Values and Objectives — Erosion and Sediment Control. Environmental Outcome; Minimise erosion (via water or wind) and sediment releases. As this observation is inconsistent with an environmental outcome specified in the EMP as such it has been classified as a recordable incident.	Immediate action Review undertaken on the height of the stockpiles. Where applicable the stockpiles were reshaped to ensure the maximum height was under 1.5 meters. The stockpiles were then covered with a geotextile liner to minimise any ongoing potential for sedimentation or erosion releases. Impact No complaints of dust generated due to the height of the stockpile was received from the operations. Monitoring for soil erosion and related issues resulted in no discovery as a result of this incident. Risk to Environmental Outcome Potential dust/erosion release.	To prevent a future recurrence of stockpile height being higher than approved in the EMP the following was undertaken; The civil construction checklist will include the direction for construction to be as the EMP approval notes. The update of the pre-spud management checklist has been undertaken to include the explicit height management and construction design of stockpiles prior to spudding of the well to be checked and verified.

DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the stockpile of surface soil and vegetative material had breached the sediment fence line making the sediment control fencing ineffective.

Estimated volume of breached material was estimated to be less than 2m³

This incident is reasonably assumed to have arisen from the relocation of the stockpile area due to the modification of the blooie line design. The new design required the stockpile to be relocated resulted in the potential over sight in the placement of material.

EMP Table 40. Environmental Values and Objectives – Erosion and Sediment Control.

Performance Standard

Minimum incidences of erosion and sedimentation occurring and,

Environmental Outcome;

Minimise erosion (via water or wind) and sediment releases.

As this observation is inconsistent with an environmental outcome and has resulted in a contravention of an environmental performance standard as specified in the EMP. As such it has been classified as a recordable incident.

Immediate action

Review undertaken on the volume of the stockpile overflow past the sediment fences.

Stockpile reshaped, levelled appropriately, and covered with appropriate geotextile liner to better reduce potential for future erosion or sedimentation

Sediment fences re-installed post liner construction.

Impact

No complaints of dust generated due to operations. Monitoring for soil erosion and related issues undertaken post drilling resulted in no incident being raised.

As a result, no impact was understood to have occurred or observed post operations.

Risk to Environmental Outcome

Potential dust/erosion release.

To prevent future recurrence of stockpile breaches the following steps have been reviewed and amended;

- Civil construction checklist altered to include the review of stockpile construction for suitability to meet the standards set out in the EMP and the ESCP.
- Update of the Pre-spud management checklist has been undertaken to include the explicit design suitability of the stockpile and the ESCP management and implementation prior to spudding of the well to be checked and verified for suitability.

Review of onsite monitoring of erosion conditions found that a more regular review during operations than outlined in the EMP for soil and erosion related issues may have picked up on this incident earlier than during the onsite inspection. As mentioned in EMP Table 40. Environmental Values and Objectives – Erosion and Sediment Control. "Monitoring for soil erosion and related issues is best undertaken at critical stages, such as:

- After completion of a specific phase of activity all areas disturbed should be inspected for early signs of compaction, erosion and soil degradation (generation of bulldust)
- 2. When accessing the site after the wet season look for signs of erosion.
- 3. If significant impacts are identified remediation works may need to be

15/10/2020

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				conducted prior to continued vehicular access."
				Future monitoring of erosion conditions to occur during operation as part of the daily checklist. Rather than the "After completion of a specific phase" intervals previously employed
				New levels of monitoring have been established include the following;
				Daily check list during operational andWeekly non-operations.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the stockpile was not covered in a geotechnical cover. Investigation has come to the conclusion that this item was overlooked in civil construction operations.	EMP Table 40. Environmental Values and Objectives — Erosion and Sediment Control. Environmental Outcome; Minimise erosion (via water or wind) and sediment releases. As this observation is inconsistent with an environmental outcome specified in the EMP is has been classified as a recordable incident.	Immediate action Review undertaken on the stockpile. Post the pre-mentioned reshaping and movement of stockpile material, the stockpile was lined with an appropriate geotextile liner to better reduce potential for future erosion or sedimentation Impact No complaints of dust generated due to operations. Monitoring for soil erosion and related issues undertaken post drilling resulted in no incident being raised. As a result, no impact was observed during and post remediation operations. Risk to Environmental Outcome Potential dust/erosion release.	To prevent future recurrence of the stockpile not having the appropriate geotechnical liner the following was undertaken; • Update of the civil construction checklist to ensure that the inclusion of a liner will be part of the construction process. Stockpile construction for suitability to meet the standards set out in the EMP and the ESCP. • An update of the pre-spud management checklist has been undertaken to include the explicit design suitability of the stockpile and the ESCP management and implementation prior to spudding of the well to be checked and verified for suitability of design.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the Sediment fencing was not installed at the base of the stockpile. As per the plan Sedimentation fencing was originally installed as per the ESCP. The stockpile was relocated on site due to an extension in the blooie line plans. This resulted in the relocation of the stockpile and the removal of the ESC management controls. When finalised there was no reinstallation of the sediment management control.	EMP Table 40. Environmental Values and Objectives – Erosion and Sediment Control. Environmental Outcome; Minimise erosion (via water or wind) and sediment releases. As this observation is inconsistent with an environmental outcome specified in the EMP is has been classified as a recordable incident.	Immediate action Review undertaken on the site ESCP. The stockpile sedimentation fence was then re-installed as per ESCP. Impact No complaints of dust generated due to operations. Monitoring for soil erosion and related issues undertaken post drilling resulted in no incident being raised. As a result, no impact was observed during and post remediation operations. Risk to Environmental Outcome Potential dust/erosion release.	 To prevent future recurrence of the ESCP not being appropriately installed the following was undertaken; The civil construction checklist has been updated to ensure that ESP is a monitored item. The pre-spud checklist has been updated to ensure that the ESCP is a monitored item. During operations the daily checklists have been updated to ensure that ESCP is a monitored item. When not in operation the weekly checks include ESCP in monitored items.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the installation of returns down the well pad fence line were not observed to be installed. This incident occurred as a wording ambiguity in the ESCP design plan. Site staff during construction read the wording to imply that this was not a mandatory design feature given the lack of slope on the well pad. As a result the returns down the well pad fence line weren't installed.	EMP Table 40. Environmental Values and Objectives – Erosion and Sediment Control. Environmental Outcome; Minimise erosion (via water or wind) and sediment releases. As this observation is inconsistent with an environmental outcome specified in the EMP is has been classified as a recordable incident.	Immediate action Review undertaken on the site ESCP. The returns down the well pad fence line were then installed as per ESCP. Photos forwarded to DEPWS Impact No complaints of dust generated due to operations. Monitoring for soil erosion and related issues undertaken post drilling resulted in no incident being raised. As a result, no impact was observed during and post remediation operations. Risk to Environmental Outcome Potential dust/erosion release.	To prevent future recurrence of this incident resulting in the return line not being appropriately installed the re-writing of the new Imperial ESCP ensures that there is not any ambiguity in the installation phrasing.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that there where multiple observations over the well pad where spills to surface had occurred and secondary containment had not be installed under (e.g. drip trays)	EMP Table 37. Environmental Values and Objectives – Asset Integrity Performance Standard; No asset integrity failures and no uncontrolled releases EMP Table 38. Environmental Values and Objectives – Chemicals and Hazardous Materials Performance Standard; No uncontrolled releases of chemicals and hazardous materials and no incorrect storage and use of chemicals and hazardous materials As this observation is has resulted in a contravention of an environmental performance standard specified in the EMP and has been classified as a recordable incident.	Immediate action Review undertaken on the site chemical storage and sites of chemical spillage. All areas of spills add up accumulatively to under 4m³ of potentially contaminated soil. It was noted by operational staff that the only soil contaminated by chemicals were well below the volumes to be classified as small spills and were predominately the chemicals used in the drilling mud additives, these being KCL and Bentonite. It was noted that no oil or diesel went to contact with the ground. Chemical storage and bunding was reviewed and appropriate storage, bunding and management of chemicals was implemented prior to the next rain event. Photos were forwarded to DEPWS. Impact No impact is estimated to have occurred given the prompt clean up and management of chemicals prior to the rain event.	 To prevent future recurrence of this incident the following has been amended; Operation staff inductions to give greater focus to the management, storage and controls in place for chemical management. Daily site checks to include the review of chemical management and spills Icebreakers to include the appropriate management of chemical management and spills Educational and visual reminders to be posted in the operational workspaces to ensure that the management of chemicals and what to do to report and manage spills is an easily available and read material.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the lack of use of pre-emptive capture bunding at a spill location- at mud sump pump This incident was an oversight of onsite staff to potential spill locations.	EMP Table 38. Environmental Values and Objectives — Chemicals and Hazardous Materials Performance Standard; no incorrect storage and use of chemicals and hazardous materials As this observation has resulted in a contravention of an environmental performance standard specified in the EMP and has been classified as a recordable incident.	Immediate action Review undertaken on the spill location and the approximate volume of under 0.5m³ was moved to the mud sump. Examination and alteration of the fittings used for pumping and the installation of appropriate bunding for the pump was undertaken to prevent any further potential spillage. Impact No impact is estimated to have occurred given the prompt clean up and management of this spill.	 To prevent future recurrence of this incident the following has been amended; Operation staff inductions to give greater focus to the management, storage and controls in place for drilling mud management. Daily site checks to include the review of mud management and spills Icebreakers to include the appropriate management of mud management and spills

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the sink of the geology laboratory was not plumbed or waste water captured and contained, instead material spilt direct to ground This waste water was sink water of potable tap water and demineralised water which was used to wash out mud sampling equipment. This water was accidentally not plumbed to the mud sump for disposal but was instead allowed to ground. The maximum assumed volume of water was under 100 litres.	EMP Table 38. Environmental Values and Objectives — Chemicals and Hazardous Materials Performance Standard; no incorrect storage and use of chemicals and hazardous materials As this observation is has resulted in a contravention of an environmental performance standard specified in the EMP and has been classified as a recordable incident.	Immediate action Review undertaken on the spill location and the wet volume was pumped to the mud sump. The installation of a bucket was put under the laboratory sink to allow for the capture and re-use of the water for cleaning of mud equipment. Impact No impact is estimated to have occurred given the prompt clean up and management of this spill.	To prevent future recurrence of this incident the following has been amended; The plumbing of laboratories and other ancillary facilities has been added to the Prespud checklist. Daily site checks now include the review of all spill sites

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that the pooling of liquid within well pad This pooling was confirmed by site staff as a low lying area of the pad which had filled and retained water. The source of this water was either rainwater or dust suppression water. It was unknown the exact cause of the initial pooling water material. This location was near the loading and mixing chamber for the drilling mud and had the potential to include small amounts of the chemicals which went into the drilling mud composition, these being KCL or Bentonite. Total volume of wet material was estimated to be under 0.5m ³	EMP Table 38. Environmental Values and Objectives — Chemicals and Hazardous Materials Performance Standard; no incorrect storage and use of chemicals and hazardous materials As this observation is has resulted in a contravention of an environmental performance standard specified in the EMP and has been classified as a recordable incident.	Immediate action Review undertaken on the spill location and the wet volume was pumped to the mud sump. The site was reviewed, and new soil was introduced and re-compacted into the area to remove the low lying spot on the well pad and avoid future pooling potential. Impact No impact is estimated to have occurred given the prompt clean up and management of this water pooling incident.	To prevent future recurrence of this incident the civil construction check list has been altered to include the removal of any low lying areas.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection observed that there was a presence of drilling mud waste on ground As part of the recycling of mud on site the cuttings are often taken out through the mud shakers and deposited into the cuttings bins. Through the movement of the cuttings bins it was noted that there was some spillage past the covered areas which had not been immediately cleaned up. Estimated volume of soil and cuttings removed was less than 5m ³	EMP Table 38. Environmental Values and Objectives – Chemicals and Hazardous Materials Performance Standard; no incorrect storage and use of chemicals and hazardous materials As this observation is has resulted in a contravention of an environmental performance standard specified in the EMP and has been classified as a recordable incident.	Immediate action Review undertaken on the spill location and the cutting contaminated soil was relocated to the mud sump. Impact No impact is estimated to have occurred given the prompt clean up and management of this cuttings spillage incident.	To prevent future recurrence of this cuttings accumulation incident the daily checklist has been modified to review this location for spills, and any congregation of cutting which may have spilt in the area.

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15/10/2020	DEPWS Inspectors on the 15/10/2020 during a site inspection were advised by staff on site advised walks around on site are completed twice daily however no report of documentation was able to be supplied to demonstrate the checks and what is checked.	EMP Table 38. Environmental Values and Objectives — Chemicals and Hazardous Materials Environmental Outcome; Minimise impacts to ecosystem and human health values This observation of process management has been classified as a contravention of an environmental outcome specified in the EMP it has been classified as a recordable incident. In particular, the measurement criteria for this environmental outcome states; 'records of releases, leaks and associated clean ups are to be managed using Imperial's incident reporting system'	Immediate action Onsite the management process for the daily checklists was reviewed and where implementation or record management was deficient was reinitiated. Impact The resultant gap in paperwork has not resulted in the development of any incidents of reportable or ongoing nature. This has been reaffirmed with the reinstated daily and continuing other scheduled monitoring. These actions have resulted in the development no incidents of reportable or ongoing nature. As such there is no impact to be determined to have occurred.	To prevent future recurrence of this incident the following has occurred; Operational review of daily checklist system. Including the implementation methodology and responsibilities for completion. Review of staff inductions to give greater focus to the daily check system and the process involved.

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4/12/2020	The minimalist recordable incidents through the internal Imperial incident reporting system has prompted the requirement for internal review. Discussions between DEPWS and Imperial staff raised this as a recordable incident for internal review. "if there are no internal records of recordable incidents this in itself should be reported as an incident and the corrective actions that Imperial has undertaken to ensure the internal incident reporting is working, noting it is a key measurement criteria for most environmental performance standards in the EMP."	EMP Table 38. Environmental Values and Objectives – Chemicals and Hazardous Materials Environmental Outcome; Minimise impacts to ecosystem and human health values As this internal observation could result in a contravention of an environmental outcome specified in the EMP it has been classified as a recordable incident. In particular, the measurement criteria for this environmental outcome states; 'records of releases, leaks and associated clean ups are to be managed using Imperial's incident reporting system'	This incident was raised post operational on ground drilling operations. Currently the operational location is under monitoring and wet season management status. This includes but is not limited to weekly reviews for site security, sampling and more. Current operational staff (who undertake the weekly review of site) have had the Imperial incident reporting system reiterated to them. Risk to Environmental Outcome Potential impact to the environment, ecosystem or human health.	 To prevent future recurrence of this incident the following has been amended; Operational staff inductions to give greater focus to the incident reporting and management system. Daily site checks to include the review all objectives and report on items as per the incident management system. Inductions to include the appropriate identification and management methodology of incidents during operations Educational and visual reminders to be posted in the operational work spaces to ensure that incident management is commonly raised or read about.

Note 1: This report is required to be submitted under regulation 35(1) of the Petroleum (Environment) Regulations 2016 (NT).

Note 2: This report may be published on DENR's website, in accordance with regulation 35A(1)(c) of the Petroleum (Environment) Regulations 2016 (NT).

Note 3: Regulation 35(3)(b) of the Petroleum (Environment) Regulations 2016 (NT) requires reports to be made within specified timeframes.

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Note 4: Regulation 35(4) of the Petroleum (Environment) Regulations 2016 (NT) defines the reporting period.	