

Item	Directive	Reference	Response
1	<p>Provide confirmation on whether Phase 2 ESAs were completed at site I-02 and F-36 in October 2021, and if so, when the results from these Phase 2 ESAs will be available.</p> <p>Once available, Phase 2 ESA for site I-02 and F-36, should be posted to the MVLWB registry for dissemination.</p>	ADKFN - 1	These assessments have been completed and the reports are appended to the revised CRP.
2	<p>If seed is to be applied to support revegetation efforts, seed should only be sourced from a reliable vendor able to ensure seed mix contains only native species.</p> <p>Where possible, maintain as much natural revegetation as practical in closure and reclamation activities. We recommend that additional information be provided on specific approaches to be employed to ensure that revegetation be deterministic result in a restoration of ecosystem services and function.</p>	ADKFN - 2	During reclamation, where possible/practical, natural revegetation will be maintained in closure and reclamation activities.
3	<p>Provide additional information on specific approaches to be employed to ensure that revegetation be deterministic result in a restoration of ecosystem services and function.</p>	ADKFN - 3	<p>Relevant revegetation guidelines from the NWT and British Columbia will be utilized.</p> <p>These guidelines provide a toolkit to identify and compose a list of suitable native species with ecological factors that complement the revegetation parameters. Vegetation inspections for invasive species would also be conducted yearly until confirmed the site is suitably vegetated. If invasive species are identified during these inspections, they will be handpicked if feasible or arrangement will be made to spray the invasive species if large quantities are encountered.</p>
4	<p>Provide a link to the revised security estimate. If this estimate is not yet available, please provide a timeline for when the estimate may be made available.</p>	ADKFN - 4	An updated security estimate has been provided and will be posted to the public registry by the MVLWB.

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5	Make reasonable efforts to identify the location of the access road spill, and relevant soil testing be performed to understand whether additional remediation efforts are required.	ADKFN - 5	<p>As of January 19, 2022, SynergyAspen received the Spill Report from the prior environmental consultant (North Shore Environmental Consultants Inc.). The North Shore Phase II ESA Report identified the spill was cleaned up.</p> <p>A Site Inspection will be completed in Q2 or Q3 of 2022 or when snow is not on the ground to determine if there is any evidence of the spill remaining. If identified, soil samples will be collected for laboratory analysis.</p>
6	Generally, we agree with this assessment of risk, however, as metals and hydrocarbons can have detrimental impacts on wildlife and the environment, we recommend that as part of follow-up monitoring, chemical analysis of above-ground vegetation be conducted for contaminants identified in excess in the Phase 2 ESAs, to ensure that contaminants are not entering the food chain.	ADKFN - 6	The top 1 metre of soil at these sites did not have concentrations that exceeded the applicable guidelines. It is SynergyAspen's opinion that contaminant concentrations in the plants would not have any detrimental impacts to wildlife and the environment, as the plant rooting zone would typically not be deeper than 1 metre.
7	Clarify the status of all well-sites listed and the scope of the CRP.	MVLWB - 1	The scope (section 2.1) within the CRP has been updated to include all applicable areas. Table 2 within the revised CRP describes the current site condition of all the project components within the scope of this CRP.
8	Provide updated Phase II ESA Reports.	MVLWB - 2	The additional Phase II reports are appended to the revised CRP.
9	Update the status of this security estimate.	MVLWB - 3	An updated security estimate has been provided and will be posted to the public registry by the MVLWB.
10	Provide additional information on plans to remediate or remove contaminated soils, including closure criteria for any impacted soils and/or clear justification and rationale for not proposing such activities prior to achieving closure based on the results and recommendations provided in the ESAs.	MVLWB - 4	<p>The revised CRP includes details regarding remediation of soils as required (section 4.5).</p> <p>The applicable guidelines applied to determine if remediation is required varied depending on individual site conditions but generally Alberta Tier 1 Soil and Groundwater Guidelines or Ministry of Environment and Natural Resources guidelines were applied to all sites with certain receptor pathways eliminated as applicable (using an Alberta Tier 2 guideline approach).</p>

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			<p>A-01: Based on the North Shore Environmental Consultants Inc. Phase 1 ESA (May, 2017) outcome a North Shore Environmental Consultants Inc. Phase 2 ESA (May, 2017) was completed at the well centre and the potential drilling waste disposal area was investigated. SynergyAspen completed a Desktop Remediation Report (July, 2021) where pathways were eliminated from applied guidelines: Environmental Guideline for Contaminated Site Remediation (GNWT-ENR, 2003) and CCME Soil Quality Guidelines (CCME, 2018). The report concluded that the results/exceedances were below the applicable guidelines and no further environmental work was required.</p> <p>F-36: A supplemental ESA was completed in October 2021 and a remedial excavation was completed at the wellbore area in January, 2022.</p>
11	<p>1) Refer to the Board's Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories. The objectives-based approach for identifying closure activities, goals, objectives and criteria can and should be applied to any CRP being submitted to the Board for approval.</p> <p>2) Paramount to provide the site-specific details informing closure criteria for revegetation. This should include a discussion on the appropriate species compositions and percentage coverage that Paramount would consider a success based on baseline conditions and/or surrounding areas.</p>	MVLWB - 5	<p>1) Closure objectives and criteria are included in section 3.3 of the revised CRP.</p> <p>2) Paramount and SynergyAspen have and will continue to use an appropriate seed mix. It consisted or will consist of a native blend of grass and herbaceous species. Certified seed mix will be/was purchased from a reputable company. Prior to any future seed application, GNWT, Department of Lands will be consulted again.</p>
12	<p>What, if any, site specific guidelines are Paramount proposing to apply to its remediation goals for Liard South? How were they calculated, where will they apply, and why are they appropriate?</p>	MVLWB - 6	<p>The guidelines used are a combination of Alberta Tier 1 soil and groundwater remediation guidelines (AEP, 2019), Alberta Tier 2 (AEP, 2019), Environmental Guideline for Contaminated Site Remediation (GNWT-</p>

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			<p>ENR, 2003), CCME Soil Quality Guidelines (CCME, 2018), Subsoil Petroleum Hydrocarbon Guidelines for Remote Forested Sites in the Green Area (ESRD, 2014) and Assessing Drilling Waste Disposal Areas: Compliance Options for Reclamation Certification (AER, 2014).</p> <p>Using these documents, applicable guidelines were established and applied at each site. Further details are presented in the reports appended to the CRP.</p>
13	Provide rationale for the proposed timelines.	MVLWB - 7	The objective of reclamation monitoring is to determine topsoil quality/quantity and complete a vegetation inspection. The length of time to achieve this objective will vary for each site. Two growing seasons are required to ensure vegetation establishment and monitor for invasive plants.
14	Provide discussion on Paramount's intentions to provide these plans and reports in relation to the proposed monitoring identified in Section 5 and 8.	MVLWB - 8	Monitoring reports will be submitted as part of annual reporting starting in 2023.
15	The plan should be revised to ensure that all relevant requirements under Schedule 3 of Licence MV2021L1-0006 are included in the body of the Plan.	MVLWB - 9	The required information is available in the individual reports for each location in the scope of the plan. The CRP has been revised to include some additional detail in the main body of the plan.
16	The plan should be updated or revised to reflect the results, conclusions, and recommendations contained in the relevant Phase I and Phase II ESAs and Desktop Remediation Reports.	MVLW - 10	A summary of investigation completed to date has been included in the revised CRP (Table 3).
17	The Board and Paramount should refer to the attached ARKTIS memorandum for additional background and context supporting ENR's comments and recommendations herein.	GNWT-ENR-EAM - 1	The ARKTIS memorandum was reviewed and considered in preparation of the updated C&R.
18	Paramount should specify which well sites require earthworks and revegetation, the level of works required and/or the size of the area requiring work, and	GNWT-ENR-EAM - 2	The requested information has been included in the revised CRP.

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	the duration/schedule of the specific works.		
19	The ESAs provided in the appendix of the CRP to undergo a review and evaluation by the MVLWB and parties to further inform if the proposed reclamation activities, the closure criteria, and associated evaluation of environmental risks as discussed in the ESAs are documented in the CRP.	GNWT-ENR-EAM - 3	No proponent action required.
20	Paramount should update the timeline for the submission of an updated security estimate.	GNWT-ENR-EAM - 4	An updated security has been submitted.
21	Paramount should confirm if any closure and reclamation events have occurred in 2021 and provide an updated schedule if needed.	GNWT-ENR-EAM - 5	Two sites had work completed in 2021 and 2022: I-01: F-36: Stage 2 drilling, a supplemental site investigation to provide additional delineation and remediation of impacted soil from well centre.
22	Paramount should provide the Phase II Environmental Site Assessment (ESA) report for wellsite F-36 as well as the Phase I ESA report for wellsite O-35.	GNWT-ENR-EAM - 6	The requested reports are appended to the revised CRP.
23	Paramount should confirm if the planned Phase II ESA for wellsite I-02 and F- 36 have been completed, and if so, provide the associated ESA reports when available and describe any remediation requirements resulting from the ESAs. Provide an update on the timing for report submission.	GNWT-ENR-EAM - 7	These assessments are complete and the reports are appended to the revised CRP.
24	Paramount should confirm if the barge and associated camp site is outside the scope of the CRP and if so explain why these items are not the responsibility of the Proponent for reclamation. If not outside the current project scope, identify the reclamation status of the barge and camp site and provide any documentation describing the current site conditions as well as describe any reclamation activities that remain to be completed and if the site will be used during the reclamation program.	GNWT-ENR-EAM - 8	These have been added to the C&R.
25	Paramount should confirm the following: 1. Size of the area of the F-36 decking site. 2. Size of the area of the F-36 and O-35 borrow sites.	GNWT-ENR-EAM - 9	The requested information is provided in the revised CRP.

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	3. The reclamation status and current site conditions of each sump, decking, camp and borrow site. 4. Specific reclamation activities that are to occur for each sump, decking, camp and borrow site or describe why reclamation is not needed.		
26	Paramount should confirm the total length of all-access and winter road required to support reclamation activities and provide a map depicting the access requirements, as well as confirm the reclamation requirements for the all-access road.	GNWT-ENR-EAM - 10	This information is available on the public registry as part of the project Land Use Permit and Water Licence. GNWT should be aware that the project does not have an all access road.
27	Paramount should confirm the number of culverts and bridges requiring removal and details of their characteristics, physical size, and depth of installation, as applicable.	GNWT-ENR-EAM - 11	All culverts and bridges, where present, will be removed during final reclamation activities.
28	Paramount should confirm the quantities of each equipment type required for abandonment and reclamation activities.	GNWT-ENR-EAM - 12	One excavator and two dozers are required for the remaining work.
29	Paramount should confirm the number, type and size of camp structures to be mobilized to the site to support well abandonment and reclamation, as well as the point of origin for mobilization.	GNWT-ENR-EAM - 13	No camp is required for the remaining reclamation work.
30	Paramount should confirm the number of reclamation personnel and detailed time requirements (e.g., days, weeks, months) for the project.	GNWT-ENR-EAM - 14	The remaining reclamation work at I-02 and on the portions of constructed access are expected to take 15 days.
31	Paramount should confirm the estimated quantity of (1) solid waste and (2) sewage waste generated during the reclamation project from the camp.	GNWT-ENR-EAM- 15	No camp is required for the remaining reclamation work.
32	Paramount should confirm the following: 1. If wildlife monitoring will occur post-closure. 2. Details regarding the anticipated post-closure monitoring to occur, including on-site time requirements, monitoring locations, the anticipated quantity of soil and water samples and testing parameters. 3. Thresholds used to determine when and what maintenance activities will be required.	GNWT-ENR-EAM - 16	1. All Sites will be adequately investigated, remediated and reclaimed. Wildlife monitoring post-closure is currently not proposed/planned however evidence of wildlife is recorded as part of the reclamation assessments if identified. 2. Post reclamation earthworks and seeding of disturbed areas, monitoring site inspections will be conducted annually for two years (2023 & 2024). Reclamation

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			<p>assessment will take place in 2024/2025 (after two full growing seasons). Soil and/or groundwater investigations were previously completed. This information was previously provided.</p> <p>3. On-site monitoring events - visual inspections and walk over of lease for vegetation, erosion and subsidence issues will be completed two growing seasons after reclamation activities are completed. These inspections will include photo documentation, monitoring of soil and/or vegetation comparisons, topography and drainage thresholds - if any features assessed during the inspections does not meet reclamation criteria then maintenance activities may be implemented e.g. additional spot seeding, weed picking, weed spraying etc.</p>