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USDA Forest Service, Alaska Region
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P.O. Box 21628
Juneau, Alaska 99802-1628

FILED ELECTRONICALLY VIA FOREST SERVICE OBJECTION PORTAL

Re: Hecla Greens Creek Mining Company, Greens Creek Mine North Extension Project Draft Record of Decision Comments

Dear Ms. Crocker:

This letter and the attachments constitute Hecla Greens Creek Mining Company's ("**Hecla**") comments on the Draft Record of Decision ("**DROD**") and the Final Supplemental Environmental Impact Statement ("**FSEIS**") concerning the Greens Creek Mine North Extension Project ("**NEP**").

Completion of the National Environmental Policy Act ("**NEPA**") process is critically important to continued mine operations and Hecla's ability to contribute to the domestic mineral supply chain. Hecla's significant production of the critical mineral zinc, as well as metals essential to the decarbonization of the economy, like silver, underscore the importance of completing the NEPA process in a timely fashion.

In accordance with 36 C.F.R. Part 218, Subparts A and B, Hecla submits the following comments to maintain its pre-decisional administrative review objection rights to both the chosen alternative and proposed mitigation measures identified below as outlined in the DROD and FSEIS for the NEP. These comments are intended to further supplement Hecla's previously submitted comments during earlier stages of the NEPA process, including formal comments submitted to Matthew Reece on January 18, 2023, and May 23, 2023.[1]

Hecla remains committed to working cooperatively with the U.S. Forest Service ("**Forest Service"**) to approve the NEP, both in terms of the chosen alternative and as to the proposed mitigation measures.

I. COMMENTS ON CHOSEN ALTERNATIVE[2]

The DROD documents the Forest Supervisor's intent to select Alternative B from the NEP FSEIS.[3] The stated rationale for choosing Alternative B includes the purpose and need for the

[1] Copies of these comments are attached as Exhibits A and B. *See* 36 C.F.R. § 218.5(a).
[2] Hecla previously commented on the Proposed Alternatives in its May 23, 2023 Comment Letter to Matthew Reece. *See generally*, Exhibit B; *see also* 36 C.F.R. § 218.8(c), (d).
[3] U.S. Forest Service, Draft Record of Decision (hereinafter, "**DROD**"), at 1, available at https://www.fs.usda.gov/project/?project=57306.

decision, the impacts to surface water quality and water flow, the potential for wetland disturbance, and the ability of the Forest Service to confirm the effectiveness of the proposed mitigation measures through a phased implementation approach.[4]

While Hecla originally proposed Alternative B in its proposed amendment to the General Plan of Operations ("**GPO**") in October 2020, further geotechnical and engineering analysis revealed that the Alternatives C and D will result in more capacity in the Tailings Disposal Facility ("**TDF**") per acre of proposed disturbance.[5] Specifically, Alternatives C and D better serve Hecla's purpose and need for proposing the NEP and would result in the most feasible and efficient options of the Action Alternatives because they maximize capacity relative to acres disturbed, allow the Forest Service to evaluate additional years of operating life through a phased implementation approach, and minimize the need for further redundant environmental analyses.[6] Additionally, Hecla believes that the selection of Alternative B could result in additional cumulative disturbance associated with additional expansions, mainly due to the location of the B-Road on the eastern side of the TDF which constrains the mine life to a maximum of 18 years.[7]

The Forest Service's rationale for selection of Alternative B could be equally applied to Alternatives C and D, which better support Hecla's purpose and need for proposing the NEP and which would result in a lesser amount of wetland disturbance relative to TDF storage capacity. As such, Hecla urges the Forest Service to choose either Alternative C or D in its Final Record of Decision.

First, Alternatives C and D both allow for greater TDF storage capacity relative to the acres disturbed.[8] On its face, the FSEIS states that Alternative B will result in the least amount of surface disturbance. However, Alternative B also results in the smallest TDF capacity expansion. The authorization of Alternative C or D would result in less disturbance for more TDF storage capacity better meeting the purpose and needs of the NEP.

Second, the selection of Alternative B over Alternatives C and D would result in minimal, if any, improvements to the watershed.[9] The DROD notes that all alternatives would have similar impacts to surface water quality and water flow impacts, but that Alternative B would result in the most wetland disturbance due to the eastern alignment of the B-Road corridor.[10] Alternatives C and D would result in less wetland disturbance while simultaneously being subject to the same

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[4] DROD, at 7-12.
[5] *See* Exhibit B, at 1.
[6] *Id.*
[7] *Id.*
[8] *See* U.S. Forest Service, Final Supplemental Environmental Impact Statement (hereinafter, "**FSEIS**"), Table ES-1, at S-4, available at https://www.fs.usda.gov/project/?project=57306.
[9] *See* DROD at 8-11 (discussing the similar impacts of the alternatives).
[10] *Id.*

proposed mitigation measures that the Forest Service believes would minimize impacts to the watershed.[11]

Finally, the Forest Service states that approval of Alternative B would allow for phased implementation to ensure the effectiveness of the proposed mitigation measures.[12] However, phased approaches of Alternatives C and D could also allow the Forest Service to confirm the expected effectiveness of mitigation and monitoring methods through phased implementation.

For the reasons provided in this letter, Hecla respectfully asks the Forest Service to re-evaluate its selection of Alternative B prior to issuance of the final Record of Decision.

A. The selection of Alternative B will result in the most surface disturbance per acre of increased TDF capacity.

Table ES-1 of the FSEIS compares the total surface disturbance of each proposed alternative with the increase in TDF capacity.[13] As shown in this table, Alternative B would result in the most surface disturbance for the least amount of increased TDF capacity. Importantly, if Hecla were to need additional capacity beyond that authorized under Alternative B, it would have to initiate further surface disturbance—likely more disturbance than what is currently proposed under Alternatives C and D—to obtain that additional TDF capacity.

Under Alternative B, the B-Road would be located on the eastern side of the TDF, while simultaneously extending the tailings stack in an eastward direction.[14] The TDF cannot be expanded westward. Thus, the eastern alignment of the B-Road corridor inherently constrains any future expansion and would prevent the mine life from extending beyond 18 years without additional surface disturbance.

Aligning the B-Road on the western side of the TDF—as is proposed in Alternatives C and D—avoids challenges with road design on the eastern side of the tailings stack and removes any anticipated elevation-related constraints to the design of the tailings stack, allowing for additional TDF capacity for less acreage disturbance, either now or in the future.[15] Relocating the B-Road to the western side of the TDF would not constrain further expansion of the TDF to the east and would result in increased operational capacity per proposed acre of disturbance beyond the next 18 years.

Hecla understands that the Forest Service may be concerned with extending the mine life beyond 18 years. As such, if the Forest Service does not want to extend the life of the mine beyond the 12 to 18 years proposed in Alternative B, Hecla encourages the Forest Service to approve a modified Alternative B that would allow for the relocation of the B-Road to the western side of

[11] *Id.*
[12] *Id.* at 9, 11.
[13] *See* FSEIS, Table ES-1, at S-4.
[14] *See* FSEIS at S-3.
[15] *See id.*

the TDF. A modified Alternative B with a western B-Road alignment would allow for minimal disturbance and leave open the opportunity to expand the TDF capacity in the future with minimal additional disturbance.

Furthermore, a modification to Alternative B that allows a western B-Road alignment would not require any additional environmental analysis as it was already thoroughly analyzed in the FSEIS under Alternatives C and D. And a modified Alternative B would not trigger additional NEPA analysis as adjustments to the final engineering design for the purpose of improving project facility locations and to better meet on-site resource management objectives are not a substantial change to the environmental concerns of the NEP.

B. Alternatives C and D have similar, if not lesser, impacts to surface waters, wetlands, and aquatic habitats.

The DROD asserts that all Action Alternatives would result in similar impacts to surface waters, wetlands, and aquatic habitats.[16] As such, the Forest Service could approve Alternative C or D in lieu of Alternative B.

The DROD states that impacts to surface water quality and water flow are similar among the alternatives, but that Alternative B is preferable due to reduced disturbance in Tributary Creek, Hawk Inlet, and Cannery Creek.[17] While this may hold true for Alternative B versus Alternative D, the DROD does not address why Alternative C cannot be chosen under the same rationale.[18]

Similarly, a modified Alternative B allowing for a western alignment of the B-Road corridor (as described above) would not result in changes to the surface water quality or water flow or increase disturbances to Tributary Creek. Furthermore, while the approval of Alternative B may result in the least initial amount of surface disturbance, the DROD highlights that Alternative B actually has the highest direct impacts to open western hemlock wetlands as a result of construction along the selected B-Road corridor.[19] Alternatives C and D—or even a modified Alternative B that moves the B-Road to the west—would result in the least disturbance to wetlands in relation to TDF capacity, both now and in the future.

Finally, the DROD asserts that Alternative B would result in few changes to aquatic habitats largely due to the proposed mitigation measures.[20] However, the DROD also states the proposed mitigation measures would apply equally to all three proposed alternatives.[21] As such, that should not be a basis to choose Alternative B over Alternatives C or D. Additionally,

[16] DROD, at 8-12.
[17] *Id.* at 8.
[18] *See generally, id; see also* FSEIS, Table ES-2, at S-5—S-6 (indicating similar impacts of Alternatives B and C).
[19] DROD, at 9.
[20] *Id.* at 10-11.
[21] *Id.*

regardless of which alternative it selects, the Forest Service can confirm the expected effectiveness of its proposed mitigation and monitoring measures through phased implementation of the NEP.

C. The Forest Service can still confirm the expected effectiveness of mitigation and monitoring measures through phased implementation of Alternatives C or D, or a modified Alternative B.

While the DROD encourages the selection of Alternative B to allow the Forest Service to confirm the expected effectiveness of the mitigation and monitoring measures through a phased approach to implementation, Alternatives C or D, or a modified Alternative B could similarly provide opportunities to analyze the NEP through a phased approach. As described in the FSEIS, Phase 1 (referred to as Stage 1 for Alternatives C and D) is identical for Alternatives B, C, and D, and Stage 2 of Alternatives C and D "would be the same as under the Proposed Action [Alternative B] with the exception of the B-Road relocation to the west side of the TDF."[22]

Thus for all three alternatives, or a modified Alternative B, the Forest Service will have an opportunity to evaluate the effectiveness of existing mitigation and monitoring measures prior to authorizing subsequent expansion phases of the TDF. Therefore, authorizing an alternative with a western B-Road alignment would result in the least amount of surface disturbance and the most Forest Service oversight of mitigation measures.

Because Alternatives C and D better fit the purpose and need for the NEP, while not creating significant additional impacts to the environment, Hecla respectfully requests that the Forest Service reconsider its decision to authorize the NEP under Alternative B.

II. COMMENTS ON PROPOSED MITIGATION MEASURES[23]

As part of the NEPA review process, the Forest Service identified required mitigation, conservation, and monitoring measures provided in Attachment A of the DROD.[24] As outlined in the following comments, Hecla believes several of the proposed measures are: (1) unsupported by the analysis presented in the FSEIS; (2) infeasible or the feasibility cannot yet be determined; and/or (3) ineffective or the effectiveness cannot yet be determined. As a result, Alternatives C or

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[22] *See* FSEIS Sections 2.3.3.6, 2.3.4.6, and 2.3.5.6 for description of Phase 1 for Alternatives B, C, and D, respectively.

[23] Proposed Mitigation Measures G-1, G-2, G-4, G-5, and AQ-3 were included as mitigation measures for the first time in the FSEIS, and as such, Hecla did not have an opportunity to raise its concerns with these mitigation measures prior to this time. *See* 36 C.F.R. § 218.8(c), (d); *compare* U.S. Forest Service, Draft Environmental Impact Statement (hereinafter, "**DEIS**"), Table 2.6-1, at 2-50—2-52, available at https://www.fs.usda.gov/project/?project=57306 *with* DROD, Attachment A. Hecla previously commented on Proposed Mitigation Measures SW-1, AR-2, and AR-3 in its May 23, 2023, Comment Letter to Matthew Reece. *See, e.g.*, Exhibit B, Cmts. 21-24; *see also* 36 C.F.R. § 218.8(c), (d).

[24] *See* DROD, Attachment A, at A-2.

D (or even B for that matter) should be chosen with proposed mitigation measures G-1, G-2, G-4, G-5, AQ-3, SW-1, AR-2 and AR-3 eliminated or modified as proposed herein.

While Hecla is concerned with the inclusion of several mitigation measures given their potential infeasibility or ineffectiveness, Hecla maintains its commitment to working cooperatively with the Forest Service to determine the actual feasibility for each of the proposed mitigation measures after the DROD is finalized.

Under 36 C.F.R. § 228.80(c), the Forest Service will approve a plan of operations if it "includes all *feasible* measures which are necessary to prevent or minimize potential adverse impacts."[25]

When analyzing whether a given mitigation measure is "feasible" the Forest Service shall consider, at a minimum:

(1) The effectiveness and practicality of measures utilizing the best available technology for preventing or minimizing adverse impacts; and

(2) The long- and short-term costs to the operator of utilizing such measures and the effect of these costs on the long- and short-term economic viability of the operations.[26]

The Forest Service cannot "require implementation of mitigating measures which would prevent the evaluation or development of any valid claim for which operations are proposed."[27]

The Forest Service must also provide adequate analysis regarding the issues that the proposed mitigation measures are intended to solve and their potential effectiveness. It is not enough for the Forest Service to merely list mitigation measures without supporting analytical data.[28]

Hecla is primarily concerned about the eight following proposed mitigation measures:

(1) G-1: Mitigation measure G-1 is a general mitigation measure that provides that the GPO "will be updated to indicate that material (rock, gravel, sand) used for road, other construction, or maintenance will be tested and free of harmful metals (e.g., lead) and non-potential acid generating (PAG) sources."[29]

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[25] 36 C.F.R. § 228.80(c)(1) (emphasis added).
[26] 36 C.F.R. § 228.80(c)(2).
[27] 36 C.F.R. § 228.80(c)(3).
[28] *See, e.g.*, *Oregon Natural Desert Ass'n v. Singleton*, 47 F.Supp.2d 1182, 1193 (D. Or. 1998) ("[A]lthough mitigation measures need not completely compensate for adverse environmental impacts, … the agency must analyze mitigation measures in detail and explain how effective the measures would be.") (internal citations omitted).
[29] DROD, Attachment A, at A-5.

(2) G-2: Mitigation measure G-2 requires Hecla to establish an Independent Engineering Review Board ("**IERB**") to provide ongoing independent review of the design, construction, and operation of the TDF and associated infrastructure. The IERB must consist of qualified third-party technical experts who have not been directly involved with the design and operation of the TDF. The IERB's expertise must cover a range of issues relevant to the facility. Hecla must work closely with the Forest Service and State of Alaska representatives to ensure that the members chosen for the IERB represent the necessary disciplines. Material summaries of the IERB reviews must be provided to the Forest Service. The Forest Service and the State of Alaska will then review the IERB reports to determine if additional mitigation, monitoring, or other measures are necessary to minimize potential effects on National Forest System lands and resources.[30]

(3) G-4: Mitigation Measure G-4 requires Hecla, before the development of the project, to sample debris from the historic cannery to determine the characterization of the materials relative to the contaminants, provide a report of the findings to the Forest Service, and remove the hazardous contaminants from the site and transport the hazardous materials to a certified hazardous materials facility.[31]

(4) G-5: Mitigation measure G-5 is a general mitigation measure that requires Hecla to update the project site water balance every five years, including both surface and groundwater conditions "to show sufficient wastewater treatment potential under both current and future climate conditions."[32]

(5) AQ-3: Mitigation measure AQ-3 requires Hecla to provide a more robust 2-year analysis of the lichen monitoring data through Phase 1. At the end of Phase 1, if monitoring shows long-term downward trends of environmental effects from fugitive dust (as compared to the natural environment), the mitigation measure allows monitoring to be conducted every 5 years through the construction of Phase 2 and the life of the mine.[33]

(6) SW-1: Mitigation measure SW-1 is a surface water resources mitigation measure. It requires Hecla to develop and include in an Integrated Monitoring Plan ("**IMP**") "[a]dditional water quality and sediment monitoring locations and sampling frequency in Tributary Creek, to evaluate performance of Best Management Practices ("**BMPs**"), in coordination with the Forest Service, and State and Federal agencies to document trends toward compliance with ambient water quality standards."[34] Additionally, it imposes specific requirements about sampling

[30] *Id.*
[31] *Id.*
[32] *Id.*
[33] *Id.* at Attachment A, A-6.
[34] *Id.*

sediment and water quality at particular locations and mandates some specific updates to other annual reports or biomonitoring programs.[35]

(7) AR-2: Mitigation measure AR-2 requires an update of the 2021 Environmental Risk Characterization Report every 5 years with the first submission occurring "during year 1 of Phase 1 construction, if an action Alternative is selected in the [Record of Decision] and the second submission occurring two years prior to the completion of phase 1 construction."[36]

(8) AR-3: Mitigation measure AR-3 is an aquatic resources mitigation measure. Specifically, AR-3 requires Hecla to develop a Culvert Remediation Plan based on the September 2021 Road Survey Report (USFS 2021). It requires Hecla to outline specific actions and strategies to maintain, repair, or replace culverts that impeded fish passage, have blockages, corrosion, damage, or are functioning at a reduced capacity to transport non-"contact" waters. It also requires Hecla to update the GPO to include water management criteria and provisions for routine monitoring of functionality and condition, as well as annual reporting on water crossing monitoring and maintenance.[37]

A. Selection of mitigation measure G-1 is problematic because the measure is not supported by the FSEIS, is vague, and appears to be infeasible.

Mitigation measure G-1 requires Hecla to update the GPO to indicate that material used for road construction or maintenance will be tested and "free of harmful metals" and non-potential acid generating sources.[38] There are several issues with this mitigation measure as written.

First, neither the DROD nor FSEIS include supporting evidence to demonstrate this measure is necessary or effective. The only mention of construction rock in the FSEIS is a statement that asserts "[a]dverse effects on wetlands from acid rock drainage are not likely to occur under the no-action alternative due to the Mine's existing comprehensive engineering and water management plan in the Applicant's GPO."[39] As noted above, the Forest Service must analyze the purpose and effectiveness of each proposed mitigation measure, but there is no information in the DROD or FSEIS that supports the inclusion of this particular mitigation measure.

Second, the mitigation measure includes vague terms and ultimately may not be feasible. As explained above, the Forest Service may approve a plan of operations when the plan includes *feasible* mitigation measures to minimize adverse impacts.[40] Neither the FSEIS nor the DROD define "harmful metal" for purposes of this measure, nor does either document define the quantity

[35] *Id.* at Attachment A, A-6—A-7.
[36] *Id.* at Attachment A, A-8.
[37] *Id.* at Attachment A, A-8—A-9.
[38] *Id.* at Attachment A, A-5; *see also* FSEIS, Table 2.6-1, at 2-49.
[39] FSEIS, Section 3.8.4.2, at 3-166.
[40] *See* 36 C.F.R. § 228.80(c).

level with which Hecla must comply. Instead, by using the term "free of," proposed mitigation measure G-1 outlines a "near-zero" mitigation limit, which would prove to be a significant compliance challenge for Hecla, especially when the metals it is supposed to be eliminating are not defined.

Third, Hecla already has an established materials review process outlined in its IMP for mine waste rock. Under the IMP's internal monitoring for mine rock waste, waste rock material is characterized using established analytical procedures: multi-element ICP analysis, and Acid-Base Accounting ("**ABA**") using the Modified Sobek Method to determine acid Neutralization Potential ("**NP**"), Acid generation Potential ("**AP**"), and Net Neutralization Potential ("**NNP**").[41]

Hecla currently utilizes the mine waste rock material review process for all construction rock used on site.[42] As such, Hecla already samples construction rock used on-site that is shipped from quarries not associated with the NEP.[43] The construction rock goes through a sampling and review process by experts familiar with acid rock drainage ("**ARD**") and metal leaching principles to ensure the minimization of metals from outside the project area.[44]

Given that Hecla already has an internal review process for road construction materials, Hecla respectfully suggests that this measure is not necessary and as such, the Forest Service should remove it from the final Record of Decision. Alternatively, the Forest Service should modify this mitigation measure to allow Hecla to work cooperatively with the Forest Service to review and, if needed, modify its already-existing review process for construction materials rather than requiring it to comply with a vague and infeasible measurement system as is currently outlined in proposed mitigation measure G-1.

B. Proposed mitigation measure G-2 is vague, lacks rationale, and imposes new requirements on state agencies.

Proposed mitigation measure G-2 requires Hecla to establish an IERB to provide ongoing independent review of the design, construction, and operation of the TDF and associated infrastructure. The proposed mitigation measure is inherently vague as it fails to identify (1) the scope of the IERB's review power, (2) the number of required board members, (3) the agencies responsible for reviewing and overseeing the board's reports, and (4) the timing of IERB reviews.

To add further confusion to the necessity of this measure, neither the DROD nor the FSEIS explain the rationale for this proposed mitigation measure. Not only does this violate the requirement that the Forest Service evaluate the purpose and effectiveness of each mitigation

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[41] *See* Hecla, General Plan of Operations (hereinafter, "**GPO**") (June 2020), Appendix 1, Integrated Monitoring Plan (hereinafter, "**IMP**"), at 01-25, available at https://www.fs.usda.gov/project/?project=57306.
[42] *Id.* at 01-25—01-29.
[43] *Id.*
[44] *Id.*

measure, but it also contributes to the overall vagueness of the measure when determining what the measure is intended to encompass.

Here, the proposed mitigation measure implies that the Forest Service expects state agencies to review the IERB reports and impose additional mitigation measures through state permits to minimize potential effects to National Forest System lands. However, requiring state agency review in addition to the state agencies' already-existing permitting authority and state-mandated requirements exceeds the Forest Service's authority.[45]

Hecla already conducts internal reviews of its engineering and environmental measures. Under its current internal process, Hecla employs third-party experts to review its existing engineering and environmental measures to ensure that it is meeting any legal and permitting requirements. These third-party experts provide Hecla with confidential reports so that Hecla can ensure the work it is conducting meets the highest standards. While it is unusual for these confidential reports to be shared outside of the company, Hecla's current engineering and environmental review team could provide the Forest Service with summaries of its findings. However, Hecla believes it would be inappropriate for the Forest Service to require state agencies to review or take action in response to the summaries, as the Forest Service lacks the authority to impose new requirements on state agencies.

C. Proposed mitigation measure G-4 is vague because it does not state whether Hecla will be able to concurrently excavate hazardous materials while it waits on characterization of those materials.

Proposed mitigation measure G-4 implies that Hecla must test and characterize the debris material at the cannery site to determine whether the materials are hazardous in nature prior to continuing work within the area.

Nothing in the Resource Conservation and Recovery Act ("**RCRA**") nor the Environmental Protection Agency's implementing regulations requires that potentially hazardous materials be characterized in situ prior to construction or excavation. Instead, under RCRA, work on areas that are suspected to contain hazardous materials can typically be performed in one campaign (i.e., materials can be excavated, stockpiled/containerized, sampled, and then managed for disposal all at one time). Final reports regarding the nature of the materials are then prepared and provided to relevant agencies.

In the final Record of Decision, the Forest Service should clarify that Hecla may conduct excavation work concurrently with the characterization of the historic cannery debris.

[45] *See* 36 C.F.R. § 228.8((h) (stating that compliance with existing state regulatory certificates and approvals constitutes environmental protection).

D. Proposed mitigation measure G-5 will not provide any useable information regarding the operation of the site.

Proposed mitigation measure G-5 requires Hecla to update the project site water balance every five years. Neither the FSEIS nor the DROD outline the rationale for this proposed measure. Additionally, already-existing systems at the mine site would prevent a water balance from providing the Forest Service with any usable information.

Hecla has already provided numerous documents to the Forest Service[46] that describe the systems and processes for managing stormwater from the NEP and how these systems will account for climate-change related impacts.

A traditional water balance is intended to inform short-duration (e.g., stormwater) and long-duration (e.g., seasonal) management of water storage facilities. The aforementioned documents specifically address short-term water management at the site. Long-duration water management is not specifically addressed in these documents because Hecla operates all ponds as low as reasonably possible, at the Maximum Normal Operating Water Level ("**MNOWL**"), the level below which the pond has capacity to manage the Environmental Design Flood without release of untreated water to the environment (i.e., stormwater). When the ponds are not as low as reasonably possible (e.g., following a storm event), they are emptied as quickly as possible to maintain the MNOWL. Because ponds are managed relatively empty, a model that accounts for long-duration seasonal variation in precipitation would provide no practical value to site operations nor provide meaningful regulatory oversight of the facility.

As such, Hecla sees no benefit to the Forest Service requiring this proposed mitigation measure and requests that the Forest Service reconsider requiring this measure.

E. Proposed mitigation measure AQ-3 is infeasible because there is no research demonstrating that lichen can show a decrease in metal concentration loading.

Under mitigation measure AQ-3, Hecla must monitor lichen metal loading to determine whether the fugitive dust is being managed. The measure requires a showing of a downward trend in metal loading over the course of Phase 1. Hecla is unaware of any scientific data that demonstrates lichen can show a decrease in the concentration of metals loading over time, and the FSEIS does not explain why a downward trend in metals loading would be possible.

As such, this mitigation measure is not an effective way to measure the success of the fugitive dust mitigation plan. Hecla respectfully requests that the Forest Service remove this mitigation measure prior to issuance of the final Record of Decision.

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[46] The Forest Service referenced these documents during the EIS process. *See* 36 C.F.R. § 218.8(b). *See also KCB. 2020.* Water Management Trade-off Study. *May 26; KCB. 2020.* North Extension Project Tradeoffs and Prefeasibility Design – Climate Assessment. *November 6; KCB. 2021.* North Extension Project Prefeasibility Design. *November 15*.

F. Proposed mitigation measure SW-1 includes monitoring requirements that may be physically impossible and/or infeasible.

Hecla is concerned with the inclusion of mitigation measure SW-1 because several of its requirements may be infeasible or impossible to meet. As such, Hecla proposes working with the Forest Service after issuance of the final Record of Decision to develop a monitoring plan that takes into account the physical attributes of the site.

Mitigation measure SW-1 mandates the following additional monitoring in Tributary Creek:

(1) Measuring continuous discharge and stream temperature at upper Tributary Creek to better inform the biomonitoring data analyses for Tributary Creek and other monitoring locations. The variability in biomonitoring, water quality, and sediment monitoring may be reflective of changes in streamflow volumes.

(2) Sampling sediment and water quality (three annual sample events, taking 5 sediment sample replicates per collection concurrent with the timing of biomonitoring) in the lowest Tributary Creek beaver pond to evaluate water quality and characterize any potential contaminant storage in beaver ponds adjacent to the TDF. If elevated levels of lead are present, sampling will proceed annually.

(3) Sampling sediment concurrent with the existing annual biomonitoring at sites 9 and 1847. Add water quality sampling (Suite Q) to site 1847 to improve contaminant tracking through Tributary Creek.[47]

Additionally, SW-1 requires the following additional monitoring in Cannery, Green, Zinc, and Fowler Creeks:

(4) Sampling sediment at site 1923 in lower Cannery Creek annually in addition existing to water quality monitoring per GPO Appendix 1.

(5) Measuring continuous discharge and stream temperature at lower Cannery Creek to document potential changes in water volume associated with proposed activities in the Cannery Creek Watershed.

(6) Sampling sediment annually and add water quality sampling (Suite Q) in Fowler Creek (near bend in the A-road) to characterize baseline conditions and trends through time.

(7) Sampling sediment at Greens Creek delta at a location approximately 200 meters above mean high tide as an annual measurement. This sample location would complement the ADFG Technical 19-01 report sample site locations in other waterbodies draining into Hawk Inlet.

[47] *See* DROD, Attachment A, at A-6.

(8) Sampling sediment annually and add water quality sampling sites (Suite P) at Zinc Creek (Site 371) upstream of the bridge, and Zinc Creek (Site 10) downstream of the confluence with Tributary Creek to detect potential impacts of road sediments and fugitive dust.

(9) Integrating surface water discharge measurements into the IMP-FWMP Annual Report and/or Aquatic Biomonitoring Program.

(10) The Alaska ADEC APDES permit requires stormwater outfall monitoring during storm events twice annually. Although the Applicant conducts sampling and/or observations more frequently than required as part of the Stormwater BMP Monitoring Program. There are patterns of WQ exceedances during some of these events and resultant discharges to downstream waterbodies. The Forest Service is requiring enhanced techniques to visually assess frequency and duration of these outfall discharges at C Pond Overflow and D Pond Overflow such as using time lapse camera photo logs or other practical approaches to evaluate efficacy of these WQ BMPs. Relate outfall discharge frequency and duration to precipitation.[48]

Hecla contends that several of these requirements may be physically impossible or infeasible given the characteristics and flow of the waterbodies and that whether these requirements are possible to achieve cannot be known without detailed investigation. For example, flows in Tributary Creek may be too low and diffuse to be able to continuously measure. As such, without a detailed investigation of the ability of Hecla to comply with this measure, it is impossible to develop an appropriate mitigation strategy.

Although several commitments laid out in mitigation measure SW-1 may be impossible or impracticable, Hecla is committed to working with the Forest Service to develop a monitoring plan that will work around the physical limitations of the site to provide accurate information regarding these waterbodies. In the final Record of Decision, Hecla respectfully requests the Forest Service modify the language of this mitigation measure to demonstrate that an investigation into the physical practicality of these monitoring measures will be conducted prior to developing the mitigation strategy.

G. Proposed mitigation measure AR-2 is infeasible because it could require Hecla to submit two PSLERA reports within the same year.

Proposed mitigation measure AR-2 requires Hecla to submit two Preliminary Screening Level Ecological Risk Assessment ("**PSLERA**") reports, the first in year one of Phase 1 construction, and the second two years prior to the completion of Phase 1 construction. Under the current construction schedule, Hecla expects that Phase 1 construction will take 2-3 years, meaning that both PSLERA reports would be submitted in the same year. This makes the mitigation measure redundant and infeasible.

[48] *Id.* at Attachment A, A-7.

As such, Hecla respectfully requests that the Forest Service clarify the timing of the required PSLERA reports, with the understanding that Phase 1 construction will take no more than 3 years.

H. Proposed mitigation measure AR-3 is vague and, as such, its feasibility cannot be assessed.

Proposed mitigation measure AR-3 requires Hecla to develop a Culvert Remediation Plan. And while the proposed mitigation measure references the September 2021 Road Survey Report, it does not provide further information regarding the required scope of the Culvert Remediation Plan. As such, Hecla is uncertain of the feasibility of this proposed measure and requests that the Forest Service provide further information regarding its specificity and feasibility.

Hecla remains committed to improving the Forest Roads that it utilizes to access its site and will work with the Forest Service to develop a remediation plan that will improve fish passage on roads impacted by Hecla's activities.

III. CONCLUSION

Hecla appreciates the hard work that the U.S. Forest Service has put into this project and looks forward to working with the Forest Service to complete the NEPA process. If the Forest Service has any questions about these comments, please feel free to contact Paula Lillesve as lead objector on behalf of Hecla at (907) 790-8472 or by email at plillesve@hecla.com.

If the Forest Service determines to hold an objection resolution meeting under 36 C.F.R. § 218.11(a) on any of the objections submitted from any entity, Hecla respectfully asks to be included as a participant and/or given notice to attend the objection resolution meeting.

Sincerely,

Digitally signed by
Paula Lillesve
Date: 2024.03.18
16:28:03 -08'00'

Paula Lillesve
Environmental Manager
Hecla Greens Creek Mining Company

Digitally signed by Aaron Marsh
Date: 2024.03.18 17:36:26 -07'00'

Date: 2024.03.18 16:49:03 -08'00'

Aaron Marsh, P.E.
North Extension Project Manager
Hecla Limited
T: 208-769-4132

Martin Stearns
Director – Environmental Operations
Hecla Limited
T: 907-790-8461

Enclosures: Exhibits Index, Exhibits A and B