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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
FIRST JUDICIAL DISTRICT AT JUNEAU

LYNN CANAL CONSERVATION, RIVERS WITHOUT BORDERS, and SOUTHEAST ALASKA CONSERVATION COUNCIL, *Appellants*, v. EMMA POKON, in her official capacity as Acting Commissioner of the Alaska Department of Natural Resources; ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, and CONSTANTINE MINING, LLC, *Appellees.*	Appeal Case No. 1JU-23-_____ CI

NOTICE OF CROSS-APPEAL
(FROM ADMINISTRATIVE AGENCY TO SUPERIOR COURT)

Notice is given that Lynn Canal Conservation, Rivers Without Borders, and Southeast Alaska Conservation Council (Appellants) appeal to the Superior Court from the following decisions: the August 18, 2023, decision of Jason W. Brune, Commissioner of the Alaska Department of Environmental Conservation (DEC) upholding DEC's Division of Water's ("the Division") issuance of a waste management permit and conditional approval to construct for Constantine Mining, LLC's (Constantine) Palmer Project; the Division's October 4, 2022, conditional approval to construct the waste management system for Constantine's Project, signed by Tim Pilon, Engineer II; and the corresponding waste management permit issued by DEC and signed by Gene McCabe, Program Manager, on July 17, 2019 and revised on October 4, 2022.. Copies of the agency decisions are attached as Exhibits 1-3.

Per Appellate Rule 204(a)(2), this notice of appeal is timely as it is filed within fourteen days of the filing of Constantine Mining, LLC's notice of appeal. *See* Notice of Appeal, *Constantine Mining LLC. v. Department of Environmental Conservation et al.*, Appeal No. 1-JU-000859 CI (Oct. 17, 2023).

STATEMENT OF POINTS

The reasons for this appeal are:

1. DEC's decision to issue the waste management permit and conditional approval to construct was contrary to law, arbitrary, an abuse of discretion, lacking a reasonable basis, and not supported by substantial evidence because the record indicates the land application disposal system authorized by the permit will not comply with Alaska Pollutant Discharge Elimination System permitting requirements and because

DEC's conclusion that it will was arbitrary.

2. DEC's failure to provide public notice and comment on Constantine's revised wastewater management permit application, pursuant to AS 46.03.110(b) and 18 AAC 15.050(a)-(b), was arbitrary, an abuse of discretion, lacking a reasonable basis, and not supported by substantial evidence.

INFORMATION PURSUANT TO APPELLATE RULE 602(c)(1)

Appellants and their current addresses are:

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Respectfully submitted this 31st day of October, 2023.

s/ Olivia Glasscock

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CERTIFICATE OF SERVICE AND TYPEFACE

I certify that on October 31, 2023, a copy of the foregoing NOTICE OF APPEAL, with the accompanying documents, was served by first class U.S. mail and email on the following:

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In addition, courtesy copies were sent via email to the following: Cameron Q. Jimmo, Assistant Attorney General, Alaska Department of Law, law.oah.ecf@alaska.gov, and Cody B. Doig, Senior Assistant Attorney General, Alaska Department of Law, cody.doig@alaska.gov

In accordance with Appellate Rule 513.5(c), I also certify that the typeface used in the foregoing document is 13 point Times New Roman.

s/ Olivia Glasscock
Olivia Glasscock
EARTHJUSTICE

BEFORE THE ALASKA OFFICE OF ADMINISTRATIVE HEARINGS ON REFERRAL FROM THE COMMISSIONER OF ENVIRONMENTAL CONSERVATION

CHILKAT INDIAN VILLAGE (KLUKWAN), AUDUBON ALASKA, LYNN CANAL CONSERVATION, RIVERS WITHOUT BORDERS, SOUTHEAST ALASKA CONSERVATION COUNCIL, and TAKSHANUK WATERSHED COUNCIL, *Requesters*, v. ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF WATER, and CONSTANTINE MINING, LLC, *Respondents.*	)	OAH No. 22-0887-DEC

DECISION

This is the Commissioner's final decision on an administrative challenge to the issuance of a state permit for underground disposal of a specified quantity of adit drainage water from pre-mine exploration activities in a mining prospect. The permit has been under review since February 2019, in a process that has involved two remands and important refinements to the proposal. This decision affirms issuance of the permit but makes a modification to ensure proper compliance with water quality standards. The decision also directs the Division of Water ("Division") to conduct an ancillary proceeding under the Department of Environmental Conservation ("Department")'s *Guidance for the Implementation of Natural Condition-Based Water Quality Standards*, the outcome of which will be separately appealable by individuals or entities who participate in it.

I. Background

The Palmer Project is a mining prospect involving advanced exploration for copper, zinc, gold, and silver. It is operated by Constantine Mining, LLC in a glacial valley near the U.S.–Canada border, just southwest of the paved Haines Highway and about 20 air miles west of the village of Klukwan. The immediate surrounding area has a significant history of mineral exploration but no other current operations on the scale of the Palmer Project.

On July 17, 2019, the Division issued Waste Management Permit 2019DB001 ("WMP") to Constantine for the disposal of wastes at the Palmer Project,[1] following notice and public comment in which each of the Requesters participated. The WMP authorized Constantine to construct and operate a Land Application Disposal ("LAD") system for the treatment of non-domestic wastewater and discharge of the treated wastewater into the subsurface of the Glacier Creek valley.

Soon after it issued the WMP, the Division received a request from various entities, including most of the Requesters here, for informal review of its decision. Among the Requesters' concerns was that discharges from the LAD system may reach waters that would trigger a requirement for an Alaska Pollutant Discharge Elimination System ("APDES") permit for the project.[2]

An APDES permit is the Alaska equivalent of a Clean Water Act section 402 permit. In 2008–2012, the EPA transferred authority to Alaska to administer the Clean Water Act's National Pollutant Discharge Elimination System ("NPDES") program, including the authority to permit wastewater discharges. Since the APDES program implements the federal Clean Water Act, APDES permits are required when, and only when, a discharge affecting navigable waters is involved. Under the Clean Water Act and state law,[3] a facility may not discharge pollutants from any point source into navigable waters[4] in the state of Alaska without first obtaining an APDES permit.

In response to the request for informal review, the Division's acting director remanded the decision to issue the WMP to Division staff, with the directive to evaluate the applicability of then-recent Ninth Circuit caselaw (since overturned) regarding the limits of Clean Water Act applicability. She also instructed her staff to evaluate a range of comments submitted during the public comment period on the permit, including an evaluation of the statistical methodology used to determine effluent trigger limits, and to update the Response to Comments document.[5]

While the Division was evaluating the WMP on remand, Constantine commissioned a groundwater dye tracing study, now known as the Phase 1 study, to improve understanding of

1 A.R. 5-30.
2 A.R. 5289-90, 5294-95, 5317-26, 5346-49.
3 18 AAC 83.005(b) (APDES permit requirements "apply to the discharge of pollutants from any point source into waters of the United States); 18 AAC 83.990(77) (replicating pre-2015 federal regulatory definition of waters of the United States").
4 The Clean Water Act defines "navigable waters" as "waters of the United States." 33 U.S.C. § 1362(7).
5 A.R. 5403, 5515.

the area's hydrology. The Phase 1 study detected low concentrations of dye from one portion of the proposed LAD area at one downgradient sampling station in Glacier Creek. Glacier Creek is a small creek emptying into the Klehini River, which flows into the Chilkat River, which in turn flows into the Chilkat Inlet. Although the dye did not appear at the downgradient station until many weeks after it was deposited at the LAD location, and it appeared in small amounts, the detection indicated at least some degree of hydrological connection between the disposal area and the creek.[6] In response to this test, Constantine asked the Division to withhold its approval of the LAD system design pending further study and possible design changes.[7] Shortly thereafter, a Phase 2 dye tracing study was conducted in a new potential LAD location east of the Phase 1 area, which resulted in no downgradient detections of dye in Glacier Creek.

Constantine retained consultants to incorporate information obtained from the studies into a revised design for the wastewater discharge system. In April 2022, Constantine submitted the revised design, referred to as *Appendix A Wastewater Discharge System Design Report Phase II – Underground Exploration Upland Mining Lease No. 9100759 April 2022 (Appendix A),* as well as updates to the WMP and related materials. The Division conditionally approved the plans on May 27, 2022.[8] The approval was not posted publicly and the Requesters in this case were not notified of it directly.[9]

At a meeting attended by the Division Director on July 21, 2022, one of the Requesters referenced an analysis that had been prepared earlier in the month by California State University geochemist Jean Moran, setting out her view that Constantine's consultants had drawn "too strong" a conclusion from the Phase 2 study.[10] This report was submitted to the record on July 29, 2022.[11] In the interim, on July 27, Requesters apparently first learned of the May 27 decision.[12]

On August 24, 2022, Chilkat Indian Village submitted a request for an adjudicatory hearing.[13] The Division opposed the request as untimely since, although it was submitted less than 30 days after the village apparently learned of the May 27 approval, it was submitted more

6 *See* A.R. 1596-98.
7 A.R. 6597.
8 A.R. 8924-25. This was an approval of both the revised LAD design and of the underlying WMP application, as amended.
9 A.R. 10943; *see also* A.R. 7994, 9245-46.
10 A.R. 9738-47.
11 *Id.*
12 *See* A.R. 10943-45.
13 A.R. 9825 *et seq.*

than 30 days after May 27.[14] The Commissioner declined to take up the untimeliness contention,[15] and instead remanded this matter to the Division with the directives to expand its examination and explanation of certain issues, complete its work under the 2019 remand, and consider the Moran report.[16]

On October 4, 2022, in response to the Commissioner's directives, the Division issued a Conditional Approval to Construct and Adoption of New References at the Palmer Project, which approved the revised design for the LAD system as set forth in the revised Appendix A. The Division also issued a Response to Comments document addressing comments received on the WMP and evaluating the remaining issues from the 2019 and 2022 remands.[17] The document included the Division's determinations that the LAD System does not require an APDES permit and that the revisions to the LAD design do not have effects that require a new round of notice and public comment. The Response to Comments document also addressed the Moran Report, and revised and expanded on the Division's prior responses to comments received on the WMP in 2019.

On November 3, 2022, Requesters sought an adjudicatory hearing on the record and briefs on the following issues:

1. Whether DEC's October 4, 2022 decisions approving Constantine's revised wastewater management systems without requiring an APDES permit were arbitrary because the record indicates the system will create the functional equivalent of a point source discharge to Glacier Creek.

2. Whether DEC was required to publish public notice and provide a 30-day comment period on Constantine's revised permit application under AS 46.03.110(b) and 18 AAC 15.050(a)–(b).

3. Whether DEC's responses to comments about the integrity and reliability of the system were arbitrary because they do not actually address the concerns identified in the comments and because they ignore important and relevant factors to the decision.

[14] A.R. 10146-47.

[15] The Division's 2022 understanding was that the WMP had remained in effect while on remand from the director, although Constantine could not discharge under the permit until the engineering plan was approved. *See* A.R. 10943; A.R. 7994. Under this view, approval of the engineering plan would make the permit fully operational but would not trigger posting or notice to parties. Insofar as parties wished to appeal the activation of the permit, they would need to do so in 2019 or, in any event, by June 26, 2022. *See* A.R. 10146. However, the Division had previously and correctly informed Requesters that they could not appeal the WMP until the reconsideration on remand was complete (A.R. 5515), an event that did not occur until October 2022. The Commissioner has honored the effective date and appealability model that the Division originally conveyed to Requesters.

[16] A.R. 10411-15.

[17] A.R. 10705-16. The Response to Comments also addressed comments on a related reclamation plan.

4. Whether DEC's October 4, 2022 decisions comply with the rules and guidance for implementing water quality standards based on natural conditions.

The hearing request was conditionally referred to the Alaska Office of Administrative Hearings for a preliminary proceeding to evaluate whether it met the requirements of 18 AAC 15.200 that are a prerequisite to granting a hearing. The Division did not oppose the hearing request as framed by Requesters. Constantine opposed the hearing request. At the conclusion of the preliminary process, the Commissioner granted the hearing on the terms Requesters had proposed.[18]

Below, each of the four issues identified by Requesters is taken up in the order presented in the original hearing request.

II. The decision not to require an APDES permit is affirmed.

In *County of Maui v. Hawaii Wildlife Fund*[19]—decided while the WMP was in informal review—the United States Supreme Court held that a permit is required under the Clean Water Act "when there is a direct discharge from a point source into a navigable water or when there is the *functional equivalent of a direct discharge.*"[20] The court translated this phrase to mean a situation where a point source "directly deposits pollutants into navigable waters, or when the discharge reaches the same result through roughly similar means."[21] *County of Maui,* of course, is premised on the existence of an affected "navigable water."

Requesters originally contended, under now-superseded caselaw, that the LAD system fell under APDES jurisdiction because pollutants would reach navigable waters in greater than de minimis amounts that could be traced to the source. They now contend that an APDES permit must be obtained for the LAD system because its outflow waters will reach navigable waters so directly as to be the functional equivalent of a direct discharge.

"Navigable waters" is a term in the Clean Water Act denoting the extent of the Act's jurisdictional coverage. It is further defined to mean "the waters of the United States, including the territorial seas."[22] As the United States Supreme Court explained just last term:

> Although we have acknowledged that the CWA extends to more than traditional navigable waters, we have refused to read

18 Recommended Decision on Request for Adjudicatory Hearing (adopted December 29, 2022).
19 140 S. Ct. 1462 (2020).
20 *Id*. at 1476 (italics in original).
21 *Id*.
22 33 U.S.C. § 1362(7).

> "navigable" out of the statute, holding that it at least shows that Congress was focused on "its traditional jurisdiction over waters that were or had been navigable in fact or which could reasonably be so made." *SWANCC*, 531 U.S., at 172; *see also Appalachian Electric*, 311 U.S., at 406–407; *The Daniel Ball*, 10 Wall. at 563. At a minimum, then, the use of "navigable" signals that the definition principally refers to bodies of navigable water like rivers, lakes, and oceans. *See Rapanos*, 547 U.S., at 734, 126 S.Ct. 2208 (plurality opinion).[23]

The Supreme Court has not yet identified the extent to which the term "navigable" in "navigable waters" confers or limits federal jurisdiction.[24]

The Department understands the term "navigable" as limiting the types of waters covered by the Clean Water Act to primarily those that are navigable in fact. The nearest waters deemed navigable in fact by the Alaska Department of Natural Resources are those of the Klehini River, about four miles below the Palmer Project along Glacier Creek. The parties appear to (potentially erroneously) assume that Glacier Creek itself, although not identified by the Alaska Department of Natural Resources or by any party as navigable, is nevertheless a "navigable water" because it is "a relatively permanent body of water connected to traditional navigable waters" by a "continuous surface connection".[25] Navigability, in other words, was not a relevant consideration for either party, despite the Supreme Court's repeated indications that the term "navigable" cannot be ignored.

While true that, under *Rapanos*, a continuous surface connection can extend coverage beyond navigable-in-fact waters, the limit of this extended coverage has never been articulated, nor even assessed, by the courts. Perhaps this is because this is an issue unique to, and most problematic for, Alaska—a state with countless miles of interconnected rivers, streams, tributaries, and headwaters not fairly characterizable as "bodies of navigable waters like rivers, lakes, and oceans."[26] In Alaska, under an unlimited view of the surface-connection test, federal jurisdiction could erroneously and inappropriately snake across much of the state.

But there is a limit in caselaw: the *County of Maui* test. Reading *County of Maui*, *Rapanos*, and now *Sackett* together, the result is clear: to the extent—and *only* to the extent—

[23] *Sackett v. EPA*, 143 S. Ct. 1322, 1337 (2023).
[24] *Id*. at 1344 (Thomas, J., concurring).
[25] *Id*. at 1341. One *Sackett* concurrence would draw the jurisdictional line at the Klehini River, since that is likely the nearest body of water that is, ever was, or ever could be "a highway of interstate or foreign commerce." *Id*. at 1357 (Thomas and Gorsuch, JJ, concurring).
[26] *Sackett*, 143 S. Ct at 1337.

that a discharge into a non-navigable creek or tributary is the functional equivalent of a discharge into a navigable-in-fact water is that water is itself a "navigable water" subject to the Clean Water Act. This means that *Rapanos*' "continuous surface connection" test is not the end of the jurisdictional inquiry: time, distance, and the other *County of Maui* factors must indicate that a discharge into a non-navigable creek or tributary surfacially connected to a navigable-in-fact water) is the "functional equivalent of a direct discharge" into that navigable-in-fact water.

Requesters' and the Division's analyses assume without evaluation that Glacier Creek is a navigable water.[27] Because, as explained below, application of the *County of Maui* test does not indicate the functional equivalent of a direct discharge into Glacier Creek, deciding whether Glacier Creek is a "navigable water" is not necessary to decide this issue.[28] The Commissioner therefore does not reach and does not decide the question of whether Glacier Creek is itself a navigable water.

The Division, with prompting from the Acting Director and the Commissioner, produced a detailed and thoughtful evaluation of the degree to which any discharge from the LAD system would be connected to Glacier Creek.[29] It considered the recent Moran analysis and did not reject it, instead emphasizing the areas in which Moran and Constantine's experts agreed. Because the chemistry and hydrogeology applied in the Division's evaluation falls squarely within the Division staff's expertise, the Commissioner has elected to give "due regard" to staff's conclusions.[30] Lacking any demonstration that it is fundamentally misguided, its *factual* conclusions will be accepted. What remains is to fit these into the jurisdictional criteria.

Maui listed seven factors to determine Clean Water Act jurisdiction over a discharge affecting navigable waters:

> (1) transit time,
> (2) distance traveled,
> (3) the nature of the material through which the pollutant travels,
> (4) the extent to which the pollutant is diluted or chemically changed as it travels,
> (5) the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source,
> (6) the manner by or area in which the pollutant enters the navigable waters, [and]
> (7) The degree to which the pollution (at that point) has maintained its specific identity.[31]

[27] *See* A.R. 667-69; 18 AAC 83.990(77)(A)(v).

[28] Current APDES regulations, insofar as they are not superseded by *Sackett*, also frame the jurisdictional boundary in a pre-*Sackett* context.

[29] A.R. 666-70.

[30] *Cascadia Wildlands Project v. Div. of Spill Prevention & Response*, OAH Case No. 07-0496-DEC (Comm'r Env. Cons. 2011), at 15 (published at https://aws.state.ak.us/OAH/Decision/Display?rec=1968).

[31] 140 S. Ct. at 1476-77.

The list is not exclusive—other factors could be relevant in particular situations. The court indicated that the first two factors would typically be the most important.[32]

In applying these factors and any other relevant considerations, one must bear in mind what the *Maui* decision rejected. It rejected a prior Ninth Circuit standard that drew the line at the "functional equivalent of a discharge," and replaced it with the "functional equivalent of a *direct* discharge."[33] And it discarded a "fairly traceable" standard in favor of a standard that weighs time, distance, and amounts.[34] Moreover, *Maui* must be read in light of the court's most recent Clean Water Act case, in which it expressed horror at a statutory implementation that requires an expensive expert to divine whether there is jurisdiction.[35]

Since *Maui*, there have been a few federal decisions applying its new standard to particular types of discharges to groundwater. In the *Maui* case itself on remand, the District Court found the functional equivalent of a direct discharge, but in circumstances where 100 percent of the discharge reached navigable waters in only half a mile of underground travel, retaining its specific identity.[36] In an Alabama mining case, functional equivalency was found in the context of transit times as short at 1.5 days, with underground channels functioning "like a pipe."[37] In a Colorado mining case, functional equivalency was found where the discharge had only 100 feet to travel, which it did in two days.[38]

To place the Palmer Project discharge under Clean Water Act jurisdiction would stretch *Maui* far beyond any of these applications. The LAD system discharge may never reach Glacier Creek, and even the Moran analysis projects transit times of 17 to 142 days.[39] Dilution appears to be substantial, and the primary pollutant of concern—suspended solids carrying metals, as opposed to dissolved chemicals—will be significantly attenuated by percolating the subsurface.[40] The same pollutant is present in natural waters at the site and, in light of the addition during the permitting process of more rigorous measures to settle out solids, the likelihood of an effluent entering Glacier Creek that is identifiably different from other water entering the creek is remote.

32 *Id*.
33 *Compare id*. at 1469 *with id.* at 1476.
34 *Compare id*. at 1469 *with id.* at 1476-77.
35 *See Sackett*, 143 S. Ct. at 1336.
36 *Hawai'i Wildlife Fund v. City of Maui,* 550, F. Supp. 3d 871, 888-89 (D. Haw. 2021).
37 *Black Warrior River-Keeper, Inc. v. Drummond Co*., 579 F. Supp. 3d 1310, 1316-17 (S.D. Ala. 2022).
38 *Stone v. High Mountain Mining Co.*, 627 F. Supp. 3d 1211, 1230 (D. Colo. 2022).
39 A.R. 1536.
40 *See* A.R. 666-70.

All things considered, the conclusion that the LAD system falls outside APDES jurisdiction is the more reasonable one.

There is, of course, a small element of uncertainty in any judgment about what will happen to discharges that occur underground. Requesters suggest the record is inadequate to resolve the jurisdictional issue, apparently seeking more study.[41] But here again, recent Supreme Court caselaw is instructive: the Court clearly disapproves a jurisdictional regime overly dependent on an applicant's ability to "retain an expensive expert consultant."[42] That bridge has already been crossed here—multiple consultants have been employed. But surely, after two dye studies and three analyses, it should not be necessary to retain another expert consultant simply to decide the threshold jurisdictional issue.

Accordingly, this decision upholds the Division's determination that the LAD system requires no APDES permit.

III. The revisions to the LAD system and the WMP do not trigger a new notice and comment period.

Requesters' second hearing issue returns to the permit that was actually issued, the WMP under AS 46.03.100. It focuses on the proper application of 18 AAC 15.100(c), which provides:

> A permit or variance authorizes only that operation specified in the permit or variance. Any expansion, modification, or other change in a facility process or operation which might result in an increase in emissions or discharges, or might cause other detrimental environmental impacts from the permittee's facility, requires a new permit or variance. Any other change requires an amendment to the permit or variance.

18 AAC 15.100(c) is a Department regulation which the Commissioner of the Department interprets de novo.[43]

The WMP at issue in this case was originally applied for in 2019, at which time a public notice and comment process occurred. Comments, further analysis, and new data led to revision of Constantine's proposal, including such adjustments as moving and reconfiguring the trenches for deposition of the effluent. There appears to be no dispute that adjustments and improvements are, in concept, a healthy outgrowth of the permit review process.[44] That said, the question

[41] Opening Brief of Requesters at 32.

[42] *Sackett*, 143 S. Ct. at 1336.

[43] The argument for interpretive deference to the Division in this area, found in Constantine's Amended Response to Requesters' Opening Brief at 8 & n.9, is rejected. Staff technical judgments that bear on the *application* of the regulation may be given due regard.

[44] Notice and comment processes are an opportunity for an agency and applicant to educate themselves. Changes made subsequent to notice and comment can simply be an indication that the process is working, and by no

Requesters raise is whether the adjustments to this WMP were changes to "a facility process or operation" that "might result in an increase in emissions or discharges, or might cause other detrimental environmental impacts." If they were, the notice and comment process has to start over.

In briefing (but not in its original evaluation of this issue), the Division's first answer to this challenge is to posit that the design changes in the treatment works are not changes to a "facility process or operation," as that phrase is used in the second sentence of the regulation.[45] This effort to place an artificially narrow construction on this language is not wholly persuasive. The first sentence of § 100(c) also uses the word "operation," and it plainly uses it broadly to encompass whatever the permit authorized. In this case, the permit granted authorization, in relevant part, "to land apply non-domestic wastewater."[46] The remainder of § 100(c) addresses what kinds of changes to that "operation" trigger the need for a wholly new permit. In short, the issue is not whether the LAD redesign changes an operation—it certainly does, since it adjusts the location and methodology for exactly what was permitted—but whether it is within the subset of operational changes that the regulation classifies as needing a new permit.

There is one respect, however, in which the Division's observation about the scope of § 100(c) has force. Requesters have raised the concern that *construction* of the revised LAD system will take longer and will bring with it associated construction related impacts such as temporary creek diversion, dust, and noise.[47] But construction operations to build the treatment works is not what the WMP authorizes, and therefore is not the "operation" for purposes of § 100(c). Construction is permitted under entirely different permits that are not at issue in this case, including the Final General Permit for Discharges from Large and Small Construction Activities[48] and United States Army Corps of Engineers Nationwide Permit 58.[49]

means automatically trigger a new round of notice and comment. *See, e.g., Pennzoil Co. v. FERC,* 645 F.2d 360, 371 (5th Cir. 1981).

45 Div. Response Brief at 14. This argument was further explained at approximately 1:07:00 in the oral argument. This is an argument advanced only by the Division's counsel; the Division itself did not espouse it in its formal response to the Commissioner's 2022 remand directive. *See* A.R. 10715.

46 A.R. 7 at § 1.1. The permit was not framed to, and did not, authorize the exploration activity or the eventual mine. In addition to land application of non-domestic wastewater, the two "permittee is authorized" sentences in the WMP authorized storage and disposal of potentially-acid-generating (PAG) waste rock, an aspect of the permit that is not a focus of this appeal. *See* A.R. 7, 9.

47 Opening Brief of Requesters at 20.

48 Permit AKR100000.

49 *See* A.R. 9667-95.

The kind of operational changes that cause the permitting process—including notice and comment—to start over are changes to what the permit authorizes that "might result in an increase in emissions or discharges" or that "might cause other detrimental environmental impacts from the permittee's facility."[50] This standard is designed to avoid the illogic of a situation where an applicant has to go back to square one whenever it simply makes improvements growing out of public comment or out of other aspects of the interactive permitting process. It must be applied with a rule of reason: encouraging applicants, for example, to make changes providing a net improvement of the impact of their projects, notwithstanding that the overall improvement might come with a minimal side effect or a speculative risk that the new protections will not be administered in accordance with the permit.

The evaluation of whether a new technical measure presents a reasonable risk of greater emissions or discharges, or a reasonable risk of new environmental impacts, is a specialized engineering and scientific judgment of precisely the kind that the Division's staff is hired to evaluate. This is the kind of judgment on which a Commissioner may "give due regard to the expertise of his staff."[51] While the Commissioner is free to substitute his judgment for that of staff, and will not approach these questions with the formal and inflexible deference a court must apply,[52] the agency's technical staff may receive the benefit of the doubt for assessments involving their technical expertise. To meet their burden of proof in the present hearing on the written record, Requesters need to show the Commissioner a basic bias, flaw, or oversight in the Division's technical analysis.

They have not done this.

Requesters' lead-off point in this area focuses on the increased-discharges prong of § 100(c). They contend that the new LAD system design adds capacity to "accommodate[] Constantine's maximum predicted flow of 900 gpm, which represents an increase from the maximum 800 gpm that the previous design accommodated."[53] This is only half correct. The revised design does add surge capacity, slightly increasing the safety factor built into the system should flows from the adit surpass the projected level. But improving the system's ability to properly handle high flows does not increase the actual flows; those are determined by the

[50] 18 AAC 15.100(c).

[51] *Cascadia Wildlands Project v. Div. of Spill Prevention & Response*, OAH Case No. 07-0496-DEC (Comm'r Env. Cons. 2011), at 15 (published at https://aws.state.ak.us/OAH/Decision/Display?rec=1968).

[52] *See, e.g., Quality Sales Foodservice v. Dep't of Corrections,* OAH No. 06-0400-PRO (Comm'r Admin. 2006) at 11 (published at https://aws.state.ak.us/OAH/Decision/Display?rec=4732).

[53] Opening Brief of Requesters at 18.

characteristics of the adit, which have not been changed. Also unchanged is the permit's 500 gpm limit found in its provision 2.2.6.1.[54] Contrary to Requesters' arguments, the discussion of higher flow rates in the revised Appendix A does not override provision 2.2.6.1; the 2019 version of Appendix A, which was "incorporated" in the original WMP, likewise discussed higher flows, showing that a discussion of such contingencies was never considered inconsistent with a 500 gpm cap.[55] Since the LAD redesign does not change discharge volume in comparison to what it would have been under the old design, the issue of increased capacity cannot trigger a new permit under 18 AAC 15.100(c).

Requesters also raise the concern that the projected pH of the discharge is closer to neutral than previously thought, now estimated at 7.9 rather than 8.9.[56] A basic flaw of this argument is that Requesters have used figures for projected discharge from the adit portal, prior to treatment that can include pH adjustment.[57] The figures are, in fact, part of a more refined assessment of the circumstances the LAD is being built to address, not an indication of a change brought about by the adjustments in its design. But, in any event, nothing in the record suggests that a discharge with a pH of 7.9—a non-acid level well within Alaska's water quality standards—might add a new "detrimental environmental impact," the threshold required to trigger starting over with the permit process. Under these circumstances, even if the Commissioner were not inclined to give due regard to staff expertise, the record in this matter regarding pH would not support initiating a new process under 18 AAC 15.100(c).

Lastly, Requesters observe that the redesigned system will use certain common water treatment chemicals to settle suspended solids, which might otherwise clog the system and which, if left in suspension, could carry metal constituents into the wastewater.[58] These flocculants and coagulants are a type of treatment chemical that is exhausted during treatment, binding to the removed solids. The Division has made a reasoned finding that adding this dimension of water treatment will reduce the concentration of pollutants in the discharge and represent an overall improvement in the system's efficacy.[59] Requesters have not, simply by

54 A.R. 11, provision 2.2.6.1.
55 *See* A.R. 8, 11, 2836.
56 Opening Brief of Requesters at 20-21.
57 This can be seen, *e.g.*, via the text in A.R. 7716.
58 Also included in Requesters' spectral list of dangerous-sounding chemicals was sulfuric acid, which is used for pH correction rather than settling. Opening Brief of Requesters at 21. This chemical is only for use when grout is being applied, and its projected usage is zero kilograms per day. A.R. 1654. At the risk of stating the obvious, a record showing this level of usage does not support reopening notice and comment on the project.
59 A.R. 672.

citing the data safety sheets, created a basis for calling this judgment into question, and the Commissioner will rely on the expertise of the water staff on this issue. Accordingly, there is no basis to require a new notice and comment round under 18 AAC 15.100(c).

IV. The permit and related materials adequately address the concerns highlighted by Requesters.

Requesters point to three areas of concern which they raised in comments, contending that the Division did not adequately consider those factors in approving the permit.

A. Freezing Temperatures and Snow Cover

Requesters commented in 2019 that the site has average temperatures below freezing for about half the year, and that there was not enough information to evaluate whether freeze-ups might impair the functioning of the LAD system.[60] In fact, however, the permit application that is incorporated into the permit, as well as the LAD Revised Design document, show extensive consideration of freezing temperatures, with special attention to depth of burial needed to prevent freezing and adequate housing for pumps.[61] While not addressed in a separate, labeled section—perhaps because cold is such a fundamental design constraint in Alaska—the needs related to freezing run through the whole design. There is no basis to discredit the engineering expertise of the Division in determining that the response to this design criterion was adequate.

B. Avalanches, Floods, Earthquakes, Landslides, Mudflows, Land Slippage, and Deep Snow – Effect on Facility

Requesters go on to list the whole panoply of natural events that can occur in an alpine valley, and posit that these have not been adequately accounted for in the permit. Under 18 AAC 60.215(a)(8), the Division may consider the risk of such events insofar as they might affect the "long term stability of the facility."

Avalanches are a particular concern in the Glacier Creek Valley, and, once again, the record is replete with evidence that the Division and Constantine focused on and addressed this issue.[62]

In addition to claiming the plan does not address avalanches, Requesters also fault the purported plan "to use solid waste as structural fill" to build the very large avalanche berm that

[60] A.R. 3946-47 (SEAC), 3877 (Takshanuk).

[61] A.R. 43-45, 64, 621-27. 2019 correspondence with a member of the public, pointed to by Requesters, is additional evidence of the Division's attention this overarching concern, although it relates to a prior, less protective system design. See A.R. 4392-93..

[62] A.R. 44, 622, 700-707, 1962. Some of this attention occurred before the redesign, but carries over to unchanged aspects of the proposed treatment works.

Constantine has proposed.[63] This, they contend, triggers all the requirements of 18 AAC 60.008, governing solid waste. But this argument ignores 18 AAC 60.005(c)(6), which exempts from Chapter 60's requirements "domestic wastewater, nondomestic wastewater, and other wastes that are subject to a permit under AS 46.03, 18 AAC 72, or 33 U.S.C. 1342." Because the waste at issue is subject to a waste management permit under AS 46.03, it is not subject to an additional permit under 18 AAC 60. Additionally, Requesters have misconceived the project. Although rock will be used to build the berms, it will not be potentially acid-generating (PAG) rock.

Other potential adverse events—which Requesters have barely briefed, offering little more than a recitation of the list from the regulation—are also reflected in the design. In particular, the selection of a relatively flat area for construction addresses land instability concerns.[64] Requesters articulate a specific concern that the alluvial fan where the LAD system will be built has been characterized as a "high energy environment,"[65] which they seem to equate with unusual seismic instability. But this simply reflects a misconception of what this term means in geology. A "high energy environment" is one where the sediments were deposited in a way that transports a range of particle sizes and deposits larger components (in contrast to a low energy environment, like a settling pond, where fine components are deposited).[66]

Again, there is no basis to set aside the Division's expertise in evaluating these issues.

C. *Avalanches, Floods, Earthquakes, Landslides, Mudflows, Land Slippage, and Deep Snow – Effect on Monitoring and Inspection*

Requesters recite the same litany of potential events in an argument that the Division failed to ensure that Constantine would have uninterrupted access to monitoring locations and the like. But in presenting this argument, Requesters fail to cite a single regulation applicable to this concern, relying instead on 18 AAC 60.008 (discussed above), 18 AAC 60.840 (relating to how test parameters are selected), and 18 AAC 60.215 (relating to stability, not access).[67] While it appears that Constantine has indeed made some provisions to preserve access, Requesters' argument cannot be considered at all in light of the lack of a relevant legal foundation.

63 Opening Brief of Requesters at 34.

64 *E.g.*, A.R. 50, 215, 623, 647. Some photos displayed in this case have exaggerated the steepness of the terrain, because the camera was tilted, because of lens selection, or because of the natural foreshortening that occurs when mountains are viewed head-on. A.R. 3354, which Requesters displayed at oral argument, is particularly misleading in this regard.

65 Opening Brief of Requesters at 35; A.R. 170.

66 One source for this widely understood concept is https://glossary.slb.com/en/terms/d/depositional_energy (accessed 8/6/23).

67 *Id*. at 35-37.

V. State water standards have not yet been properly addressed.

Requesters argue that the Division, in setting trigger limits in the WMP, has implemented Natural Condition-Based Water Quality Standards within the meaning of the second sentence of 18 AAC 70.010(d), but has done so without following the procedures set out in the Department's 2006 *Guidance for the Implementation of Natural Condition-Based Water Quality Standards*,[68] as that sentence requires. There is no dispute that the procedures in the *Guidance* were not implemented here; the parties' dispute is over whether they are applicable.

The Division contends that this issue has been raised untimely, because Requesters did not bring it up in the original comment round in 2019. Putting aside the question of whether Requesters fairly put the matter in issue at that time through their requests for clarification of the reasoning behind the permit's trigger limits,[69] the time for an adverse party to raise this timeliness concern has passed. Such objections must be raised when the hearing request is evaluated under 18 AAC 15.220(b) for eligibility to be heard under 18 AAC 15.200—which encompasses the requirement under § 200(a) for having previously raised the issue. The portion of this administrative adjudication leading to the Commissioner's order of December 29, 2022 was entirely devoted to that evaluation. The Division actively conceded during that phase that all four issues brought forward by Requesters were eligible for hearing under 18 AAC 15.200,[70] and the timeliness issue will not be revisited now.

Turning to the merits, the handling of water quality standards in this case starts with 18 AAC 70.010. Broadly, that regulation is aimed at regulating "the degree of degradation" that human activities may impose on a waterbody.[71] The regulation does not seek to improve on nature. Limits set by 18 AAC 70 must be met in surface water or groundwater at the boundary of a treatment works.[72] This leads us to 18 AAC 70.010(d), which provides:

> Where the department determines that the natural condition of a water of the state is of lower quality than the water quality criteria set out in 18 AAC 70.020(b), the natural condition supersedes the criteria and becomes the standard for that water. When establishing a water quality standard based on the natural conditions in a permit, certification, or other written decision, the department will follow the procedures set out in the department's *Guidance for the Implementation of*

[68] The *Guidance*, which has the force of regulation through an adoption by reference, can be viewed from a link on this page: https://dec.alaska.gov/water/water-quality/standards/natural-conditions.

[69] *See* A.R. 4801; *cf.* A.R. 5323-24.

[70] Division's Response to Request for Adjudicatory Hearing (Dec. 2, 2022) at 11.

[71] 18 AAC 70.010(b).

[72] 18 AAC 70.010(c).

> *Natural Condition-Based Water Quality Standards*, dated November 15, 2006 and adopted by reference.

The first sentence of 18 AAC 70.010(d) establishes that whenever the Department determines that a natural condition of a water of the state is lower than a numerical standard in the water quality regulations, the "natural condition supersedes" and "becomes the standard for that water."[73] The sentence is not self-executing; it requires a determination.

The process for making the requisite determination,[74] documenting it,[75] expressing it where necessary for use in permits,[76] allowing public input on the determination,[77] and allowing appeals[78] is set out in the *Guidance*. The requirements found in the *Guidance* have been adopted by reference as regulations,[79] and they are law binding on the Department. The *Guidance* "specif[ies] the procedures that the [Department] will use to implement natural condition-based water quality standards."[80]

If the Department makes the determination under the first sentence of 18 AAC 70.010(d), a public notice and comment procedure ensues. It is not optional, but rather is triggered *"[a]ny time DEC finds* that the natural condition comprises the water quality standard for a water."[81] Importantly, this process may be conducted independently or may be conducted "as part of the public notice and comment process of an associated action, such as a permitting decision."[82] In either event, however, the notice must be explicit and must contain substantial background information:

> The public notice will include information on the waters to which the natural condition-based standard applies, a summary of the information supporting that the natural condition is the water quality standard, a summary of any information on how the standard will be expressed in narrative or numerical terms, and a description of how members of the public can obtain a copy of the detailed record.[83]

[73] If the prerequisite determination by the Department has been made, the natural condition supersedes the default criteria set in the tables in 18 AAC 70.020(b).

[74] *Guidance* at 2.1.1 – 2.1.3.

[75] *Guidance* at 2.1.6.

[76] *Guidance* at 2.1.4.

[77] *Guidance* at 2.1.5.

[78] *Guidance* at 2.2.

[79] 18 AAC 70.010(d).

[80] *Guidance* at 1. As the Division points out, the Department could, in its discretion, establish a site-specific water quality criterion under 18 AAC 70.235. But 18 AAC 70.010(d) is clear that the *Guidance* is the sole route for establishing water quality standards based on natural conditions without promulgating a regulation.

[81] *Guidance* at § 2.1.5 (italics added).

[82] *Guidance* at 2.1.5.

[83] *Id*., last paragraph.

In this case, the Division has evidently made a determination under 18 AAC 70.010(d), and the "any time" provision of the *Guidance* has been triggered.[84] However, no public notice and comment process in conformity with the *Guidance* has been completed. The sole public notice issued, which is found at A.R. 3562-87, did not set out to, and did not, provide the information required by the quoted passage from the *Guidance*. This means that an independent notice and comment process in accordance with the third paragraph of *Guidance* § 2.1.5 will need to occur before discharges under the WMP can occur, and corrective action triggers in the WMP may need to be adjusted as appropriate to meet the natural condition-based water quality standards that result from that process.

The applicant is still required to adhere to water quality standards.[85] There is no indication that the Division's judgment to use an indirect, predictive model to monitor for exceedances, as permitted by 18 AAC 60.830(g)(3),[86] was inappropriate. Thus, there is no fundamental flaw in the WMP, and it will not need to be reissued through a new notice and comment process provided any adjustments to corrective action triggers are downward, rather than upward—or, otherwise stated, more, rather than less, stringent.

Accordingly, the holding in this Part V will be implemented as follows. The WMP will be affirmed with one modification, set out in Part VI, that will preclude discharges prior to completion of an independent natural condition-based water quality standard process in conformity with the *Guidance*.[87] Based on that process, corrective action triggers in the permit must be amended if they are not protective of natural condition-based water quality standards. They may be amended downward, but not upward, in conformity with the final sentence of 18 AAC 15.100(c), which was discussed in Part III.

84 *See* A.R. 4801.

85 A.R. 8, 9 (§ 2.1.1.7), 16 (§ 2.5.2), 18 (§2.6.1), 20 (§ 2.7.2)

86 Because this is the final agency decision, regulations in effect now are the ones that apply to it. Accordingly, the citation here is to the February 25, 2022 revision of 18 AAC 60. For discussion of which version of changing laws should be applied, *see, e.g., Stacey v. Jewell*, No. 3:13-CV-00113-RRB, 2015 WL 13674859, at *2 (D. Alaska 2015) (court must apply the regulation that went into effect after the ALJ held the hearing but before the Interior Board of Land Appeals rendered its decision because "[t]he law in this Circuit is clear that an administrative agency is bound to enforce its rules in effect at the time it takes *final* action" (italics added); *ITG Voma Corp. v. Int'l Trade Comm'n*, 253 F. Supp. 3d 1339, 1349 (Ct. Int'l Trade 2017) ("An agency is required to apply the law that is in effect at the time that it issues its final determination, even when a change in legislation occurs during the administrative proceeding."); *see also Ziffrin v. United States*, 318 U.S. 73, 78 (1943) (seminal case holding that "a change of law pending an administrative hearing must be followed in relation to permits for future acts" and noting that "[o]therwise the administrative body would issue orders contrary to the existing legislation").

87 Construction of the LAD system may proceed. The applicant bears any risk that downward adjustment of corrective action triggers may affect its use.

VI. Conclusion and Order

The challenges to the WMP and related decisions, as issued on October 4, 2022, are resolved as follows:

1. The decision not to require an APDES permit is affirmed. This is a final agency decision.

2. The WMP is amended to add the following provision 2.1.1.10:

> Notwithstanding any other provision herein, the permittee may not discharge wastewater through the LAD system until the Department has delivered to the permittee and published via the Online Public Notice System a notice that it (i) has completed all proceedings attendant to its finding that the natural condition comprises the water quality standard for any wastewater constituent and (ii) has completed any associated amendments to Tables 1-5 herein.

Issuance of the WMP is otherwise affirmed. This is a final agency decision.

3. The Division is directed to initiate and conduct a proceeding under the Department's *Guidance for the Implementation of Natural Condition-Based Water Quality Standards* with respect to water quality standards in the vicinity of the LAD system. Review of any decision that the natural condition comprises the water quality standard for a water will be available to participants in that proceeding in accordance with *Guidance* § 2.2. Upon completion of that proceeding, the Division shall make downward amendments to levels in Tables 1-5 of the WMP as needed to conform to any standards determined to apply including, where applicable, standards in 18 AAC 70.020(b). Upward amendments may not be made.

* * *

Insofar as this decision moves forward the state waste management permit for the proposed exploration activities at the Palmer Project, the Commissioner does not dismiss the concerns of the Chilkat Indian Village and many Haines area residents regarding activity in the headwaters of Glacier Creek. The Department will continue to consider their views, and encourages their participation in the upcoming proceedings related to natural condition-based water quality standards. More broadly, the Department will remain vigilant in enforcing the terms of this permit and in reviewing future permits or amendments, should the project change, expand, or move into a mining phase.

DATED: August 18, 2023.

By: Jason W. Brune

Digitally signed by Jason W. Brune
Date: 2023.08.18 14:46:25 -08'00'

Jason Brune
Commissioner of Environmental Conservation

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

Certificate of Service: I certify that on August 18, 2023, a true and correct copy of this order was distributed as follows: Erin Colón (by email), Olivia Glasscock (by email), Cameron Q. Jimmo, AAG (by email), Cody B. Doig, AAG (by email), James F. Clark (by mail and email), and Dept. of Law Central Email. A courtesy copy was emailed to Hearing Liaison Gary Mendivil, Deputy Commissioner Emma Pokon, and Julie Pack, AAG.

By: Sarah Marshall
Office of Administrative Hearings

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

DIVISION OF WATER QUALITY
Fairbanks Office

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Fairbanks, Alaska 99709-3643
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October 4, 2022

Garfield MacVeigh
Constantine Mining LLC
800 West Pender Street, Suite 320
Vancouver, British Columbia
V6C 2V6 Canada

Re: Conditional Approval to Construct and Adoption of New References at the Palmer Project

Dear Mr. MacVeigh:

The department received *Appendix A Wastewater Discharge System Design Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* April 2022 (*Appendix A*) containing a revised design for the Land Application Disposal system at the Palmer Project. According to *Nondomestic Wastewater System Plan Review Regulation* 18 AAC 72.600 and condition 2.4.5.2 of Waste Management Permit 2019DB0001, these plans were reviewed and approved. **Conditional Approval** to construct is granted provided that as-built drawings are submitted to the department within 90 days of the system's startup date.

The new, revised, and approved *Appendix A* necessitates updates to the *Application for Waste Management Permit for the Palmer Phase II Exploration Project Haines, Alaska Upland Mining Lease No. 9100759* April 2022 (*Application*) and *Attachment 2 Water Management Plan Palmer Advanced Exploration Project Haines, Alaska Phase II – Underground Exploration Upland Ming lease No. 9100759* April 2022 (*Attachment 2*). Under condition 1.2 of Waste Management Permit 2019DB0001, the *Application*, *Attachment 2*, and *Appendix A* are approved as adopted references replacing the dated March 2019 versions.

Approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulation or permit requirement. The department's construction approval does not guarantee correctness or the functionality of the design, or waive the owner's responsibility for continued compliance with State regulations.

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC's "Appeal a DEC Decision" web page https://dec.alaska.gov/commish/review-guidance/ for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200. Requests must be submitted no later than the deadline specified in 18 AAC 15.

If you have questions, please contact me at 451-2136 or tim.pilon@alaska.gov.

Sincerely,

Tim Pilon
Engineer II

cc: Kate Harper, DNR, Anchorage
Gene McCabe, DEC, Anchorage
Allan Nakanishi, DEC, Anchorage
Allegra Cairns, Constantine Mining
Jack DiMarchi, Core Geoscience
David Khan, DEC, Juneau

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
610 UNIVERSITY AVE.
FAIRBANKS, AK 99709-3643

WASTE MANAGEMENT PERMIT

for the

Palmer Project

Permit 2019DB0001 **Date: July 17, 2019**

This Waste Management Permit is issued to Constantine Mining LLC, 800 West Pender Street, Suite 320, Vancouver, BC V6C 2V6, for the disposal of wastes from Palmer Project as prescribed herein. The Palmer Project is undertaking advanced exploration for copper, zinc, gold, and silver. It is located in the Porcupine Mining District, 35 miles northwest of Haines, Alaska on the eastern margin of the Saint Elias mountain range in the Glacier Creek drainage. The permit is issued under the provisions of Alaska Statutes (AS) 46.03, and the Alaska Administrative Code (AAC), 18 AAC 15, 18 AAC 60, 18 AAC 70, and 18 AAC 72, as amended or revised, and other applicable state laws and regulations. This permit is effective **July 17, 2019**, and expires after **July 16, 2024**. It may be terminated or modified in accordance with AS 46.03.120.

The permit incorporates by reference the *Application for Waste Management Permit for the Palmer Phase II Exploration Project Haines Alaska Upland Mining Lease No. 9100759* March 2019 (*Application*) including *Attachment 1 Monitoring Plan Palmer Advanced Exploration Project Haines, Alaska Phase II - Underground Exploration Upland Mining Lease No. 9100759* March 2019 *(Attachment 1)*, *Attachment 2 Water Management Plan Palmer Advanced Exploration Project Haines, Alaska Phase II - Underground Exploration Upland Mining Lease No. 9100759* March 2019 *(Attachment 2)*, *Attachment 3 Reclamation Plans and Cost Estimates Phase II - Underground Exploration Upland Mining Lease No. 9100759* March 2019 *(Attachment 3)*, *Appendix A Wastewater Discharge System Design Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019 (*Appendix A*), *Appendix B Surface Water and Groundwater Quality Memos Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019, *Appendix C Source Term Predictions Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019, and *Appendix D Waste Rock Geochemical Characterization Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019. Changes to the documents incorporated herein must be approved by the Alaska Department of Environmental Conservation (department) if they affect this permit. If the department approves the changes, they become part of this permit.

Gene McCabe
Program Manager

TABLE OF CONTENTS

1 PERMIT COVERAGE & ADOPTED REFERENCES

1.1 COVERAGE

The permittee is authorized to land apply non-domestic wastewater from exploration activities and to store and dispose of potentially acid generating (PAG) rock. Discharge water will originate as seepage into an underground exploration ramp. Seepage water will be collected and stored temporarily in underground settling ponds before being pumped to the portal and either 1) directed to a buried upper diffuser for subsurface discharge, and/or 2) directed to two surface settling ponds and from the ponds to a buried lower diffuser for discharge. Regarding PAG rock, preliminary assessment indicates that no PAG rock will be encountered during construction of underground exploration works. However, in the event that PAG rock is encountered, it must be stored on the surface, covered when not being handled, runoff contained, and hauled to the underground ramp for final disposal.

This permit also covers secondary containment for hazardous substances/fuel and monitoring requirements for waste rock, groundwater and surface water. This permit prohibits the discharge of wastewater to surface water.

1.1.1 This permit covers disposal of wastewater, storage and disposal of PAG waste rock, and monitoring at the sites listed under this subheading. See Figures 6.1 and 6.2.

1.1.1.1 Land Application Disposal (LAD) System

Wastewater from mineral exploration's underground workings is disposed through the LAD system. Wastewater may be discharged subsurface through an upper diffuser or a lower diffuser. See Figures 6.1, 6.2, and 6.4. See *Appendix A* to the *Application* for the LAD system design.

1.1.1.1.1 Upper Diffuser

The upper diffuser is located about 200 meters southeast of the portal and buried in a talus slope at a slightly lower elevation than the portal.

1.1.1.1.2 Lower Diffuser

The lower diffuser consists of 1) flow to two settling ponds located approximately 300 meters east northeast and downgradient of the portal, and 2) discharge through a buried diffuser situated about 315 meters east northeast and downgradient of the settling ponds.

1.1.1.2 PAG Rock Storage Pad

The PAG rock storage pad is adjacent to the LAD system's Settling Pond 2. The area and perimeter berms are lined with an impermeable 60-mil geomembrane and has a berms around its perimeter to contain runoff. See Figures 6.1 and 6.2

1.1.1.3 Surface Water Monitoring Sites

Surface water is monitored at five sites: P01 near the source of Glacier Creek, P25 in Waterfall Creek downgradient of the LAD system's upper diffuser, P26 in Hangover Creek downgradient of the LAD system's lower

diffuser, and P27 at the midpoint of Glacier Creek and below the exploration impacted area. See Figure 6.3.

1.1.1.4 Groundwater Monitoring Sites

Monitoring wells MW-01 and MW-02 are situated at the LAD system's lower diffuser. Monitoring well MW-01 is located upgradient of the lower diffuser discharge and monitoring well MW-02 provides groundwater quality samples immediately downgradient of the lower diffuser discharge. See Figure 6.4. Groundwater monitoring site MW-04 will also be included as a monitoring site following the conditions of Permit Part 2.2.5.2.

1.2 ADOPTED REFERENCES

In addition to the stipulations in this permit, the permittee shall adhere to the applicable requirements of 18 AAC 15 *Administrative Procedures*, 18 AAC 60 *Solid Waste Management*, 18 AAC 70 *Alaska Water Quality Standards* (WQS), and 18 AAC 72 *Wastewater Disposal*. The permittee shall also adhere to department-approved plans authorized under the permit. When the terms of this permit differ from the terms of department-approved project documents adopted by reference in this section, the most recent term with written department approval is controlling. If there is doubt as to which conflicting term is newer, this permit shall control. Department-approved plans adopted by reference in this section must be updated within 90 days of permit issuance incorporating any changes necessary to be consistent with the terms of this permit, and these plans may be revised provided that written department approval is received. The department-approved plan adopted by reference into this permit includes the *Application for Waste Management Permit for the Palmer Phase II Exploration Project Haines, Alaska Upland Mining Lease No. 9100759* March 2019 (*Application*) with the following attachments and appendices:

1.2.1 *Attachment 1 Monitoring Plan Palmer Advanced Exploration Project Haines, Alaska Phase II - Underground Exploration Upland Mining Lease No. 9100759* March 2019 *(Attachment 1)*,

1.2.2 *Attachment 2 Water Management Plan Palmer Advanced Exploration Project Haines, Alaska Phase II - Underground Exploration, Upland Mining Lease No. 9100759* March 2019 *(Attachment 2)*,

1.2.3 *Attachment 3 Reclamation Plans and Cost Estimates Phase II - Underground Exploration Upland Mining Lease No. 9100759* March 2019 *(Attachment 3)*.

1.2.4 *Appendix A Wastewater Discharge System Design Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019 (*Appendix A*)

1.2.5 *Appendix B Surface Water and Groundwater Quality Memos Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019

1.2.6 *Appendix C Source Term Predictions Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019, and

1.2.7 *Appendix D Waste Rock Geochemical Characterization Report Phase II – Underground Exploration Upland Mining Lease No. 9100759* March 2019

2 SPECIFIC CONDITIONS

2.1 SITE-WIDE WASTE DISPOSAL

While this permit is in effect and subject to the limitations in Section 2.1.1, the permittee is authorized to dispose of PAG waste rock in the underground exploration ramp and wastewater that seeps into the exploration ramp through the LAD system. The underground tunnel, PAG storage pad, and LAD system, including piping Upper and Lower diffusers and settling ponds are treatment works. This permit only applies during exploration activities and does not apply during mining or beneficiation.

2.1.1 Limitations

2.1.1.1 Except as otherwise authorized in an Alaska Pollutant Discharge Elimination System permit, the permittee shall control and treat onsite surface water, groundwater and seepage as necessary to prevent offsite water quality exceedances.

2.1.1.2 Best management practices indicated in Part 2.1.3 Nitrates and Nitrate Source Control of the *Application* must be implemented to minimize the addition of nitrogen compounds to wastewater.

2.1.1.3 The permittee shall ensure that all wastewater and PAG rock are deposited in a manner that will not damage or otherwise jeopardize the integrity of containment.

2.1.1.4 The permittee shall implement a program to minimize the likelihood that any area containing contaminated water within the facility boundary becomes attractive to waterfowl, shorebirds, or other wildlife.

2.1.1.5 Activities at the Palmer Project, which will cause a significantly greater amount of wastewater and PAG waste rock to be generated and disposed in the permitted facilities, require the prior approval of the department.

2.1.1.6 The following materials shall not be disposed onsite.

2.1.1.6.1 Acute hazardous wastes, as defined by 18 AAC 60.990(157), including radioactive material, explosives, strong acids and untreated pathogenic waste; however, this prohibition does not preclude disposal of natural minerals found in exploration rock; or

2.1.1.6.2 Contaminated soils, spill booms, and liners used for the containment of spilled hazardous substances, chemicals used in the cleanup of hazardous substance spills, or other hazardous substance spill cleanup wastes.

2.1.1.7 When monitoring as specified in Section 2.5 is required, the groundwater in the monitoring wells must not show a statistically significant increase, according to 18 AAC 60.830(h), in constituent concentration above WQS. When a statistically significant increase in a concentration of a constituent above its WQS is discovered, corrective action outlined in Section 2.7 must be implemented.

2.1.1.8 The limitations in Section 2.1.1 do not preclude, and authorization is

hereby given for, disposal of non-hazardous solid wastes such as settled solids from sumps, ditches, and degritting basins and ash from combustion of scrap wood material.

2.1.1.9 The department may set or modify permit conditions based on monitoring results or changes in facility processes in accordance with permit amendment or modification procedures.

2.2 LAND APPLICATION DISPOSAL (LAD) SYSTEM

2.2.1 The permittee is allowed to discharge wastewater from the exploration tunnel into the LAD system. The LAD system discharges at two different subterranean sites, the upper diffuser and the lower diffuser.

2.2.2 Land application must not adversely impact vegetation. If any stress or evidence of adverse impact to the vegetation is detected, application must be halted and the department must be notified according to Section 2.7.

2.2.3 Land application discharge shall not create the functional equivalent of a direct discharge to surface water.

2.2.4 Advancement of the exploration ramp shall cease before influent flow to the LAD system exceeds its maximum discharge capacity.

2.2.5 Upper Diffuser

The disposal of wastewater through the LAD system‘s upper diffuser is prohibited unless specific written approval from DEC has been received. The request for long term approval to discharge wastewater through the LAD system’s upper diffuser shall include data acquired during a trial period of usage for the LAD system’s upper diffuser. During the trial period the following requirements apply.

2.2.5.1 Discharge shall not exceed 50 gallons per minute (gpm);

2.2.5.2 A shallow groundwater monitoring well, MW-04, shall be installed and developed downgradient of the LAD system’s upper diffuser between Waterfall Creek and the diffuser to document groundwater quality;

2.2.5.3 In the event that developing MW-04, a shallow groundwater well in the designated area of the Waterfall Creek drainage, is not practicable, then DEC may rely on the baseline groundwater quality from a reference monitoring well located downgradient of the LAD system’s upper diffuser and within the Waterfall Creek drainage;

2.2.5.4 Before the trial period commences, the monitoring well shall be sampled at least three times at weekly intervals to establish background groundwater quality for the parameters and minimum level of quantification as shown in Table 5;

2.2.5.5 The trial period shall be during the snow free season and last 120 days from the day that wastewater discharge is initiated;

2.2.5.6 Beginning with the onset of discharge for the trial period, the discharge water and the monitoring well water shall be sampled on the same day with at least a monthly frequency;

2.2.5.7 Water quality samples shall be analyzed for the parameters listed in Table 1; and

2.2.5.8 Surface expression of wastewater discharge from the LAD system's upper diffuser is prohibited.

2.2.6 Lower Diffuser

The following requirements apply to the disposal of wastewater through the LAD system's lower diffuser.

2.2.6.1 Flow to the lower diffuser is limited to 500 gpm;

2.2.6.2 Monitoring well MW-01 provides background water quality upgradient of the lower diffuser and monitoring well MW-02 serves to detect LAD system impacts on downgradient, groundwater quality. Monitor MW-01 and MW-02 according to Section 2.5; and

2.2.6.3 MW-02 monitors groundwater quality downgradient of the lower diffuser. Groundwater in MW-02 must not exceed the triggers listed in Table 1. If any of the triggers in Table 1 are exceeded, then corrective action as designated in Section 2.7 must be implemented.

Table 1: Corrective Action Triggers for Groundwater in MW-02

Parameter[1]	Units	Trigger
aluminum	mg/L[2]	15
arsenic	µg/L[3]	10
cadmium[4]	µg/L	0.40
calcium[5]	mg/L	NA
copper[4]	µg/L	53
iron	mg/L	29
lead[4]	µg/L	6.2
magnesium[5]	mg/L	NA
manganese	µg/L	550
mercury	µg/L	0.012
nitrate as N	mg/L	10
pH	s.u.[6]	<6.5 or >8.5
selenium	µg/L	5
sulfate	mg/L	250
total dissolved solids	mg/L	500
zinc[4]	µg/L	186

1. total recoverable concentrations
2. milligrams per liter
3. micrograms per liter
4. Parameter has a hardness-based trigger using the 15th percentile of the background hardness, 168 mg/L as $CaCO_3$. Hardness is calculated as follows: (2.497 x [Ca]) + (4.118 x [Mg]).
5. Parameter is used to calculate hardness.
6. standard units

2.2.7 Monitoring site P25 in Waterfall Creek serves to monitor potential impacts, if any, from the LAD system's upper diffuser on downgradient water quality. Surface water sampled at P25 must not exceed the triggers listed in Table 2. If any of the triggers in Table 2 are exceeded, then corrective action as designated in Section 2.7 must be implemented.

Table 2: Corrective Action Triggers for Surface Water at Site P25

Parameter[1]	Units	Trigger
aluminum	mg/L	10
arsenic	µg/L	10
cadmium[2]	µg/L	0.37
calcium[3]	mg/L	NA
copper[2]	µg/L	24
iron	mg/L	16
lead[2]	µg/L	4.4
magnesium[3]	mg/L	NA
manganese	µg/L	290
mercury	µg/L	0.012
nitrate as N	mg/L	10
pH	s.u.	<6.5 or >8.5
selenium	µg/L	8.2
sulfate	mg/L	649
total dissolved solids	mg/L	1,055
zinc[2]	µg/L	146

1. total recoverable concentrations
2. Parameter has a hardness-based trigger using the 15th percentile of the background hardness, 126 mg/L as $CaCO_3$.
3. Parameter is used to calculate hardness. Hardness is calculated as follows: (2.497 x [Ca]) + (4.118 x [Mg]).

2.2.8 Monitoring site P26 in Hangover Creek serves to monitor potential impacts, if any, from the LAD system's lower diffuser on downgradient water quality. Surface water sampled at P26 must not exceed the triggers listed in Table 3. If any of the triggers in Table 3 are exceeded, then corrective action as designated in Section 2.7 must be implemented.

Table 3: Corrective Action Triggers for Surface Water at Site P26

Parameter[1]	Units	Trigger
aluminum	mg/L	21
arsenic	µg/L	10
cadmium	µg/L	0.79
calcium[2]	mg/L	NA
copper	µg/L	70
iron	mg/L	39
lead[2]	µg/L	7.1
magnesium[2]	mg/L	NA
manganese	µg/L	970
mercury	µg/L	0.012
nitrate as N	mg/L	10
pH	s.u.	<6.5 or >8.5
selenium	µg/L	5
sulfate	mg/L	299
total dissolved solids	mg/L	573
zinc[3]	µg/L	147

1. total recoverable concentrations
2. Parameter is used to calculate hardness. Hardness is calculated as follows: (2.497 x [Ca]) + (4.118 x [Mg]).
3. Parameter has a hardness-based trigger using the 15th percentile of the background hardness, 127 mg/L as $CaCO_3$.

2.2.9 Monitoring site P27 is located at about the midpoint of Glacier Creek below all exploration activities and serves to monitor potential impacts, if any, from the cumulative exploration activity on downgradient water quality. Surface water sampled at P27 must not exceed the triggers listed in Table 4. If any of the triggers in Table 4 are exceeded, then corrective action as designated in Section 2.7 must be implemented.

Table 4: Corrective Action Triggers for Surface Water at Site P27

Parameter[1]	Units	Trigger
aluminum	mg/L	43
arsenic	µg/L	10
cadmium[2]	µg/L	0.39
calcium[3]	mg/L	NA
copper[2]	µg/L	133
iron	mg/L	86
lead	µg/L	6.4
magnesium[3]	mg/L	NA
manganese	µg/L	2,200
mercury	µg/L	0.012
nitrate as N	mg/L	10
pH	s.u.	<6.5 or >8.5
selenium	µg/L	5
sulfate	mg/L	268
total dissolved solids	mg/L	500
zinc	µg/L	470

1. total recoverable concentrations
2. Parameter has a hardness-based trigger using the 15th percentile of the background hardness, 162 mg/L as $CaCO_3$.
3. Parameter is used to calculate hardness. Hardness is calculated as follows: (2.497 x [Ca]) + (4.118 x [Mg]).

2.3 PAG ROCK STORAGE PAD

2.3.1 Solids and liquids on the PAG rock storage pad shall be contained within an area lined by an impermeable geomembrane.

2.3.2 The PAG rock storage pad shall be surrounded by berms to contain runoff within the geomembrane lined area.

2.3.3 PAG rock must be covered by an impermeable cover when not being handled.

2.3.4 The amount of PAG rock placed on the storage pad is limited to no more than 4,000 cubic meters (5,230 cubic yards).

2.3.5 PAG storage pad water must be contained in the lined area and may not be discharged without written department approval.

2.3.6 PAG rock must be managed as indicated in Part 3.2 Development Rock Monitoring, Handling and Disposal of the *Application*.

2.4 SITE CONSTRUCTION, MAINTENANCE, & OPERATION

2.4.1 Specific

The LAD system and the PAG rock storage pad shall be constructed as indicated in the *Appendix A.*

2.4.2 General

2.4.2.1 Changes that may have a significant impact on surface or groundwater quality; information on engineering changes to the wastewater disposal systems that may affect water quality; new waste treatment processes; changes to ground and surface water interception, conveyance or monitoring systems; or the addition of new waste streams to the discharge that could significantly change the quality or increase the quantity of pollutants in a waste stream must be submitted to the department and approval must be obtained prior to any such changes or discharges.

2.4.2.2 The permittee shall develop the project in accordance with department-approved plans and amendments thereof, which are submitted by the applicant as required by this permit and referenced in Section 1.2. Pollution prevention concepts shall be incorporated into operations plans for the project.

2.4.2.3 The permittee shall construct and maintain wastewater collection systems and control wastewater in accordance with plans approved by the department.

2.4.2.4 The permittee shall ensure that removal of settled solids deposited from the LAD system settling ponds is done in a manner that will not damage or otherwise jeopardize the integrity of the containment.

2.4.2.5 The permittee shall not dispose of PAG rock or wastewater in quantities exceeding the design capacity of the disposal facilities.

2.4.2.6 The permittee shall control and treat wastewater as necessary to prevent causing downgradient offsite water quality exceedances in surface water.

2.4.2.7 The LAD system and its appurtenances shall be properly operated and maintained.

2.4.3 Secondary Containment

2.4.3.1 Secondary containment of all hazardous substances, as defined at AS 46.03.826(5), must be impermeable to those stored hazardous substances.

2.4.3.2 The permittee shall provide and maintain secondary containment for all tanks containing hazardous or toxic materials and piping associated with that tankage. For a given containment area, secondary containment must provide a storage volume greater than or equal to 110 percent of the largest tank or the total volume of permanently manifolded tanks.

2.4.3.3 The permittee must design and install secondary containment structures in a manner that ensures that hazardous substances/fuel will not escape from the structures. To prevent such discharges, facilities shall be maintained in good working condition at all times by the permittee.

2.4.4 The permittee shall maintain fuel handling and storage facilities in a manner

that will minimize the discharge of hazardous substances.

2.4.5 Notification

2.4.5.1 The permittee shall notify the department in writing at least 15 days before the introduction of a new chemical into the process or wastewater treatment streams that could significantly change the quality or increase the quantity of pollutants in a wastewater stream(s). Safety Data Sheets on such new chemicals must be forwarded to the department at time of notification and maintained onsite. Introduction of the new chemical into the process requires written department approval.

2.4.5.2 Under 18 AAC 72.600, the permittee shall submit engineering plans to the department at least 60 days before construction or modification of an applicable system, and receive department approval of any changes that will significantly modify the quality or quantity of a waste stream, the operation of a wastewater treatment component, or the LAD system covered under this permit.

2.4.5.3 With respect to any department-approved change as described in Section 2.4.2.2, the permittee must submit to the department within 90 days after completing construction:

2.4.5.3.1 As-built drawings of the process components showing changes potentially affecting performance as required in 18 AAC 72.600,

2.4.5.3.2 A summary of the quality control activities that were carried out during construction, and

2.4.5.3.3 The revised operating plans that reflect modifications made during construction.

2.5 MONITORING

The monitoring plan, *Attachment 1*, submitted by Constantine Mining LLC and approved by the department, is incorporated into this permit. Future department-approved changes to project monitoring will be included as modifications to *Attachment 1* and do not require re-issuance or modification of this permit. *Attachment 1* shall contain monitoring procedures to include the following and must be updated within 90 days of permit issuance or prior to commencing Phase II, as needed, to conform to the permit.

2.5.1 Visually monitor the all facilities for signs of damage or potential damage from settlement, ponding, leakage, instability, frost action, erosion, thawing of the waste, or operations at the site. Also, check for signs of stress to vegetation and wildlife at the facility, the presence of aufeis, and sheen on discharged water. Visual monitoring shall be at least weekly and documented monthly.

2.5.2 Monitor surface and groundwater near the site to ensure that WQS or natural conditions are protected and based on representative sample results.

2.5.3 Whenever the upper or lower diffuser is discharging wastewater, it shall be inspected on a daily basis.

2.5.4 Waste rock must be monitored as indicated in Part 3.2 Development Rock Monitoring, Handling and Disposal of the *Application.*

2.5.5 Groundwater, surface water, and discharged wastewater monitoring shall meet the requirements below.

2.5.5.1 Groundwater must be sampled at MW-01 and MW-02 and meet the requirements in Table 5.

2.5.5.2 Surface water must be sampled at the following sites: P01, P25, P26, and P27 and meet the requirements in Table 5.

2.5.5.3 Flow of discharged wastewater from the upper and lower diffusers must be measured continuously to assure that each does not exceed its design daily average flow rate.

2.5.5.4 Wastewater from the upper and lower diffusers must be sampled after the last treatment process and before discharge and meet the requirements of Table 5.

2.5.5.5 All samples must be analyzed for the parameters listed in Table 5 and must achieve a minimum level of quantification (ML) that is equivalent to or less than those listed therein. The permittee may request different MLs. The request must be in writing and must be approved by DEC.

Table 5: Water Quality Monitoring Requirements

Parameter[1]	Units	Minimum Sampling Frequency	Minimum Level of Quantification
aluminum	mg/L	quarterly[2]	0.087
arsenic	µg/L	quarterly	1
cadmium	µg/L	quarterly	0.01
copper	µg/L	quarterly	0.5
hardness, calculated	mg/L	quarterly	
iron	mg/L	quarterly	0.1
lead	µg/L	quarterly	0.1
manganese	µg/L	quarterly	1
mercury	µg/L	quarterly	0.012
nitrate as N	mg/L	quarterly	1
pH	s.u.	quarterly	± 0.1
selenium	µg/L	quarterly	0.05
sulfate	mg/L	quarterly	1
total dissolved solids	mg/L	quarterly	1
zinc	µg/L	quarterly	3

1. Measure total recoverable concentrations.
2. Calendar quarter when water is flowing and samples can be safely gathered
3. Hardness is calculated as follows: (2.497 x [Ca]) + (4.118 x [Mg]).

2.5.5.6 The permittee shall adhere to the Quality Assurance Project Plan (QAPP) contained in *Attachment 1* and approved by the department. The permittee shall update and maintain the QAPP to include the following:

2.5.5.6.1 The QAPP will reflect the current sampling program for the LAD system. Any significant changes in the QAPP procedures shall be submitted to the department for approval.

2.5.5.6.2 The QAPP shall ensure water quality samples are analyzed by a laboratory that follows EPA-approved procedures, quality control requirements, reporting and documentation procedures.

2.5.5.6.3 The QAPP must be designed to assist in planning for the collection and analysis of water samples in support of the permit and in explaining data anomalies when they occur.

2.5.5.6.4 Throughout all sample collection and analysis activities, the permittee must use chain-of-custody procedures described in the QAPP.

2.5.5.6.5 The permittee must amend the QAPP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAPP.

2.5.5.6.6 A copy or copies of the QAPP must be made available to the department upon request.

2.5.6 Discharged wastewater, groundwater and surface water monitoring and corrective action monitoring shall be in accordance with Section 2.7, Article 7 of 18 AAC 60 Solid Waste Management Regulations, *Attachment 1,* and the QAPP.

2.5.7 The department may modify monitoring requirements, including the establishment of additional compliance points in response to trends showing changes in the concentration or load of parameters being monitored.

2.5.8 If the permittee monitors any surface or groundwater identified in the *Attachment 1*, more frequently than required, the permittee shall notify the department that the additional monitoring has occurred in the next quarterly report after the monitoring has occurred. The results of such monitoring shall be available for inspection by the department, and the permittee shall provide copies of the results to the department upon request.

2.6 REPORTING

2.6.1 When a statistically significant increase in the concentration of a constituent above a WQS is discovered at a groundwater or surface water monitoring as listed in Tables 1 through 4, or if noncompliance with a permit requirement is discovered, the permittee shall verbally notify the department no later than the end of the next working day after discovery, and shall conduct corrective actions according to Section 2.7.

2.6.2 The permittee shall provide the department with quarterly monitoring reports summarizing inspection and monitoring results required in Section 2.5. The reports shall satisfy the following conditions.

2.6.2.1 Due Dates - Reports for the first three calendar quarters are due within 60 days after the quarter ends, and the report for the fourth calendar quarter shall be submitted by March 1st of the following year.

2.6.2.2 Form – Reports shall be provided in electronic form using commercially available software or according to other electronic reporting requirements approved by the department. Paper copies of the reports are not required unless specifically requested.

2.6.2.3 Content - Reports shall contain a narrative portion discussing data and information collected during the preceding quarter.

2.6.2.4 Graphing - Reports shall present water quality data in graphical form indicating trends as well as the margin of compliance with limits.

2.6.2.4.1 Graphs of concentration measurement versus time must include the past five years of data, if available, and may contain all historic data.

2.6.2.4.2 The graphs must also include the parameter, units, and applicable permit limit or WQS.

2.6.2.4.3 Multiple stations, identified using symbols in a legend, may be included in the same graph.

2.6.2.4.4 Scales shall be proportioned to display the limit or WQS, as indicated by a highlighted line, near the top of the graph or when data exceeds the limit, the maximum value shall be near the top of the graph.

2.6.2.4.5 Formatting shall allow addition of new data to each graph's cumulative data when producing the next quarterly report.

2.6.2.4.6 For graphical purposes, non-detect values shall be plotted at one half the method detection limit (MDL), and values between the minimum level of quantification (ML) and MDL shall be plotted at the value of the qualified measurement.

2.6.3 Annual Report - In addition to satisfying the requirements of Section 2.6.2, the fourth calendar quarter report serves as the annual report. The annual report shall:

2.6.3.1 Be submitted to the department by March 1st of the following year;

2.6.3.2 Contain an electronic copy (preferably Excel) of the water quality data for the reporting year, including the past five years' data, if available, and may contain all historic data in spreadsheet form. When a value is less than the ML, it must be identified as less than the ML, and the ML must be provided. Non-detect values must be identified as less than the MDL or non-detect and the MDL must be provided in the electronic water quality data spreadsheets; and

2.6.3.3 Address the adequacy of the financial responsibility including, but not limited to, significant changes in reclamation activity costs, concurrent reclamation, expansion or other changes to the operation of the facility.

2.6.4 The permittee shall provide the department with copies of any amendments to the Reclamation Plan Approval (RPA) issued by Alaska Department of Natural Resources (DNR), when they affect the waste disposal operations authorized by the permit.

2.6.5 All records, information, and reports resulting from the monitoring activities

required by this permit, including but not limited to all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation, shall be retained in Alaska for observation by the department for a minimum of five years. Upon request from the department, the permittee shall submit certified copies of such records.

2.6.6 Any onsite wildlife casualties associated with facility activities shall be reported to appropriate State agencies, including the department, within one working day of discovery.

2.6.7 All reports submitted under the requirements of this permit shall be sent to:

Dept. of Environmental Conservation
Division of Water
610 University Ave.
Fairbanks, AK 99709
(907) 451-2136

2.6.8 Knowingly making a false statement, by the permittee, the operator or other employees, including contractors, on any such report may result in the imposition of criminal penalties as provided under AS 46.03.790.

2.7 CORRECTIVE ACTIONS

2.7.1 The permittee shall comply with 18 AAC 60.815 if the visual monitoring program in Section 2.5.1 discovers damage or potential damage to the waste disposal-related facility that could lead to water quality violations.

2.7.2 When a statistically significant increase in a constituent concentration above a WQS is discovered in any of the water sampling locations, the permittee shall comply with 18 AAC 60.820-860. Statistical significance shall be determined using one of the methods outlined in 18 AAC 60.830(h). The permittee shall comply with the notification requirements in 18 AAC 60.850(c) upon determining a statistically significant increase in a constituent concentration.

2.7.3 For a single constituent, when a statistically significant increase in concentration above its WQS is discovered at a water monitoring station or if noncompliance with a permit requirement is discovered, the permittee shall:

2.7.3.1 Orally notify the department no later than the end of the next working day;

2.7.3.2 Determine the extent of the exceedance or noncompliance;

2.7.3.3 In consultation with the department and documented in writing, implement a plan to restore compliance and determine the cause of the exceedance or noncompliance;

2.7.3.4 Submit to the department, within seven working days after an exceedance or noncompliance is verified by the permittee, a plan for corrective actions to prevent adverse environmental impacts and avoid future exceedances of a similar nature; and

2.7.3.5 Implement the corrective actions as approved by the department.

2.8 SUSPENSION OF OPERATIONS

2.8.1 Suspension of operations is defined as a suspension of seasonal exploration

activities for more than one year but less than three years. The length of time for the period of suspension may be extended beyond three years by written authorization from the department. The permittee shall submit a conceptual suspension of operations plan to the department either (i) 90 days after the effective date of the permit or (ii) 90 days prior to commencing phase II exploration, whichever is later.

2.8.2 The permittee must notify the department within three days of suspending operations. The notice shall provide the nature of and reason for the suspension and its anticipated duration.

2.8.3 No later than ten days after operations have been suspended, the permittee shall submit a detailed and updated suspension of operations plan that supersedes the suspension of operations conceptual plan required by Section 2.8.1 with current information and specific details. The suspension plan shall address the following:

2.8.3.1 Explanation of what would reasonably result in resuming or permanently terminating exploration activities;

2.8.3.2 Reclamation or construction activities during the period of temporary suspension;

2.8.3.3 Procedures, methods, and schedule to be implemented for the treatment, disposal, or storage of wastewater;

2.8.3.4 The control of surface and groundwater drainage to and from the facility and the surrounding area;

2.8.3.5 The control of erosion from the waste rock disposal areas and any other disturbed areas within the facility boundary;

2.8.3.6 The storage of hazardous materials during the period of suspended operations; and

2.8.3.7 Procedures for maintaining and monitoring the LAD system and the temporary PAG rock storage pad and site-wide water balance.

2.8.4 The department shall have 15 days to review and approve or request modifications to the suspension plan.

2.8.5 Once a suspension of operations plan has been approved, it becomes enforceable under the conditions of this permit and full implementation of the approved suspension plan is required. The plan can be amended by submitting a revised plan to the department for approval.

2.8.6 During suspension of operations, the permittee shall:

2.8.6.1 Continue pollution control activities associated with waste disposal and management, including but not limited to dust control, maintenance of the drainage diversion structures, maintenance of all discharge and leakage control structures and processes, as specified by the suspension plan.

2.8.6.2 Continue monitoring and reporting activities of all active portions of the site as specified by this permit or the suspension plan.

2.8.7 Written department approval is required before resuming exploration after a

period of temporary closure.

2.9 TERMINATION OF EXPLORATION ACTIVITIES

2.9.1 Termination of exploration activities is defined as the permanent cessation of those activities. Updated reclamation and monitoring plans must be submitted for approval within 90 days after initiating termination of exploration. The updated plans must address current conditions at the facility. Updates and changes to those plans must be approved in writing by the department.

2.9.2 Although this permit is limited to a period of five years from the date of issuance (unless administratively extended), it is the intent of the department to re-issue this permit with the following conditions to apply to LAD system reclamation, post-cessation treatment and monitoring and post closure care and monitoring. These conditions may be updated, modified or amended by the department as necessary to address new information and future changes to the facility, reclamation and closure plans, regulations or other pertinent considerations for long-term environmental protection. Closure of the waste disposal facilities will be complete when the following criteria are met:

2.9.2.1 Termination of exploration at the site must be implemented and completed according to the conditions of this permit and with the *Attachment 3* to the *Application*, which is incorporated by reference into this permit; and

2.9.2.2 Reclamation shall be performed at outlined in *Attachment 3* to the *Application*.

2.9.3 The permittee shall maintain the facility correcting any erosion or settlement that may impair water quality or otherwise threaten the environment, up until the time that this permit, or any successor permit, is transferred to another entity or terminated by the department.

2.9.4 Post-closure monitoring of surface water quality and visual monitoring for settlement, seeps, and erosion is required annually for at least 60 months after termination of wastewater discharge.

2.9.5 The permittee shall assess the conditions at the facility and respond accordingly throughout the reclamation and post-closure care periods. At the end of the post-closure monitoring period, the department will determine whether post-closure care and monitoring should be extended beyond 60 months after termination of wastewater discharge, based upon the information collected by that time.

3 GENERAL CONDITIONS

3.1 ACCESS AND INSPECTION

The permittee shall allow the Commissioner or designated representative access to the permitted facility at reasonable times to conduct scheduled or unscheduled inspections or tests to determine compliance with this permit, state laws, and regulations.

3.2 INFORMATION ACCESS

Except where protected from disclosure by applicable State or Federal law, all records and reports submitted in accordance with the terms of this permit shall be available for public inspection at the State of Alaska, Department of Environmental Conservation, Fairbanks, Alaska.

3.3 CIVIL AND CRIMINAL LIABILITY

Nothing in this permit shall relieve the permittee from any potential civil or criminal liability for noncompliance with the permit or with applicable laws.

3.4 AVAILABILITY

The permittee shall post or maintain a copy of this permit available to the public at the facility.

3.5 ADVERSE IMPACT

The permittee shall take all necessary means to minimize any adverse impacts to the receiving waters or lands resulting from noncompliance with any limitation specified in this permit, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. The permittee shall cleanup and restore all areas adversely impacted by the noncompliance.

3.6 CULTURAL OR PALEONTOLOGICAL RESOURCES

Should cultural or paleontological resources be discovered as a result of this activity or work which would disturb such resources, is to be stopped, and the State Historic Preservation Office, Division of Parks and Outdoor Recreation, DNR is to be notified promptly at (907) 465-4563.

3.7 APPLICATIONS FOR RENEWAL

In accordance with 18 AAC 15.100(d), an application for renewal or amendment of this permit must be made no later than 120 days before the expiration date of the permit or the planned effective date of the amendment.

3.8 OTHER LEGAL OBLIGATIONS

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the department or from other local, state, or federal agencies, and to comply with the requirements contained in any such permits. All activities conducted and all plans implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

3.9 TRANSFER OF OWNERSHIP

In the event of any change in control or ownership of the permitted facility, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Director of the Division of Water. The original permittee remains responsible for permit compliance unless and until the succeeding owner or controller agrees in writing to assume such responsibility, and the department approves assignment of the permit. The department will not unreasonably withhold such approval.

As between the State and the permittee, no transfer of this permit shall relieve the permittee of any liability arising out of operations conducted prior to such transfer, regardless of whether such liability accrues before or after such transfer.

3.10 TOXIC POLLUTANTS

If during the life of this permit a new or revised toxic pollutant (including oil, grease, or solvents) concentration standard is established in accordance with 18 AAC 70 for a pollutant managed at this facility and that standard is more stringent than previously, then upon the effective date of the new rule, this permit automatically adopts the new toxic pollutant concentration standard and applies it to management of facility wastes

going forward from the date of adoption. Authorized discharges made prior to any standards change or adoption will not be subject to ex post facto clean up requirements.

3.11 POLLUTION PREVENTION

In order to prevent and minimize present and future pollution, when making management decisions that affect waste generation, the permittee shall consider the following order of priority options as outlined in AS 46.06.021:

1st waste source reduction,

2nd recycling of waste,

3rd waste treatment, and

4th waste disposal.

4 FINANCIAL RESPONSIBILITY

4.1 AUTHORITY

Under AS 46.03.100(f), 18 AAC 15.090, and 18 AAC 60.265, the department is required to secure proof of financial responsibility for reclamation and long term care and maintenance, including wastewater treatment and monitoring at the facility.

4.1.1 The permittee shall provide the department with proof of financial responsibility for reclamation and closure of the facilities and post-closure monitoring. The proof of financial responsibility shall cover costs incurred for suspension of operations, reclamation and closure, and monitoring of all project facilities. An overview of the areas covered by the financial responsibility for reclamation and closure is shown in Figure 6.1.

4.1.2 The department will review and modify if necessary, the financial responsibility requirements including adjustments for concurrent reclamation, expansion, or other changes to the operation of the facility. The permittee shall address the adequacy of the financial responsibility in the annual report required in Section 2.6.3.

4.1.3 The proof of financial responsibility may be in the form of a trust fund, surety bond, letter of credit, insurance, or another department-approved mechanism.

4.1.4 Approved proof of financial responsibility must remain available through the post-closure period and may not be released in its entirety until the department certifies in writing that closure of the facility and the required post-closure monitoring have been successfully concluded or that another entity has assumed responsibility for permit compliance, reclamation and closure activities, and post-closure monitoring.

4.1.5 The permittee must provide acceptable proof of financial responsibility before collaring the portal. The department will accept or reject the financial surety as expeditiously as possible but in no event later than 30 days after its receipt.

4.1.6 If the permittee is unable to provide acceptable proof of financial responsibility to the department within the time period stated above, this permit will expire automatically at that time, notwithstanding any other approvals to the contrary, unless the department's failure to act is responsible for the delay in accepting or rejecting this proof.

4.1.7 If the permittee fails to comply with the terms and conditions of this permit and if the department concludes that such failure may prevent, inhibit or delay satisfactory reclamation and closure or post-closure monitoring of the facility, then the department may exercise its rights, under an approved mechanism, to access financial responsibility funds and use them for reclamation and closure and post-closure activities.

4.1.8 The permittee can apply to have the amount of the financial responsibility adjusted during the life of the permit if, for example, concurrent reclamation has been completed or if annual adjustment for inflation is needed.

4.2 AMOUNT OF FINANCIAL RESPONSIBILITY

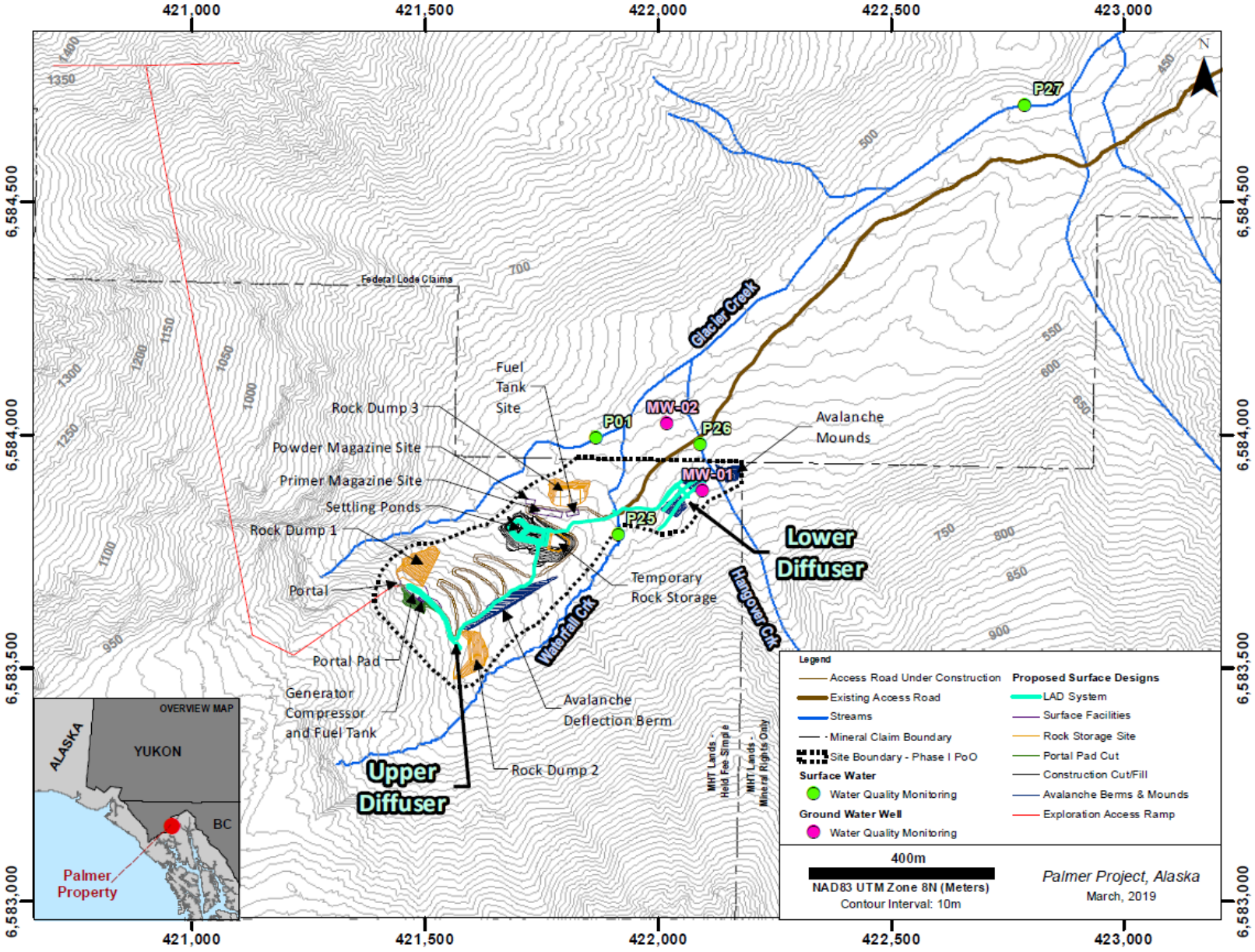
DNR issued a RPA #J20185690RPA to Constantine Mining LLC for the Palmer Project. Review of Phase II reclamation plans and associated costs, Attachment 3, was conducted in consultation and agreement between DNR and the department. The amount of financial responsibility, satisfying AS 46.03.100(f), 18 AAC 15.090, and 18 AAC 60.265, established in the Attachment 3 is $1,116,996.

5 GLOSSARY OF ACRONYMS

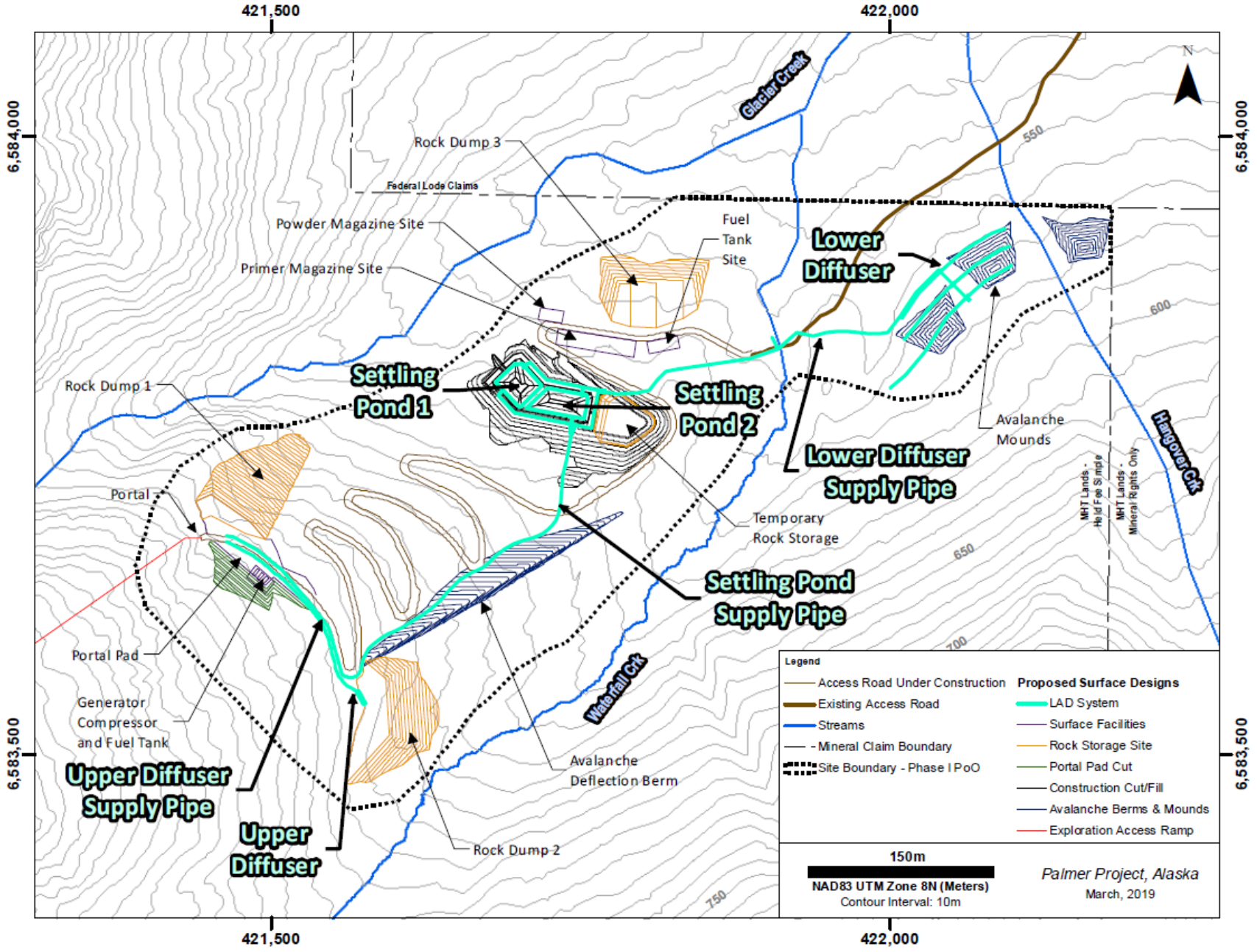
AAC	Alaska Administrative Code
AS	Alaska Statutes
DNR	Alaska Department of Natural Resources
gpm	Gallons per Minute
LAD	Land Application Disposal
MDL	Method Detection Limit
ML	Minimum Level of Quantification
PAG	Potentially Acid Generating
QAPP	Quality Assurance Project Plan
RPA	Reclamation Plan Approval
WQS	Alaska Water Quality Standards (18 AAC 70)

6 FIGURES

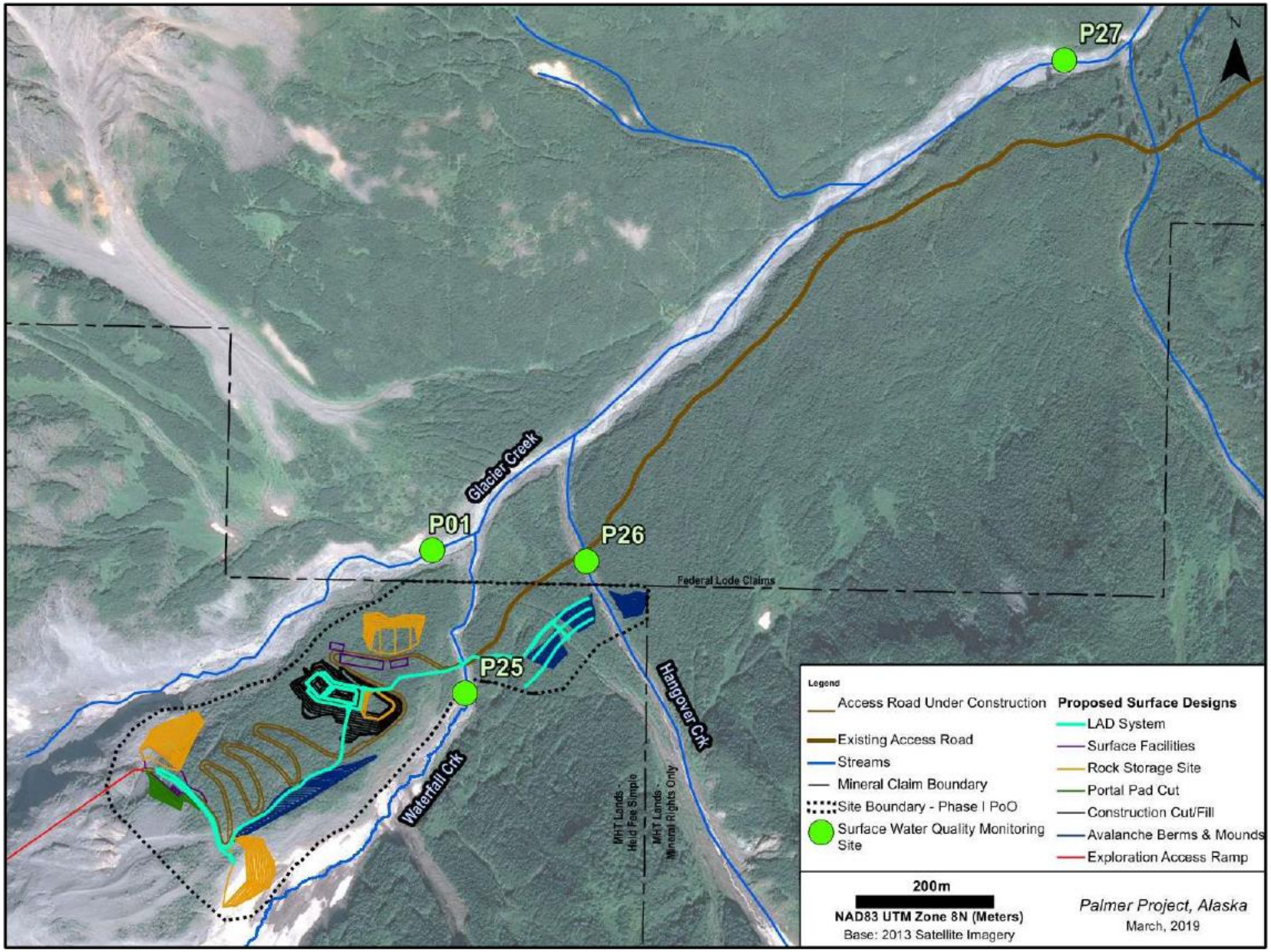
6.1 PROJECT MAP



6.2 PROJECT CLOSE-UP



6.3 SURFACE WATER MONITORING SITES – P01, P25, P26, & P27



6.4 LAD SYSTEM & MONITORING WELLS – MW-01, MW-02, & MW-04