

**Alaska Public Interest Research Group ▪
Appalachian Center for the Economy and the Environment ▪
Cook Inletkeeper ▪ Sierra Club**

July 13, 2011

U.S Army Corps of Engineers, Alaska District
Attention: Benjamin Soiseth, Regulatory Division
CEPOA-RD
Post Office Box 6898
JBER, Alaska 99506-0898
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RE: Alaska Railroad Corporation Project POA-2007-1586

Dear Mr. Soiseth:

Please accept these comments on the behalf of Alaska Public Interest Research Group, Cook Inletkeeper, Sierra Club and Appalachian Center for the Economy and the Environment in reference to the proposed Alaska Railroad Corporation (“ARRC”) project to build a rail spur connecting Port Mackenzie to interior Alaska. The Corps has determined the project would impact 140.7 acres of wetlands and other waters.

In order to permit the proposed activities, the Corps must find that the activity complies with Section 404 of the Clean Water Act (“CWA”). The basic precept of Section 404 is: “that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystem of concern.” 40 C.F.R. § 230.1 (c).

The Corps and EPA’s 404(b)(1) Guidelines impose important limitations on when a § 404 permit may be issued. In general, no discharge of dredged or fill material shall be permitted: 1) if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem; 2) if the discharge will cause or contribute to violations of applicable state water quality standards; 3) if the discharge will cause or contribute to significant degradation of the environment; and 4) unless all appropriate steps have been taken to minimize potential adverse impacts. 40 C.F.R. § 230.10. The Guidelines provide that significant adverse effects on human health or welfare; aquatic life and other water dependent wildlife; aquatic ecosystem diversity, productivity, and stability; or recreational, aesthetic, and economic values are effects contributing to significant degradation. 40 C.F.R. § 230.10(c)(1)–(4). Significant effects are those that are more than “trivial.” Preamble to Guidelines for Specification of Disposal Sites for Dredged or Fill Material (“Preamble”), December 24, 1980, 45 Fed. Reg. 85,336, 85,343. These factors must be considered both individually and collectively when evaluating the permit application.

Under the 404(b)(1) Guidelines, “the degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these Guidelines. The guiding principle should be that degradation or destruction of special sites may represent an irreversible loss of valuable aquatic resources.” 40 C.F.R. § 230.1(d). Likewise, the regulations governing the Corps’ “public interest” review require that the analysis begin with the presumption that “unnecessary alteration or destruction of [wetlands] should be discouraged as contrary to the public interest.” 33 C.F.R. § 320.4(b)(1). *See Sierra Club v. Flowers*, 423 F.Supp.2d 1273, 1356 (S.D. Fla. 2006).

ARRC’s proposed project is not a “water dependent” activity and the Corps and the project would fill “special aquatic sites,” including wetlands. Thus, the Corps’ regulations create a rebuttable presumption that there are practicable and environmentally preferable alternatives, and such alternatives are presumed to have less adverse impact unless “clearly demonstrated” otherwise. *Flowers*, 423 F. Supp.2d at 1352; 40 C.F.R. § 230.10(a)(3). The applicant has the burden of demonstrating that no feasible alternative exists, and the Corps must engage in a reasoned analysis of this issue. *Id.* at 1356–57. The Corps cannot blindly and uncritically accept an applicant’s study of alternatives and its assertions that no practicable alternative exists. *Friends of the Earth v. Hintz*, 800 F.2d 822, 835–36 (9th Cir. 1986).

Additionally, when taking any action that may significantly affect the environment, the Corps must comply with the National Environmental Policy Act (“NEPA”). NEPA requires that federal agencies carefully consider the direct, indirect and cumulative effects of federal actions. The statute requires federal agencies to take a “hard look” at the environmental impacts of proposed agency actions. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989); 42 U.S.C. § 4331 *et. seq.* To take a “hard look” under NEPA, agencies must consider the relevant factors and the important aspects of their actions. *See Friends of the Boundary Waters Wilderness v. Dombeck*, 164 F.3d 1115, 1128 (8th Cir. 1999). If an agency approves a major federal action without taking a hard look at its impacts, a court must set aside the agency action as arbitrary and capricious. *See Robertson*, 490 U.S. at 350; 5 U.S.C. § 706.

One of NEPA’s fundamental purposes is to demonstrate that the agency has properly considered the environmental consequences of its actions and given the public an opportunity to respond to the agency’s disclosures. *See Robertson*, 490 U.S. at 349 (explaining that NEPA “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision”). NEPA further requires agencies to “provide *full and fair discussion of significant* environmental impacts” and to inform the public and decision makers about potential alternatives to avoid or minimize environmental impacts. 40 C.F.R. § 1502.1 (emphasis added).

In this case, the Office of Environmental Assessment (“OEA”) of the Surface Transportation Board (“STB”) recently issued a final environmental impact statement (“FEIS”) for ARRC’s rail extension project, on which the Corps acted as a cooperating agency. Subsequently, the Corps issued a Public Notice (“PN”) of ARRC’s application for a CWA § 404 permit, along with associated documents. Both the FEIS and the PN consistently fail to discuss the significance of potential impacts or provide enough information to make a reasonable determination as to

whether a permit may be granted for discharges of fill material associated with the proposed project in compliance with NEPA or CWA § 404(b)(1).

As the U.S. Environmental Protection Agency (EPA) summarized in its comments on the draft EIS, the proponent has not provided sufficient information to determine whether a less harmful practicable alternative exists. EPA found that “most or perhaps all of the proposed alternatives may not qualify as the least damaging practicable alternative (LEDPA),” and also expressed concern “about reduction in ecological connectivity and habitat fragmentation.” FEIS at R-141. EPA also suggested consideration of the use of full span bridges and track elevation in certain areas. *Id.* at R-143,144. The agency commented that,

absent substantial efforts to avoid and minimize project impacts, the construction and operation of a rail line extension to Port MacKenzie may result in substantial and unacceptable impacts on aquatic resources of national importance (ARNIs). We believe that measures such as elevating portions of the rail line are practicable and should be considered where appropriate to minimize impacts to aquatic resources. We question whether an alternative without such measures could be demonstrated as being the LEDPA in compliance with the Guidelines.

Id. at R-145. Because of these concerns EPA objected to the DEIS based on insufficient information. *Id.* at R-141.

In response to these and other comments the STB did consider additional alternatives but failed to credibly and fully consider the use of additional bridges, elevated segments and other measures to reduce harm from loss of connectivity and habitat fragmentation. See comments on bridging in Section 3 below. The Corps has an independent responsibility to evaluate these and other alternatives not included in the FEIS and to assure that all practicable alternatives have been evaluated prior to making a final determination.

1. The Public Notice and the FEIS fail to give the public adequate information regarding mitigation of adverse impacts.

The PN is insufficient and illegal because it does not provide the public with sufficient information to adequately assess and develop meaningful comments on the proposal. Specifically, the PN fails to provide any detail on the applicants’ proposed mitigation of presumed unavoidable adverse impacts of the project. Corps regulations require a PN to include “the amount, type, and location of any proposed compensatory mitigation, including any out-of-kind compensation, or indicate an intention to use an approved mitigation bank or in-lieu fee program. The level of detail provided in the public notice must be commensurate with the scope and scale of the impacts.” 33 C.F.R. § 332.4(b)(1). Because the ARRC’s proposed impacts to over 140 acres of wetlands and other waters are “among the most severe environmental impacts covered by [the 404(b)(1)] Guidelines,” the associated PN should contain a detailed assessment of how those impacts will be mitigated.

In its PN, the Corps merely quantifies the total number of mitigation acres needed to offset filled

acres and states that “the applicant proposes to compensate using preservation, restoration, establishment or enhancement.” PN at 2; Mitigation Statement at 3. In other words, the PN lists the various types of compensatory mitigation available to any applicant but fails to outline site-specific mitigation plans or the applicant’s intentions to use a mitigation bank. “Key components of a sound mitigation plan are not provided such as the criteria that will be used for site selection, how proper hydrology will be establishment [established] and maintained, any requirements for the presence of hydric soils, and the methods of vegetation establishment (Mitsch and Gosselink 2007, Fennessy et al 2008). Thus, while the plan states that mitigation will be carried out, it does not address the methods by which it will be accomplished, nor the means to judge the likelihood of success (i.e., performance standards) and the establishment of ecosystem functions at the mitigation site.” Ex. 3 at 7. For these reasons, the public has no way of determining if the impacts of ARRC’s project will be sufficiently mitigated.

In addition, key decisions on how to preserve the hydrology of the area are not explained in the PN or FEIS but rather delayed until “final permitting and design.” FEIS at 5.4-4. The PN shows that much of the information needed to preserve flow and make conveyance sizing determinations has still not been collected. Project Plans at 6. Also see detailed comments on hydrology in Section 4.C. Thus, the public is further left out of the decision making process.

The Alaska District Regulatory 2009 Guidance Letter No. 09-01 (“RGL”) states that a 404 application that does not contain any information on sequencing and compensatory mitigation is incomplete. If that is the case, the Corps must request more information from the applicant. RGL at 1. The RGL also details, over many pages, the types of information concerning compensatory mitigation the Corps needs to inform its decision making process. RGL at 2-6. None of this information is available in the PN or in the FEIS and is presumably not available to the Corps.¹ Without this and other information, the Corps simply has inadequate information to make a decision on the project. Citizens are also left without key information needed to meaningfully comment on the project.

Likewise, the FEIS fails to meet NEPA requirements. NEPA regulations require that environmental information must be available to citizens and public officials before decisions are made and before actions are taken. 40 C.F.R. § 1500.1(b). The OEA’s FEIS does not explain how loss of wetland structure and function will be mitigated, but says only that mitigation measures could include utilizing a “wetland bank” or creating new wetlands. FEIS at 4.5-27. Again, such a cursory explanation is insufficient to allow for meaningful analysis of the project’s impacts and public participation.

Additionally, in EPA’s comment letter on the FEIS, EPA states, “we are concerned that the EIS does not appear to include the ARRC’s current project proposal (with the terminus reserve located along the Mac East Variant and an alignment that does not extend as far west as the STB preferred route) as presented in recent ARRC written materials and at a recent ARRC open

¹ May 2011 phone discussion between Corps staff and Margaret Janes of ACEE indicated the entire record for the project was either included in the FEIS or PN online with the exception of field notes/trip sheets on wetlands and other waters assessments.

house.” Ex. 6 at 2. This difference undermines the validity of the FEIS. Also, there are differences in the preferred routes shown on G-4 of the FEIS and the Project Location Map Figure 1 of the PN that should be explained.

A 2009 federal court decision involving a citizen challenge to the public notice procedures employed by the Corps’ Huntington District explains that:

mitigation is the centerpiece of a determination of no significant degradation and/or a FONSI [finding of no significant impact] issued with respect to a § 404 permit for a mountaintop mine. For, it is site-specific mitigation measures that allow the Corps to: (1) issue such determinations, and (2) issue a permit without further environmental review. *Id.* The Court therefore agrees with Plaintiffs that a public notice that contains no substantive information on mitigation is deficient under NEPA.

OVEC v. U.S. Army Corps of Engineers, 674 F. Supp.2d 783, 809 (S.D. W.Va. 2009) (emphasis added), Ex. 1 at 43. And further,

Consequently, a public notice containing no substantive information on mitigation violates the CEQ Guidelines related to agency requirements for public involvement and deprives the public of its procedural right to an adequate opportunity to participate in the permit evaluation process. *See, e.g., Block*, 690 F.2d at 770,771; *Hodges*, 300 F.3d at 438; *Nat’l Audubon*, 442 F.3d at 184.

Id. at 44. And finally,

the Corps failed to comply with its regulatory duties under the CWA, NEPA and the APA because it failed to provided notices that either (1) provided a clear understanding of the nature and magnitude of the [applicants’] proposals, or (2) allowed the public to be involved to the extent practicable in the permit process.

Id. at 53.

We include by reference the entire decision as Ex. 1.

Because the current PN does not provide sufficient information regarding compensatory mitigation for the public to meaningfully participate in the permitting process, the Corps must add this information and re-notice the proposed project.

2. The project is unnecessary and is not in the public interest.

The purpose and need for this project are highly suspect, and there has been no definitive showing that a rail link to Port MacKenzie serves an important public or private function that cannot be met elsewhere. EPA states this concern in comments on the FEIS, “[w]e believe that the final EIS does not provide the project need and a clear demonstration for public necessity, including a preliminary cost-benefit analysis.” Ex. 6 at 2. First, Port Mackenzie has no known

contracts in place to demonstrate expanded Port usage, and for the reasons cited herein, it's unlikely the Port will ever see much use.^{2,3} Second, Port Mackenzie is plagued by heavy icing conditions for approximately three-four months each year, and as a result, it will be very difficult to obtain contracts for commodities shipments based on intermittent shipping schedules. Third, there are serious questions about navigational and shipping safety on and around the Port MacKenzie dock, where currents up to 6 knots are known to wreak havoc on large bulk vessels. Finally – and perhaps most importantly - there are obvious, known, existing alternatives to the Port MacKenzie rail link – including the Port of Anchorage and the ice-free Ports of Whittier and Seward – all of which are serviced by existing rail lines. In fact, Anchorage Port Director and former Alaskan Governor Bill Sheffield addressed serious concerns about duplication of resources and unnecessary construction and operational costs for the Port MacKenzie rail link.⁴ Remarkably, in discussions with the Alaska Railroad Corporation, the Port of Anchorage “learned that in fact it is more expensive to ship to and from Port Mackenzie than from Port Anchorage despite the geographical distance savings. Briefly stated, although Port of Anchorage is 35 to 40 miles closer, the railroad will essentially be adding a dead-end 70-mile spur resulting in increased maintenance costs.” Ex. 5 at 1. Accordingly, there is no compelling public or private need to spend hundreds of millions of tax dollars to construct a rail link that will destroy important wetlands and salmon habitat especially in light of the fact that a reasonable alternative to the existing proposal, that of expanding the Port of Anchorage was not considered.

We include, by reference, comments on the draft EIS from the Port of Anchorage dated May 10, 2010 as Exhibit 5.

² See., e.g., Letter from Bill Sheffield, Port of Anchorage, to David Navecky, Surface Transportation Board, May 10, 2010, p. 3 (citing low use current and projected use of the Port MacKenzie dock facility).

³ The Mat Su Borough may wish to proceed with this project under a “build it and they will come” philosophy, but that rationale fails to meet the mandates of NEPA and Clean Water Act section 404. To understand the management approach embraced by the Mat Su Borough, it's informative to look at other projects it is currently overseeing. For example, over \$85 million in public funds have been directed toward construction of the Mat Su Borough “Fast Ferry,” yet the vessel has no business plan, no place to dock, and no ridership. See <http://www.adn.com/2011/05/08/1852124/mat-su-ferry-two-ports-zero-landings.html>. Similarly, the Mat Su Borough's new Goose Creek Correctional Facility has been hampered with cost overruns and the operational costs will be so high some state legislators are saying it should never be opened. See <http://www.adn.com/2011/03/02/1733173/mat-su-prison-under-fire-maybe.html>. As a result, it's important to view the proposed rail link to Port MacKenzie through a lens that recognizes the Mat Su Borough's propensity to pursue large public spending projects without the requisite information and follow-through needed to ensure they are necessary and publicly useful.

⁴ See Letter from Bill Sheffield, footnote 2.

3. The Corps must consider practicable alternatives to the proposed project that would have less adverse impacts on the aquatic ecosystem.⁵

We include by reference in their entirety comments by Ed Landreth, Railroad Engineer, as Exhibit 8.

Even if the Corps erroneously supports a build alternative, the agency must consider other less environmentally damaging alternatives. The 404(b)(1) Guidelines mandate that “no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. § 230.10(a). The Corps defines a practicable alternative as an alternative that “is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” *Id.* at § 230.10(a)(2). Where the project “does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not “water dependent”), “practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise.” *Id.* at § 230.10(a)(3). Moreover, “all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.” *Id.*

The ARRC’s project is not dependent upon access or proximity to or upon siting within wetlands. The Corps states that the purpose of the project is to “provide rail service to Port MacKenzie and connect the Port with the existing ARRC main line, providing Port MacKenzie customers with rail transportation between the Port and Interior Alaska.” This basic purpose can be accomplished without impacting wetlands. *See* Preamble, 45 Fed. Reg. at 85,339. Because the project is not water-dependent, “it is reasonable to assume there will generally be a practicable site available upland or in a less vulnerable part of the aquatic ecosystem.” *Id.*

The FEIS and the Corps’ PN documents discuss a range of alternative routes for the rail line that would impact differing amounts of wetlands and other special aquatic sites. However, beyond comparing the impacts of the proposed alternative routes, the Corps has not considered whether other practicable alternatives exist that would have less adverse impacts on the aquatic ecosystem. The Corps must perform this analysis before it can properly identify the least environmentally damaging practicable alternative (LEDPA).

First, the Corps must consider modifications to the proposed route that would lessen impacts to special aquatic sites. Although the route chosen could be the least environmentally damaging of those proposed, the Corps still must evaluate if relatively minor adjustments to the route to avoid

⁵Many of the concerns raised in this section could also be viewed as failures to minimize the adverse impacts of the chosen alternative. “[N]o discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” 40 C.F.R. § 230.10(d). Regardless of whether they are framed in terms of practicable alternatives or practicable minimization efforts, the substantive failures are the same.

impacts to special aquatic sites represent practicable alternatives. The FEIS and the PN documents do not contain any analysis of the possibility of such modifications, but rather simply compare the impacts of the various proposed routes. Indeed, the FEIS acknowledges that “[f]inal decisions regarding minor route adjustments and other measures to minimize wetland impacts would be made during permitting and final design.” FEIS at 23-87. Because the rail line need not be sited in special aquatic sites to achieve its basic purpose, such alternative route adjustments are “presumed to be available, unless clearly demonstrated otherwise.” The Corps has not performed sufficient analysis of the practicability of potential route adjustments that would avoid impacts to special aquatic sites and thus cannot determine if the proposed route is the LEDPA.

Second, the Corps must adequately consider alternative methods of constructing the rail line through any unavoidable special aquatic sites that would reduce the project’s adverse impacts. In its comments on the DEIS, EPA suggested that “measures such as elevating portions of the rail line are practicable and should be considered where appropriate to minimize impacts to aquatic resources. We question whether an alternative without such measures could be demonstrated as being the LEDPA in compliance with the Guidelines.” FEIS at 23-86. EPA reiterates these points in comments on the FEIS stating, “we also disagree with the STB’s conclusions made in response to our earlier comments that elevating portions of the rail may not be reasonable, particularly since portions of the line are proposed to be elevated. We understand that practicability was not considered in this determination but such alternatives will need to be considered in the 404(b)(1) analysis.” Ex. 6 at 2. EPA also expresses continued concerns about the “absence of analysis of an alternative without a full-length permanent access road.” *Id.* A rail line including elevated sections crossing sensitive wetland areas would have less adverse impacts to the aquatic ecosystem than the chosen alternative and is “presumed to be available, unless clearly demonstrated otherwise.”

The Corps has not adequately considered such alternative rail line construction methods to determine if they represent practicable alternatives. Although the FEIS briefly discusses the increased cost of elevating portions of the rail line, its consideration is insufficient for the Corps to conclude that elevation of certain stretches is not a practicable alternative.⁶ The FEIS compares the cost of constructing an elevated rail line “in general” versus the cost of constructing a standard rail line at ground level and concludes that the elevated rail line is significantly more expensive. FEIS at 23-89, 4.5-27. Neither the FEIS, nor the PN documents, however, analyze whether those cost estimates apply to construction in wetland areas. The Corps has not considered the possibility that construction of a standard rail line through a wetland would be significantly more expensive than construction in a non-wetland area because of the additional preparatory work required, the cost of measures to protect the wetland during construction, and other additional expenses. *See infra* notes 7–10 and accompanying text. Thus, the cost of elevating the rail line may be much closer to the cost of standard construction when

⁶ Indeed, in responding to EPA’s comments the OEA acknowledged that the FEIS would not likely contain sufficient information for the Corps to make its permitting decision. The agency noted that “it is not always feasible to have available the level of project detail necessary to meet final permitting requirements. That is especially true for long, linear projects like this one with multiple alternatives.” FEIS at 23-87. And, “EISs are not required to contain permit-level information; such information can be developed later.” *Id.* at 23-88.

considered in the context of specific wetland crossings. The Corps needs to undertake this analysis before it can identify the LEDPA.

Moreover, the Corps has not undertaken sufficient study to determine the practicability of an alternative including elevated rail lines over the most important and vulnerable stretches of wetlands. Undoubtedly, the Corps may consider cost when assessing practicability of an alternative. 40 C.F.R. § 230.10(a)(2). However, “[t]he mere fact that an alternative may cost somewhat more does not necessarily mean it is not practicable.” Preamble, 45 Fed. Reg. at 85,339. In this case, the FEIS merely compares the difference in cost per foot of elevated construction versus ground level construction. There is no analysis of specific sites where the rail line could be elevated to avoid the most serious impacts to the aquatic environment. Nor is there consideration of whether the increased costs of elevation would prevent the ARRC from achieving its basic project purposes. The Corps must undertake these considerations before it can determine the LEDPA. *Friends of the Earth v. Hall*, 693 F.Supp. 904, 946 (W.D.Wash. 1988) (overturning Corps’ Section 404 permit in part because “the Corps failed to explain why a cost differential of whatever size renders the upland alternatives impracticable...” and it “does not explain why additional funds would not be available.”).

Further, the PN and the FEIS do not provide adequate survey or engineering information in order for the public or the Corps to adequately evaluate all practicable alternatives. Ex. 8 at 1. For example, neither the FEIS nor PN include “sufficient information to estimate or analyze the cost of embankment verses bridging across the wetland areas. To make this analysis the project plans would need to show the existing ground line profile, the proposed railroad subgrade profile, location of the affected wetland areas, soil exploration boring logs with foundation analysis, location of the embankment barrow areas, and the location and length of the haul roads. The project plans as submitted by the Corps of Engineers’ only show one of the six required parameters that would be required to make this analysis.” *Id.* at 3-4. Thus, the OEA’s independent verification of the applicant’s claim stated in the FEIS that trestle construction is “infeasible” is baseless. FEIS at 23-89. Without such information, the Corps cannot properly determine the LEDPA.

In fact, in some cases bridging may be less expensive than embankment. In a 2007 Geotechnical Reconnaissance Summary of a preliminary study along routes considered at the time, Shannon & Wilson consultants found sections of soft compressible soil from 0 to 15 feet deep in sections along each route. See http://www.portmacrail.com/documents/PR/vol2/vol2_app_h.pdf at 13-33. In order to support the railroad across areas of soft compressible soil, the soil must be either removed to the level of a solid foundation or bridged.^{7,8} Generally, once more than 3 feet of soft compressible soil is found bridging should be considered as a cheaper alternative to standard embankment because of the expense of excavation, finding nearby barrow areas and hauling fill.⁹ Soft compressible soils of depths greater than 3 feet are often found in wetland areas.¹⁰

⁷ Various methods of bridging could be considered.

⁸ Personal communication between Ed Landreth Railroad Engineer and Margaret Janes of the Appalachian Center for the Economy and the Environment, July 12, 2011.

⁹ *Id.*

¹⁰ *Id.*

In addition, for any alternative, the location of embankment barrow areas, staging areas and haul roads for the delivery of the fill material “can have a significant environmental, economic, and social impact and the environment constraints need to be addressed prior to any decision.” *Id.* at 3. Remarkably, the FEIS states that barrow areas “would be identified by the Applicant during final design and permitting.” FEIS at 4.2-11. The public and the Corps need this information to adequately comment on and to make credible decisions on the project alternatives.

4. The Corps fails to adequately assess project impacts to wetlands and other aquatic resources.

In order to decide whether discharges will cause or contribute to significant degradation of the affected waters, the 404(b)(1) Guidelines require the Corps to determine “the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms.” 40 C.F.R. § 230.11(e). “In determining compensatory mitigation, the functional values lost by the resource to be impacted must be considered.” EPA/Corps Memorandum of Agreement (Feb. 6, 1990), Section II.

In comments on the project, EPA states that “the draft EIS contains very limited information regarding wetland function and this information is not site- specific. Additional, detailed, site-specific information regarding wetland type and functions will be necessary to identify the LEDPA and establish that all practicable steps have been taken to minimize impacts to aquatic resources.” FEIS at R-145. While the FEIS adds some segment-specific data, it fails to give site specific information on the wetlands that will be filled or impacted by the alternative routes. Further, EPA continues to express “serious concerns regarding the project’s potential impacts to waters of the U.S,” in comments on the FEIS. Ex. 6 at 2. In order to comply with NEPA and the 404(b)(1) Guidelines, the Corps must provide and consider sufficient site-specific information on wetlands functions in areas impacted by its permit decision.

A. The wetlands assessment methodology used is flawed.

We include by reference, in their entirety, comments by wetlands expert Dr. Siohban Fennessy, as Exhibit 3.

In order to help make a determination about existing wetlands structure and function, the Corps, the OEA and the applicant used *A Rapid Procedure for Assessing Wetland Functional Capacity* (Magee and Hollands, 1998; HDR, 2008) to classify wetlands as low, medium or high functioning. FEIS at 4.5-1. The applicant also used the USACE delineation manual in conjunction with site visits and other tools to determine the amount and types of wetlands that would be impacted. *Id.* Based on those assessments and the Alaska District Regulatory Guidance Letter No. 09-01 (“RGL 09-01”) the Corps determined the amount of compensatory mitigation necessary to offset significant impacts.

The Corps’ use of the Magee Hollands functional assessment tool was inappropriate in part because of the availability of a more recent and rigorous assessment method (based on data

collected in the region) that the Corps helped sponsor (the Wetland Functional Assessment Guidebook for the Cook Basin Ecoregion; Hall et al. 2003). Ex. 3 at 3, 7-8. As explained by wetlands expert Dr. Fennessy, “[a]ssessing the condition and functions of wetlands is a cornerstone of mitigation implementation, however no explanation or rationale is provided as to why one method was selected over another.” *Id.* at 7-8.¹¹

Dr. Fennessy compares and contrasts the Magee Hollands and HGM approaches, “the Magee Hollands Wetland Assessment Method (1998) was originally developed over 25 years ago (1985) in order to assess wetland functions in nontidal wetlands in the glaciated northeastern U.S. In the original method, functions are assessed based on an evaluation of site elements and a series of steps that lead to weightings of site observations and an assessment model that describes wetland function using a qualitative approach. Generally, this type of method can lack robustness and repeatability, two hallmarks of a sound assessment method (Fennessy et al. 2007). Because the method was not developed for this region and its appropriateness has not been demonstrated, any conclusions based on its results are necessarily weak.” *Id.* at 8.

“The HGM-based method (Hall et al. 2003) was developed specifically for [the Cook Basin] region of Alaska, based on detailed data from reference standard sites and reference sites, and field tested and revised based on data collection in the field. It appears a much more specific and extensively tested method for the assessment of ecosystem function in these wetlands.” *Id.* at 7.

The HGM and the Magee Hollands approaches, however, are similar in that neither has been validated through direct quantitative measure of wetland functions (See Magee Hollands description above). Dr. Fennessy discusses why that is problematic:

While the HGM method appears better suited than the Magee-Hollands method in evaluating wetlands in the Cook Inlet Basin (at least for slope and organic flat systems), the HGM approach to assessment can be problematic because typically the models used to assess function have not been verified with empirical data documenting actual levels of function in wetlands. For this reason, HGM models do not directly measure functions as is sometimes claimed, rather they work by using structural data to infer function. Without testing this assumption it is unclear what the HGM method is measuring. For instance, there is recent evidence that structural measures do not necessarily indicate function. In a study linking structural characteristics to in-depth measures of ecosystem function, Hossler et al. (in press) demonstrated that biogeochemical processes in created wetlands are not reflected by structural attributes. This suggests that there could be negative consequences when HGM methods are used to assess wetlands and the adequacy of mitigation projects to compensate for wetland impacts.

Ex. 3 at 8-9.

¹¹ Note: in a phone conversation May 2011 with Margaret Janes of the Appalachian Center, Corps staff indicated that the Corps did not have an approved wetlands assessment protocol but rather allowed applicants to choose one from three or four options allowed by the Corps.

The National Research Council also states concerns about the failure of structural additions to restore function.

The establishment of wetland structure does not necessarily restore all the *functions* of a wetland ecosystem. For example, denitrification (an ecological process that benefits water quality) requires the presence of nitrate supply, a labile carbon source, anaerobic conditions, and microbial activity. Thus, a site that has wetland structure in terms of its vegetation assemblage might not provide the function of denitrification if these four requirements are not met.¹²

In addition, there are no data or calculations shown in the FEIS or PN as to how Magee Hollands was used or how functional assessments were done making it extremely difficult to evaluate the details of the wetlands assessment.

Because Magee Hollands is an inappropriate tool for measuring wetland functions in Alaska or elsewhere, an adequate baseline of existing wetlands structure and function was not done. Without an adequate baseline of existing wetlands structure and function it is impossible to compensate for the wetlands that will be filled or establish permit performance standards that assure wetland structure and functions that are lost will be replaced. This deficiency must be rectified in order for the Corps to make a determination of mitigation needs.

In addition, while the applicants wetlands assessment shows that only 0.7 acres of wetlands are categorized as high functioning (Mitigation Statement at 3), the FEIS contradicts this assessment, stating that “[w]etlands in the study area are very highly functional because they are predominantly intact, undisturbed systems (Herrera Environmental Consultants, 2008). FEIS at 4.5-5. Table 45.5 of the FEIS shows that 96% of the wetlands in the rail line footprint (the 200 foot ROW) are high functioning with respect to the export of detritus, 87% contribute highly to groundwater discharge, 99% are high functioning for wildlife habitat and support of vegetation diversity, and 100% for the modification of water quality. Further, in the opinion of wetlands expert, Dr. Siohban Fennessy, “[g]iven the high quality nature of the environment in the Knik Arm Inlet region, it strains credulity that only 0.7 % of the wetlands fall into Category 1 while 76% fall in the two lowest categories (III and IV).” Ex. 3 at 9.

In fact, according to Dr. Fennessy some wetlands in the area are so valuable they should be avoided entirely.

The presence of particularly sensitive wetlands should be avoided altogether since their loss cannot be mitigated for. This includes the Goose Creek Fen and other peat-accumulating wetlands. Not only are these extremely valuable as a unique habitat type, peatlands also store enormous quantities of carbon making them important in regulating the global carbon cycle (Gorham 1991, Zedler and Kercher 2005). The Big Lake South

¹² Committee on Mitigating Wetland Losses, Board on Environmental Studies and Toxicology, Water Science and Technology Board, National Research Council; Compensating for Wetlands Under the Clean Water Act, 2001, p. 27.

Bank Plan Su-Knik Wetland Mitigation Bank should also be avoided. Mitigation banks by definition exist to compensate for earlier or on-going wetland losses, and are expected to be maintained in perpetuity.

Ex. 3 at 4.

The inconsistencies between the Magee Hollands results and statements in the FEIS concerning the quality of impacted wetlands further erode confidence in the Corps' functional assessment. The Corps must adequately assess the baseline wetland structure and function before making a final decision on the proposed project.

B. The Corps fails to quantitatively assess and mitigate for significant impacts to wetlands outside the footprint of the fill.

In addition, the FEIS and the Corps fail to quantitatively assess or mitigate for impacts to wetlands and other waters outside of the 200-foot right-of-way ("ROW") that will capture the rail spur, access road and associated areas. The FEIS says that "[i]mpacts outside of the rail line footprint cannot be quantitatively assessed, and would depend on the type of wetland crossed, the type and size of drainage structures, value of nearby waterbodies and habitat, and proposed avoidance, minimization, and mitigation measures (see Chapter 19). When possible, these impacts are discussed in general terms." FEIS at 4.5-10. It is not sufficient to simply say that an assessment cannot be done. NEPA prohibits federal agencies from taking actions that will significantly affect the environment without fully considering the impacts of those actions. Before issuing a CWA § 404 permit, the Corps must determine that direct and indirect impacts from the discharge of dredged or fill material will not cause significant degradation to the waters of the United States. 40 C.F.R. §§ 230.10, 230.11. If this requires the gathering of additional information, the agency must gather and analyze that information. "[T]he very purpose of NEPA's requirement that an EIS be prepared for all actions that may significantly affect the environment is to obviate the need for [] speculation by insuring that available data is gathered and analyzed prior to the implementation of the proposed action." *Found. for N. Am. Wild Sheep v. U.S. Dep't of Agric.*, 681 F.2d 1172, 1179 (9th Cir. 1982). 40 C.F.R. § 1502.22 sets out an agency's obligations when preparing an EIS in the face of incomplete or unavailable information.¹³ Only if an agency makes a finding that the incomplete information "cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known," can it proceed to analyze potential impacts in the EIS in the face of incomplete information. 40 C.F.R. § 1502.22(b); *Or. Evntl. Council v. Kunzman*, 817 F.2d 484, 495-96 (9th Cir. 1987). Therefore, to fulfill its responsibilities under NEPA and the 404(b)(1) Guidelines, the Corps must assess the full scope of the impacts of ARRC's project in making its final decision.

The FEIS further states, "the project could also indirectly affect wetlands adjacent to and within the ROW by fragmenting wetland vegetation and hydrology. . . . Because many wetland

¹³ The Council on Environmental Quality (CEQ) regulations implementing NEPA are "mandatory regulations" binding on all federal agencies. *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979); 40 C.F.R. § 1500.3.

functions depend on the size of the wetland or the contiguous nature of the wetland with other habitats, clearing and filling a wetland could lower the ability of adjacent wetlands to perform functions that depend on size or an unfragmented connection to a waterbody.” FEIS at S-20. Moreover,

When the water table of a wetland drops because of decreased inflow or increased outflow, there can be changes in vegetation and degradation of the peat layer, which can ultimately result in degradation of the wetland and reduction or elimination of its functions. Rail bed embankments could fragment normal sheet flow through wetlands, leading to the creation of surface impoundments that would decrease water circulation and lead to water stagnation. Decreased water circulation also results in increased water temperature, lower dissolved oxygen levels, changes in salinity and pH, the prevention of nutrient outflow, and increased sedimentation (USEPA, 1993). Rail beds and road beds could create impoundments even with installation of properly placed and maintained culverts.

Once installed, even a properly sized culvert can become an ice trap because its location within an embankment exposes the culvert to maximum cooling conditions (Freitag and McFadden, 1997). This is of special concern in the study area because weather conditions are subject to alternating periods of freeze and thaw, which can cause ice to build up in culverts.

FEIS at 4.5-8–4.5-9.

Yet despite numerous statements in the FEIS about potential harm outside of the ROW, the FEIS in almost every case fails to specifically quantify or come to any conclusions about the significance of such harm. The Corps in its mitigation statement also fails to assess or mitigate for these impacts. PN Mitigation Statement at 3. The failure to consider these impacts is particularly significant because over 99% of the wetlands in the study area are connected to waterways or other wetlands. FEIS, at 4.5-2.

As Dr. Fennessy explains:

A critical issue that is not fully addressed in the assessment of impacts is the associated hydrological changes that will result from construction of the railroad bed. The hydrological impact of railroads on streams, floodplains and wetlands are commonly related to the creation of a physical barrier and the resulting lateral disconnections that break the hydrological links between a river, its floodplain, and wetlands in the surrounding landscape. This has a significant negative impact on the ecological functions of aquatic ecosystems that otherwise act as an integrated hydrologic system, with consequences to biodiversity, riparian habitats, fish movements and fish habitat use, and the provision of stream and wetland ecosystem services (Blanton and Marcus 2009). In essence, hydrological connectivity is critical for the exchange of materials that lead to aquatic ecosystem function, including the exchange of sediment, energy, and organisms (Nadeau and Rains 2007, Mitsch and Gosselink 2007). Structures such as railway

embankments can modify local drainage and lead to serious changes in the wetland habitat.

Blanton and Marcus (2009) divide the impacts of railroad and road beds into two categories: those from crossings (bridges, culverts), and the lateral disconnection that can result from the construction of road beds (grades) and levees. Roadbeds act, in effect, as a lateral dam when they are placed adjacent to rivers and/or in wetlands. Consequences can include:

- altered fluvial processes such as flood and flow pulses;
- reduced exchange of water, biota and sediment between rivers and their floodplains that result from fluvial processes;
- over the long term, changes may occur in the meandering of streams and a consequent reduction in habitat value due to the loss of side channels, backwaters and oxbow lakes.

Ex. 3 at 5-6. And further,

Hydrology is the foundation for wetland ecosystem structure and function, affecting species composition, biogeochemical cycles and primary productivity, among other ecosystem characteristics (Mitsch and Gosselink 2007). Human actions that alter floodplains, rivers and wetlands, modify their functions and their physical, hydrologic and biotic character. A full assessment of project impacts cannot be accomplished without an explanation of the wetland's hydrology and the proposed alterations to it. The EIS states that hydrological impacts will be minimized through the installation of numerous culverts to provide for 'uninterrupted water flow'. While culverts may lessen impacts, they are unlikely to convey surface sheet flow or lateral groundwater movement. Mitigating for wetland losses requires an understanding and evaluation of hydrologic processes that maintain their characteristic structure and the functions and services they provide (Bedford 1996).

Id. at 5.

Thus, without in-depth knowledge of wetlands hydrology, a valid assessment of impacts and necessary compensatory mitigation cannot be done. The FEIS states in Voluntary Measure 5 that, "[t]he Applicant shall design and construct the proposed rail line in such a way as to maintain natural water flow and drainage patterns to the extent practicable. This shall include installing bridges or placing equalization culverts through the embankment as necessary, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains and wetlands." FEIS at 19-3. The FEIS does not demonstrate how such measures would maintain hydrologic functions. The FEIS also requires other voluntary measures related to flow to the extent practicable but does not assure that hydrology will be sufficiently protected to prevent significant degradation of the aquatic environment. *Id.* at 19-3 to 19-13. Given that "[r]ail beds and road beds could create impoundments even with installation of properly placed and maintained culverts," FEIS at 4.5-9, the inclusion of such vague requirements cannot obviate the need to comprehensively assess the hydrological impacts of the proposed project.

C. The FEIS and the Corps fail to assure that existing hydrology will be maintained and protected

We include by reference in their entirety comments by Dr. John Tyner, hydrologist, as Exhibit 7.

In both the FEIS and PN, the documents describing the hydrological and associated environmental impacts of the proposed routes are preliminary to the point of having little value. In many cases, the planning and design of water conveyance structures have not yet been conducted, making an evaluation of the potential hydrological outcomes impossible. Ex. 7 at 5. “To make a fair analysis against not building the rail line” the Corps must carry out a reasoned determination “of the real environmental damage that will occur” and effectively mitigate the damage. *Id.* at 5-6. It has not done so. *Id.* at 6. The FEIS states that drainage structures will be determined by the applicant during the final design process. *Id.* at 4, FEIS at 4.2-2. The PN and FIES’s failure to include details that will significantly affect the magnitude of the impacts of the project prevents the Corps from making a reasoned decision on the permit application and effectively cuts the public out of the decision making process.

For example, “[a]lthough 100 Culverts have been sized for the preferred route, the background information used to size said culverts was not provided, and therefore their efficacy towards eliminating the negative hydrological effects of the rail line cannot be determined.”¹⁴ Ex. 7 at 3. From review of the Project Plans Culvert Detail Table, it appears that for many culverts, pipe diameter which is dependent on other information has been chosen but the information needed to determine pipe diameter is either categorically omitted or is often shown as not available (shown as XX). *Id.* The project plans show a “predominate use of 24[” inch] diameter culverts. The use of a 24[” inch] diameter culvert for a wetlands equalization culvert is misguided as culverts within wetland area are susceptible and prone to plugging and are difficult to clean. A culvert with a diameter that would allow an average man to work within to clean debris should be selected. Probably a single span bridge or 4’ x 8’ concrete culvert would mitigate the possibility of the equalization culvert becoming plugged with debris and in addition would provide a limited reduction in the total embankment placed in the wetland lands.” Ex. 8 at 2.

“Further, no alternative plan, other than culverts, was presented. So the public has no evidence as to whether the culverts might work, or if another approach (e.g., an elevated line), might be a more suitable approach.” *Id.* “Elevating the rail line above the wetland, although likely more costly, would avoid many of the hydrological problems...” Ex. 7. at 4.

Wetlands are hydrologically sensitive and the hydrology can easily be disrupted. *Id.*

Wetlands are difficult places to place significant structures while maintaining environmental integrity. Wetland surfaces are generally very compressible, and they are flat with poor drainage. The proposal amounts to removal of the compressible surface

¹⁴ Note that the FEIS only addresses 19 culverts versus the 100 culverts shown in the PN. FEIS Summary at 2.

media and replacement with more stable media and ballast, forming a raised rail bed in a direction generally perpendicular to the hydrologic gradient. This rail bed therefore forms an impoundment within the wetlands for both surface flow and shallow sub-surface flow. To allow water flow across the impoundment, culverts would be placed periodically. This in essence cuts the large original wetland into two smaller wetlands connected serially by multiple culverts. Given that the entire basis for wetland management is the control of the probabilistic distribution of inundation depth (Somes and Wong, 1997), simply placing multiple corrugated pipes to connect the two sides of the rail line is an overly simplistic approach.

Id. at 3-4.

Information on design for fish crossings is similarly flawed.

There is no information pertaining to the specifics of the sub-watersheds necessary to validate the sufficiency of the water crossings in terms of hydraulic failure, much less whether the resident and transient fish will be satisfied with the hydraulics of the situation. One would require the sub-watershed data (watershed area, annual precipitation, %pond, slope, etc.) to estimate: peak flows, low flows, slopes of culverts, etc. This information simply isn't provided so I cannot validate whether the fish crossings would have a good chance of success or not.

Id. at 5.

Without additional quantitative hydrological data beyond the predominantly qualitative data in the FEIS or PN, neither the Corps nor the public can adequately assess hydrological impacts or determine the adequacy of proposed protective measures.

The Corps must carefully evaluate impacts to hydrology and other important environmental values both inside and outside of the ROW and the fill areas in order to comply with the CWA's mandate to prevent significant degradation of the aquatic environment and NEPA's requirement to take a "hard look" at both direct and indirect environmental impacts.

D. The Corps and the FEIS fail to adequately assess impacts to fish and the beluga whale.

We include by reference in their entirety comments by Dr. Charles Hocutt, fisheries expert, as Exhibit 4.

Beluga whale

NEPA requires analysis of the direct and indirect impacts of the project. One particularly significant indirect impact of the project that the Corps and other agencies failed to adequately consider is the expansion of Port MacKenzie. The expansion of port activities associated with construction of the rail line will lead to increased shipping traffic to the port with all the

attendant impacts to Cook Inlet beluga whales from such traffic (e.g. air pollution, noise disturbance, dredging, prey disturbance, greenhouse and black carbon emissions, and ship strikes). Concern over impacts associated with port activity was recognized in the Cook Inlet Beluga Whale Conservation Plan. Conservation Plan for the Cook Inlet Beluga Whale (*Delphinapterus leucas*), October 2008, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Protected Resources Division, Alaska Region. The Conservation Plan noted that the potential for impacts to the beluga whale is heightened by actual or potential development activities in Knik Arm, including Port Mackenzie. *Id.* at 55. Specifically, the Conservation Plan recognized the following threats associated with port activities:

- (1) encroachment into lower Knik Arm beluga habitat;
- (2) increased dredging requirements associated with port expansion
- (3) displacement due to increased ship traffic from port expansion;
- (4) increased in-water noise levels due to port construction, port operations and the associated increased vessel traffic;
- (5) high in-water noise due to dredging; and
- (6) ship strikes associated with increased vessel traffic

Id. at 55-57.

The FEIS, however, did not evaluate impacts from increased dredging of the port and gave cursory attention to other impacts from port expansion. The FEIS explained, “[t]he expansion of Port MacKenzie is not part of the proposed action. As discussed in Section 1.3 of the EIS, the MSB plans for expansion of the port facilities are independent of the proposed rail line. OEA consulted with the NMFS [National Marine Fisheries Service] under section 7 of the Endangered Species Act regarding the potential impacts of the proposed rail line on the Cook Inlet beluga whale. OEA prepared a BA to evaluate potential impacts to the Cook Inlet beluga whale that could result from *construction and operation of the proposed rail line.*” *Id.* at 10 (emphasis added). The Corps must not similarly segment the proposed rail line from the expansion of the port and must independently analyze the significance of port expansion and the threats it will pose as a foreseeable cumulative impact. *See, e.g.*, 40 C.F.R. § 230.11(g)(h) (requiring consideration of cumulative and secondary effects of a proposed discharge); *id.* at § 230.30 (requiring consideration of the impacts of a proposed discharge on threatened and endangered species, including the project’s potential for “[f]acilitating incompatible activities.”)

Further, in comments on the Port Mackenzie proposal, Dr. Charles Hocutt, former Associate Dean and Professor of Fisheries and Oceans at the University of Alaska Fairbanks, emphasizes the importance of looking at cumulative impacts:

The proposed railway and the development of Port MacKenzie have been irrefutably linked for 40 years, strategically and economically by the Applicant(s). Thus, there is every rationale to link them environmentally. Viewed as a “whole”, data presented in the

Final Environmental Impact Statement (FEIS) indicate that the Federally-protected Cook Inlet Beluga Whale and its critical habitat will be severely impacted. “Critical habitat” by definition includes environmentally-sensitive areas for the sustainability of the species, including whale-foraging areas for anadromous salmonids.

Ex. 4 at 3.

Further, the 2009 Fort Richardson EIS describes concerns about the expansion of Port MacKenzie:

The new development at Port MacKenzie will add to the disturbance of Cook Inlet beluga whales. Noise levels will increase from construction activities. The build-up of infrastructure at Port MacKenzie will lead to greater vessel traffic on the west side of Knik Arm, with the associated increase in noise and risk of ship strikes and hazardous material releases. The planned floatplane base will increase aircraft noise. There is concern that all of the increases in development within the action area may prevent beluga whales from reaching important feeding areas in upper Knik Arm.”

Ex. 4 at 12. There are existing significant threats to the beluga whale in Cook Inlet and these threats require the Corps to thoroughly evaluate the significance of not only the proposed rail spur but also the additional impacts of the expansion of Port Mackenzie.

Anadromous salmonids and other fisheries

The stock of anadromous fish in the project area is already in decline. As Dr. Hocutt notes:

A clear decline of 38% is depicted for commercial catch of anadromous fish stocks in Upper Cook Inlet from 2004 through 2007, the period for which the Applicant presented data in the FEIS. These data are further corroborated by (a) declining trends in “escapement” data for salmonids for 2004-2007 in the FEIS, i.e., those that have “escaped” harvest, as well as (b) more recent information published in the Federal Register / Vol. 76, No. 69 / Monday, April 11, 2011 for the listing of **Endangered and Threatened Species: Designation of Critical Habitat for Cook Inlet Beluga Whale** that discusses more recent declines in Cook Inlet salmonid stocks.

Id. at 3. Despite those concerning statistics, the FEIS contains no mitigation measures or post-project monitoring of fish stocks to assure that additional impacts to anadromous fish can be identified and prevented.

In addition Dr. Hocutt states concern over an inadequate baseline of “seasonal, annual or decadal trends in fisheries stocks; water quality conditions; and hydrological variability for the study area. The data base also is insufficient to serve as a baseline for assessing impacts from both the construction phase and postconstruction operational phase upon which mitigation measures need to be based. These weaknesses endanger the long-term management and sustainability of the

fishery resources of the study area and the Essential Fish Habitat (EFH) for both anadromous and resident species.” *Id.*

The National Marine Fisheries Service (“NMFS”) in its letter on the DEIS shares the concerns of Dr. Hocutt, explaining:

[s]tudies conducted to identify and characterize fish species (anadromous and resident) should address seasonal relative abundance at all life stages. The aquatic studies should also identify freshwater invertebrates, vegetation, and associated habitat and substrate composition. Any tributary reach intersected by the rail line should be surveyed both up and down stream of the sited reach. For the purpose of this discussion, a reach is defined as 20 times a channel's average width at the specified site....

The final rail alignment should be sited to avoid wetlands, streams, and rivers that bear fish populations (especially anadromous fish). Where preliminary surveys have identified potential wetlands, functional assessments and wetland delineations should be conducted to one half mile of either side of the proposed final alignment. In addition, any fresh water tributaries identified as bearing anadromous fish populations should also have functional assessments and wetland delineations conducted to the same distance on either side of the tributary. These surveys should also include riparian characterization and descriptions of cover such as woodland vegetative condition and viability, where wetlands are not present.

FEIS at A-16. None of the studies suggested by NMFS were carried out and included in the FEIS or summarized in the PN. Without an adequate baseline it is impossible to measure or mitigate harm to anadromous fish and other aquatic resources during the project or post construction.

Although neither the DEIS nor the FEIS include sufficient information to adequately analyze the adverse impacts of the proposed project on fisheries, NMFS described some likely harmful effects in its comments on the Draft EIS:

Historically, railroad construction and transportation infrastructure has negatively impacted fresh water aquatic ecosystem function and balance, causing habitat and wetland fragmentation and altering surface and ground water regimes. These impacts are well documented to have particularly devastating impacts on anadromous fish populations by eliminating fish passages, limiting accessibility to spawning and rearing habitat, and eventually leading to declines in formerly stable and sustainable salmon populations.

FEIS at A-15.

Further, the NMFS discusses concerns over proposed fish crossings, recommending that, “[e]levated bridges, rather than culverts, should be used to span all anadromous tributaries.” *Id.* EPA also states concerns about design criteria for all crossings referenced in the draft EIS, stating that, “crossings designs should be based on site-specific information such as: peak discharge; flow velocities and patterns; channel stability; sediment and bed load transport; flooding regime (50-year to 100-year flood frequency and magnitude; cross-section profiles of channel morphology and water surface elevations, etc. This information should be included in the final EIS.” FEIS at R-147. The FEIS does not contain the additional site-specific information but rather claims that voluntary minimization measures done to the extent practicable will address EPA’s concerns. FEIS at 19-3 to 19-13. Also see above comments on Voluntary Measure-5.

Further, the FEIS:

- a. Presents no plans for long-term monitoring of water quality or biological resources beyond a 1-year post construction period,
- b. Indicates no mitigation measures for assessment of long-term cumulative effects, especially in light of declining fish stocks, shifts in water quality, and regional warming of waterways,
- c. Does not require compensation for either Fisheries or EFH impacted by the stated project, either short-term or long-term,
- d. Does not address stream crossing requirements beyond the 100-year flood in the face of higher precipitation rates and flooding associated with climate warming
- e. Ignores impacts to aquatic invertebrates which are (1) the basis of the food chain for anadromous and resident fish species, (2) critical to the functioning of the ecosystems in the study area, and (3) important as in-stream biological indicators of water quality.

Ex. 4 at 3. All of these deficiencies support the conclusion that impacts to anadromous fish will be significant and that the project would cause a further decline in anadromous fish populations and significantly impact the beluga whale. At the very least, there is insufficient information for the Corps to determine that the proposed project will not have significant adverse effects on the aquatic environment.

5. The Corps and the FEIS have not sufficiently addressed rail crossings

The railroad crossing design does not address a number of problems associated with railroad crossings and fails to:

- a. Provide for Elk, Deer, and other 4 footed animals to cross the railroad right of way. This is normally accomplished with fencing to direct the wildlife to either overpass

or underpass structures provided in the area of existing wildlife trails and are landscaped to provide a natural trail across the right of way.” Ex. 8 at 3.

b. Provide for agricultural crossings of the 6.57 miles of the rail line within the Point MacKenzie Agricultural Project area. Again it would be short signed not to provide grade separations every ½ to 1 mile within this Agricultural area. *Id.* at 3.

c. Provide for low-boy equipment trailers with less than 4” underside clearance and other vehicles’ with a long wheel base and minimal underside clearances. The National Policy as established by the FHWA is not to create new grade crossings. Due to the minimal number of public roads crossed by this proposed rail line the same diligence and care should be provided the traveling public as has been given to wildlife by providing grade separated crossings. Low density road grade separations should be designed for two 12’ traffic lanes with 8’ Shoulders plus a protected pedestrian walkway. *Id.* at 2.

All of these issues should be addressed by the Corps in order to minimize impacts to wildlife, property owners and communities.

6. Cumulative impacts.

In the cumulative impacts section of the FEIS, OEA reviews a brief history of the area and then evaluates “future projects and actions that *could* result in impacts that would coincide in time and space with potential impacts of the proposed Port MacKenzie Rail Extension.” FEIS at O-1 (emphasis added). The FEIS, however, fails to make the required assessment of past harm or existing impacts or their environmental consequences. This omission undermines the entire cumulative impacts assessment because the FEIS qualitatively discusses future or potential impacts without a context of the harm that has already occurred. *OVEC v. Hurst*, 604 F. Supp. 2d 860, 885-86 (S.D. W.Va. 2009) (“Because the Corps failed to conduct any inquiry into the existence of present effect of past actions . . . , the Corps failed to complete a cumulative impacts analysis sufficient to support a FONSI under NEPA.”)

Further, in many other sections of the FEIS, OEA states that cumulative impacts could occur but never reaches a conclusion about whether or not those impacts will occur or are likely to be significant. See e.g. FEIS at O-10 to O-42. The assessment done in the FEIS does not meet the requirements of the NEPA or the 404(b)(1) Guidelines that require the Corps to determine “the nature and *degree* of effect that the proposed discharge *will* have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms.” 40 C.F.R. § 230.11(e) (emphasis added). Thus, the Corps must supplement the work done in the FEIS to meet NEPA and CWA requirements.

7. Compensatory mitigation.

The FEIS determined that even after avoidance and minimization, “each of the build alternatives would result in substantial environmental impacts.” FEIS at OEA-2. The Corps also indicates

that compensatory mitigation is required to offset unavoidable project impacts. PN Mitigation Statement at 3.

The 404(b)(1) Guidelines mandate that “the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions.” 40 C.F.R. § 230.93(f)(1). When assessing the required amount of compensatory mitigation, “[t]he district engineer must require a mitigation ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The rationale for the required replacement ratio must be documented in the administrative record for the permit action.” *Id.* at § 230.93(f)(2). The Corps has utterly failed to comply with this mandate.

In order to determine the amount of mitigation needed for the project, the Corps used the applicant’s functional assessment based on the Magee and Hollands methodology and the RGL Appendix B protocol. Specifically, the Corps used the table in Appendix B that helps set mitigation ratios for different wetland categories. The table is shown below:

Impacted Wetlands or other waters of the US	Preservation	Restoration and/or Enhancement
Low - Category III or IV	1.5:1	1:1
Moderate - Category II or III	2:1	1:1
High - Category I or II	3:1	2:1

The RGL also lists assumptions and considerations that should be used when determining final ratios. In particular, the RGL states, among other things that:

- 1) “Most ratios will be greater than 1:1 because there is a risk of failure associated with many forms of compensation, there is usually a temporal loss (it may take years for a compensation site to develop wetland functions and/or structure equivalent to the impacted wetlands), and preservation and enhancement activities result in net loss of wetland acreage and/or function.”
- 2) “Ratios shown represent a compensatory project that is constructed or protected in perpetuity concurrent with aquatic resource impacts. If there is a time delay in constructing or securing a preservation site the ratios will increase due to temporal loss.”

3) The Corps should “[c]onsider indirect and/or secondary impacts. For example, impacting a small portion of the wetland (< 25% on edge) is less impact than bisecting a wetland in the middle or impacting > 70% of a wetland. RGL, App. B.

The Corps failed to properly consider project-specific impacts when setting the mitigation ratios, resulting in ratios that will not adequately account for losses to wetland function. The Corps’ mitigation statement says that the ARRC will need mitigation of 165.7 acres using preservation or 102.6 acres using restoration or enhancement to offset unavoidable impacts to 101.9 acres of wetlands. In other words, the Corps would accept an overall mitigation ratio of approximately 1:1. This is contrary to the RGL, which says most ratios should be higher than 1:1. Even if the Corps assumed that a mature, fully-functioning mitigation bank would be used for offsets such that there would be no temporal losses in regards to the functions of the wetlands in the footprint of the fill, which ARRC’s Mitigation Statement by no means assures, the mitigation ratios would still be inadequate. This is because the project will bisect many larger wetlands, causing adverse impacts on hydrology and other wetland features and aquatic life beyond the footprint of the proposed fills (as noted in the RGL, by EPA in the FEIS at R-141, and in the comments in Section 3 above). The Corps failure to consider the full impacts of the proposed project on wetland functions renders its mitigation efforts inadequate..

Wetlands expert Dr. Siohban Fennessy explains why the current status of wetlands mitigation justifies much higher mitigation ratios:

Requiring so little mitigation for these proposed impacts is problematic because of the distinct possibility that at least some portion of the mitigation project(s) will not be an ecological success, i.e., they will be unable to meet the no net loss goal. In the U.S., approximately 40,000 acres of wetlands are restored, established, enhanced, and preserved each year to compensate for approximately 20,000 acres of permitted losses. There has been debate whether this compensation leads to the effective replacement of lost wetlands. Recent studies on wetland compensatory mitigation suggest that the proportion of compensation sites that meet administrative and ecological performance standards is quite low (NRC 2001, Environmental Law Institute 2006, Kihlslinger 2008). For example, a recent review found that wetland restoration sites were able to replace only about 20% of the wetland functions that were lost (Turner et al. 2001). And if the mitigation wetland is an ecological success, there may still be problems associated with the temporal loss of wetland functions (NRC 2001). Mitigation is a risky business. In a recent study of the biogeochemical functions performed by wetlands, Hossler et al. (in press) found that, despite the assumption of the no-net-loss policy that wetlands can be created/restored/enhanced to be functionally equivalent to natural wetlands, the loss of biogeochemical functions (e.g., carbon sequestration, nitrogen processing) are not being mitigated. The authors go on to say that this “study suggests that subversion of natural wetlands into restored or created wetlands could have large-scale environmental consequences such as reduced capacity for nitrate removal and C sequestration.” While mitigation wetlands may look structurally like natural sites, there is scant evidence that they function as such.

The trading of natural for mitigation wetlands has been called a ‘losing game’ (Roberts 1993) because when a natural wetland is destroyed, its functions, or ecosystem services are also destroyed and mitigation wetlands are not making up for those losses (NRC 2001, Hossler et al. 2011). Wetland ecosystem processes lead to the flow of services such as water purification, removal of sediment, nutrients and metals from water that flows through them, water storage and flood flow regulation including reduction of peak flows (including in nearby residential areas) and maintenance of stream base flows, the cycling of carbon and nitrogen leading to carbon sequestration and nitrogen processing, organic matter production and export, support of biodiversity, and provision of habitat (including spawning grounds) for fish, birds, mammals, amphibians, invertebrates, etc. (NRC 2001). These are compelling reasons that if the permit is approved, the mitigation ratios should be considerably higher than 1:1.

Ex. 3 at 9-11.

Further, a National Academy of Science report discusses the risks of mitigation saying, “mitigation is not fully successful, and does not compensate for wetlands lost to permitted fills.” 67 Fed. Reg. 2020, 2068 (Jan 15, 2002). The Corps has also admitted as much. “The Corps agrees with the NRC/NAS report and that we must improve the success of mitigation.” *Id.* “The Corps understands that some mitigation projects fail.” *Id.* at 2069. The Corps made similar findings in its draft PEIS on the 2002 NWP. See Ex. 2, at S-17 (“Scientific and other literature generally suggests problems with compensatory mitigation in terms of both permit compliance and ecological success”); *Id.*, at 3-21, 4-14 (the extent to which mitigation replaces lost wetlands and functions “cannot now be ascertained” and it is likely that “mitigation success has not been high”). Thus, the Corps’ proposed near 1:1 mitigation ratio is inconsistent not only with the state of the science but also with past Corps statements. The ratio must be higher to compensate for the risk of failure, particularly considering the additional challenges due to the climate in Alaska.

In addition, the Corps must evaluate and compensate for temporal losses of wetlands structure and function. The Corps’ mitigation regulations “require a mitigation ratio greater than one-to-one where necessary to account for” several factors, including “temporal losses of aquatic resource functions.” 33 C.F.R. § 332.3(f)(2). They also provide that “[t]he rationale for the required replacement ratio must be documented in the administrative record for the permit action.” *Id.* The present record does not meet these requirements.

Even if mitigation works it can take years to mature and reach full functional capacity. The preferred route will permanently fill 64.9 acres of shrub wetlands and 27.6 acres of forested wetlands. PN Att. 2, at 1. According to the National Research Council:

Shrub swamps and forested wetlands are more difficult to create or restore because of the time needed to establish mature woody plants (Niswander and Mitsch 1995; Brown and Veneman 1998; King 2000). The committee observed examples of created wetlands where tree saplings had been planted and appeared to be viable, but forest structural characteristics (e.g., stand density, stand height, basal area per tree) were quite different from those of the mature stands they were intended to replace. Planted trees are usually

small in diameter, so that basal area per tree is small in comparison to natural forested wetlands. The density (trees per unit area) of planted stands is typically higher than that of natural stands because of either permit specifications or the desire to compensate for mortality. Given sufficient time, planted trees would be expected to attain basal areas comparable to those of trees in natural stands, but densely planted stands would continue to differ from natural stands unless thinned.¹⁵

In addition, neither the FEIS nor the PN state the acres of peatlands such as fens and bogs that will be impacted by the project. The FEIS classifies wetlands along the preferred route by vegetation but not by soil type. See for example FEIS at 4.5-12. Some peatlands will be impacted. FEIS at 4.5-3, 4.5-7, 4.5-9. The November 2008 Wetlands Technical Report and Functional Assessment states that peat soils are present in 73 % of the wetlands in the report. See Report at 3-15.

According to the National Research Council “[w]etland ecosystems that require a specific combination of plant types, soil characteristics, and water supply are *difficult to impossible* to create from scratch. Examples include vernal pools, fens, and bogs.”¹⁶ (emphasis added) And further, “[b]ogs occur on acidic organic soil (“peat”) that develops over millennia from the accumulation of plant decomposition remains. In eight studies summarized by Johnston (1991), natural peat accretion rates ranged from 0.1 to 3.8 millimeters (mm) per year, which indicates an extremely slow rate of development.”¹⁷ “The committee concludes that some types of wetlands can be restored and/or created (e.g., freshwater emergent marshes) but that others cannot (e.g., fens and bogs).”¹⁸ Bogs and fens should be avoided but in any event temporal issues related to peatlands must be addressed by the Corps.

These issues add to the tremendous uncertainties of success and require project monitoring and maintenance until the site is stable and has replaced lost structure and function. The ratio must compensate for the temporal issues related to tree growth and the time for complete functional and structural replacement of the wetlands that will be destroyed. In its assessment of mitigation requirements, the Corps has completely failed to consider the difficulties and temporal issues of replacing lost structure and function of special wetlands. This is particularly troubling given that, “[m]ost of the affected wetlands would be scrub/shrub and forested communities” and predominantly peatlands. FEIS at 4.5-10; November 2008 Wetlands Technical Report and Functional Assessment at 3-15. In order to comply with the 404(b)(1) Guidelines, the Corps must require mitigation of the temporal losses of wetland function.

Likewise, the Corps must require mitigation of the temporary impacts that result from rail line construction. The Corps simply states but does not support that there are no long term affects

¹⁵ Committee on Mitigating Wetland Losses, Board on Environmental Studies and Toxicology, Water Science and Technology Board, National Research Council; *Compensating for Wetlands Under the Clean Water Act*, 2001, p 23.

¹⁶ Committee on Mitigating Wetland Losses, Board on Environmental Studies and Toxicology, Water Science and Technology Board, National Research Council; *Compensating for Wetlands Under the Clean Water Act*, 2001, p.24.

¹⁷ *Id.* at 26.

¹⁸ *Id.* at 27.

from temporary construction activities. The Corps has determined that no mitigation is needed for temporary impacts. Even if the damage from construction could eventually be repaired, the Corps must require mitigation for the loss of wetland function that occurs in the interim. The Corps must take into consideration that Alaska's harsh climate and short growing season could readily disrupt revegetation and require a mitigation ratio that accounts for the uncertain duration of "temporary" impacts.

Additionally, the Corps must limit the amount of mitigation achieved through preservation. The Mitigation Statement's "Option 2" would allow the unavoidable adverse impacts of the project to be mitigated entirely through preservation. That option is inconsistent with several Corps policies and regulations. For instance, the preamble to the Corps' mitigation rule says that "[p]reservation is rarely the sole source of compensatory mitigation for a DA permit; in most cases, aquatic resource restoration, establishment, and/or enhancement is required to achieve a minimum of one-to-one replacement of lost aquatic resources and any required preservation augments that replacement." 70 Fed Reg. 19,621(April 10, 2008). Similarly, the 404(b)(1) Guidelines note that "[r]estoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation." The RGL and the new mitigation rule also require that, among other things, any areas targeted for preservation must "contribute significantly to the ecological sustainability of the watershed" and be "under threat of destruction or adverse modifications." 33 C.F.R. § 332.3(h)(1)(ii) and (iv); RGL at 5-6. The Corps must gather sufficient information so that it can assure that these requirements are met prior to finalizing mitigation requirements. Moreover, the Corps must provide the specifics of the mitigation plan and adequately explain the rationale behind its mitigation ratios prior to permit issuance so that the public can meaningfully comment on the complex issues surrounding mitigation.

8. The FEIS failed to consider cumulative and indirect climate impacts from greenhouse gas emissions.

NEPA requires the consideration of all direct and indirect impacts stemming from a proposed project. The Council for Environmental Quality (CEQ), which implements NEPA at the federal level, has issued draft federal guidance on how to evaluate the effects of greenhouse gas (GHG) emissions under NEPA.¹⁹ The Federal Guidance confirms that both direct and indirect GHG emissions should be evaluated in the context of "cumulative effects" in an EIS if significant. *Id.* at 5 ("Analysis of emissions sources should take account of all phases and elements of the proposed action over its expected life, subject to reasonable limits on feasibility and practicality.") Under the Federal Guidance, NEPA documents should put direct and indirect GHG emissions associated with a project in the context of the "aggregate effects of past, present, and reasonably foreseeable future actions" related to climate. *Id.* at 9-10. As the guidance confirms, the duty to evaluate all climate related impacts is not new. Rather, climate is an

¹⁹ Available at: http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL_02182010.pdf.

important factor to be considered within NEPA's existing framework. *Id.* at 11. Furthermore, CEQ notes that agencies must take particular care to consider the impacts of climate change on populations particularly vulnerable to climate change, such as many Tribal and Alaska Native communities.²⁰

Several cases confirm that NEPA requires evaluation of climate-related impacts even where those impacts are indirectly related to the project under review. In a case with circumstances analogous to the Port MacKenzie rail project, *Mid-States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520 (8th Cir. 2003), the Eighth Circuit Court of Appeals invalidated an EIS for a rail construction project intended to supply coal from the Powder River Basin to power plants because it failed to analyze the emissions of burning the coal that would be transported by the rail project. When the nature of the project's impact is foreseeable, even if the full extent is not, the agency must still analyze such impacts. *Id.* at 549. The court found that it was reasonably foreseeable that the project was going to increase the country's long-term demand for coal and, consequently, the adverse impacts of coal burning, both of which should have been considered in the EIS. *Id.*

Similarly, in *Border Plant Working Group v. Department of Energy*, 260 F. Supp. 2d 997 (S.D. Cal. 2003), a federal district court invalidated a decision to approve transmission lines that would connect proposed power plants in Mexico to the U.S. power grid because indirect effects were not considered. The court found that the decision violated NEPA because decision-makers failed to consider the impacts of the operation of the Mexican power plants—including impacts on air quality and climate—that were closely linked to the transmission lines. The court found that the operation of the power plants were an “indirect effect” of the transmission line project because the two were causally linked. *Id.*

There is no analysis in the draft or final EIS of the reasonably foreseeable cumulative and indirect impacts of the Port MacKenzie rail project, which would cause additional mining and other resource extraction in the interior part of the state, and a subsequent increase in coal burning and export. All of these activities would serve as significant sources of greenhouse gas emissions. The draft and final EIS for the Port MacKenzie rail project does address some climate issues in Section 8 and 16.5.6 but the analysis is limited to the rail line's construction and operation-related emissions.

Further, the EIS does acknowledge such indirect consequences of the project—increased mining, increased exports and higher coal fired power plant emissions—even while failing to analyze the associated emissions. On page 1-4 of the final EIS, the STB recognizes that impacts related to mining are reasonably foreseeable: “[t]he Applicant believes that by creating a rail connection with Port MacKenzie, the proposed project would make the development of existing natural resources in Interior Alaska, including the coal, limestone, timber, and metallic mineral resources along the existing ARRC main line corridor, more economically feasible.” Given that Alaska

²⁰ See *id.* at 8 “Tribal and Alaska Native communities that maintain their close relationship with the cycles of nature have observed the changes that are already underway, including the melting of permafrost in Alaska, disappearance of important species of trees, shifting migration patterns of elk and fish, and the drying of lakes and rivers. These effects affect the survival for both their livelihood and their culture.”

possesses roughly half the known coal reserves in the U.S., such increased coal mining is not inconsequential and should have been analyzed in the EIS.

It is widely acknowledged that the rail project would encourage the increased export and burning of coal in South America, Japan, China and other Asian countries by providing a link from Alaska's interior to the port, as discussed in a cost-benefit report about the Port MacKenzie rail line expansion.²¹ Indeed, the Port MacKenzie Master Plan from February 1, 2011, notes that "[d]ue to the design of this relatively high speed freight rail extension, and the inherent transportation cost savings, the amount of coal transported over the extension during the second five years could be up to four million tons [of coal] (Metz, 2007a)." (emphasis added)²² Test coal shipments have already occurred at Port MacKenzie in anticipation of gaining rail access that would make regular coal exports from Port MacKenzie economically feasible.²³ There is no analysis of the impact of burning 4 million tons of coal each year in Asian or South American countries in the draft or final EIS. The lack of analysis of these significant greenhouse gas impacts in the draft or final EIS disregards NEPA's requirement to provide analysis of reasonably foreseeable direct and indirect impacts.

Additionally, due to the increased traffic and industry that the rail line is expected to bring to Port MacKenzie, there are plans to build a power plant, which may create an additional 1 million tons of coal demand per year.²⁴ In the cumulative impacts section, the FEIS notes that the "Matanuska Electric Association coal-fired power plant is not being considered until at least 2012 (Carter, 2008) and is therefore not considered reasonably foreseeable" without providing additional analysis. FEIS at O-2. Given that these plans are tied to the construction of the rail line—and relate to the coal that would be transported by the rail line—the emissions from such a plant should have been analyzed in the FEIS rather than ignored.

As written, the FEIS fails to analyze the impact of at least five million tons of coal each year that would be exported and/or used in a power plant as facilitated by the rail line. This amounts to roughly ten million tons of CO₂ that were not accounted for in the EIS, which represents about a fourth of the entire state of Alaska's annual CO₂ emissions as of 2007.²⁵ Additionally, there was no analysis of the impact from such emissions on populations particularly vulnerable to climate change, such as many Tribal and Alaska Native communities.

²¹ Available at: http://www.iser.uaa.alaska.edu/publications/PMK_RailExtension.pdf.

²² Port MacKenzie Master Plan Update, February 1, 2011, at p. 11, accessed: http://www.matsugov.us/docman/doc_view/3226-port-mackenzie-master-plan-updatefinal?tmpl=component&format=raw.

²³ Anchorage Daily News, June 10, 2010, <http://www.adn.com/2010/06/07/1311540/usibelli-tests-coal-loading-at.html>. See also Mat Su Valley Frontiersman, http://frontiersman.com/articles/2010/06/06/local_news/doc4c0b2a29ceef0037406795.txt. For the test shipment, the coal was trucked from a Usabelli mine in Healy because the rail capacity does not yet exist.

²⁴ Port MacKenzie Master Plan Update, February 1, 2011, at p. 11.

²⁵ Table 8-6 on page 8-9 of the FEIS estimates 3,141 metric tons of CO₂ during rail construction and 2,606 metric tons of CO₂ during rail operation. Alaska's 2007 CO₂ emissions can be found in EPA 2009, State CO₂ Emissions from fossil fuel combustion, 1990-2007, available: http://www.epa.gov/statelocalclimate/documents/pdf/CO2FFC_2007.pdf

In a June 27, 2011, letter to the Surface Transportation Board, the Alaska Railroad Corporation responds to these comments by stating that the project, by making mining more economically feasible, does not mean that increased mining is reasonably foreseeable. ARRC Letter at 6-7.

The court in *Mid States Coalition*, which was faced with analyzing coal impacts in the context of new rail line construction, defined reasonably foreseeable as “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.”

Mid States Coalition for Progress v. Surface Transp. Bd., 345 F.3d 520, 549 (8th Cir. 2003) The court further opined that “when the *nature* of the effect is reasonably foreseeable but its *extent* is not, we think that the agency may not simply ignore the effect.” *Id.* at 549.

If building the rail line is to make coal mining more economically feasible as the STB itself acknowledges in the FEIS, the nature of that effect—increased coal mining—is a reasonably foreseeable project impact that also demands environmental analysis by any ordinary person’s standards. The Borough, local newspapers, coal companies, and EIS are all discussing this economic impact, even while the EIS is not analyzing the environmental impact of those activities.

If the rail line is not being built to increase coal mining in interior—it begs the question of what the rail spur will do. See Section 2 of these comments (noting that the project is unnecessary and is not in the public interest.) Alaska Railroad cannot have it both ways—touting coal development as an argument to justify the public interest and economic necessity for building the rail line all while ignoring the analysis of the environmental impacts associated with increased coal mining, transport, burning and export.

The cases cited by Alaska Railroad are unpersuasive. Alaska Railroad cites *Ground Zero Center for Non-Violet Action v. U.S. Dep’t of Navy*, 383 F.3d 1082, 1090 (9th Cir. 2004)(discussing the sufficiency analysis for the remote possibility of an accidental missile explosion, which the Navy had studied.) For Port Mackenzie, the STB did not conduct any analysis of the reasonably foreseeable impact that the rail line is intended to facilitate interior coal development at all, even though it was mentioned as economic justification in the same EIS. Indeed, coal mining and transport, unlike the random act of a missile explosion which the Navy had studied to some degree, is being touted in long-term borough development plans and by local coal companies that are running test shipments from the port in anticipation of rail service.

Similarly, *Airport Impact Relief, Inc. v. Wykle*, 192 F.3d 197 (1st Cir. 1999) and *Northwest Bypass Group v. U.S. Army Corps of Eng’rs*, 552 F. Supp. 2d 97, 127 (D.N.H. 2008), and *Airport Neighbors Alliance, Inc. vs. United States*, 90 F. 3d 426 (10th Cir. 1996) all discuss the need for future plans to be more than speculative and in relatively the near term for them to be analyzed as part of a project’s impacts. The situation here is quite different than those in the above-cited cases involving airport expansions and roads. Here, the Borough’s plans discuss coal exports via rail in the first five years “after completion of the rail extension” and that due to the

design as a high speed freight extension and cost savings, the coal volumes will only grow after that time.²⁶

Under *Mid States Coalition*, the nature of increased coal mining and transport must be analyzed even if the exact extent of this impact is not settled.²⁷ Additionally, coal mining companies are already actively pursuing mine development and permits in anticipation of having such a rail spur at the Wishbone Hill mine, among others.²⁸ Mining is not a far off possibility 20 years in the future, it is actively being pursued.

Additional environmental analysis is necessary under the circumstances presented here.

9. The FEIS failed to consider the project's indirect impacts on air and water quality.

The indirect impacts of the increased mining, export, and burning of coal that the draft and final EIS failed to consider extend beyond greenhouse gas emissions. Mining causes a broad array of environmental harms through contamination of air, surface and groundwater. Transportation of coal over long distances also has significant environmental impacts, including the fossil fuel consumption of moving large volumes of material over long distances via boat as well as the diesel pollution from the rail line.

Burning the coal exported abroad also poses a significant risk of mercury pollution, which comes from coal-fired power plants. In Alaska, the major source of mercury pollution is coal-fired power plants in Asia that travels to Alaska via the air and ocean currents.²⁹ Mercury can cause adverse health effects, including learning and developmental disorders, cardiovascular disease, and immune suppression. The state of Alaska issued a fish consumption advisory because mercury is already a severe problem in the state.³⁰ Consequently, the EIS should have analyzed mercury impacts from coal that this rail project would facilitate.

Moreover, data shows that open coal train cars—the type of rail car commonly used to transport coal—lose huge volumes of coal dust during transportation, which is a significant air and water

²⁶ Port MacKenzie Master Plan Update, February 1, 2011, at p. 11, accessed: http://www.matsugov.us/docman/doc_view/3226-port-mackenzie-master-plan-

²⁷ Alaska Railroad argues that the coal volumes in *Mid-States* were different than what is being discussed here—that shipping 100 million tons of coal annually would be inconceivable in Alaska. Given that Alaska possesses roughly half the known coal reserves in the U.S., facilitating increased coal mining is not inconsequential and should have been analyzed in the EIS. The Railroad does not dispute that the projected immediate increase of 5 million tons of coal exports a year—a conservative estimate—would amount to ten million tons of CO₂, which represented about a fourth of the entire state of Alaska's annual CO₂ emissions as of 2007 as cited above. In the Alaska context, this amount of coal mining and greenhouse gas emissions are certainly significant and warrant analysis.

²⁸ Usabelli has applied for a minor source air permit for the Wishbone Hill mine which the Sierra Club and other groups submitted comments on this past May, 2011. See Alaska Journal of Commerce, Usibelli may have buyer for Wishbone coal; plan tests from MacKenzie, June 4, 2010, http://www.alaskajournal.com/stories/060410/loc_11_002.shtml. See also State Grants Usabelli Drill Permit at Wishbone Hill, <http://www.adn.com/2010/07/07/1357828/state-grants-usibelli-drill-permit.html>.

²⁹ Physicians for Social Responsibility, <http://www.psr.org/news-events/events/mercury-pollution-in-alaska.html>.

³⁰ Available at: <http://www.hss.state.ak.us/press/2007/pdf/pr101507fish-consumption-facts.pdf>.

quality issue.³¹ Coal dust is a ballast safety issue and has been linked to train derailments, as discussed in a recent proceeding before this agency where the STB found coal dust to be “a pernicious ballast foulant.”³² The draft and FEIS address some dust impacts on vegetation near the rail line from construction, but neither document examines the serious impacts known to be caused by coal dust from the rail transportation of coal, another reasonably foreseeable indirect impact which was not analyzed in the FEIS.

In the Alaska Railroad’s June 27, 2011, letter to the Surface Transportation Board, they state that the FEIS indicates that “OEA is not aware of any environmental problems resulting from ARRC’s current bulk material transport practices and, therefore sees no reason to expect such problems in association with the proposed rail line.” ARRC letter at 7-8.

Such a generic statement in the FEIS about being unaware of environmental problems associated with bulk materials transport that does not specifically mention coal dust is not sufficient to meet the NEPA standard requiring a “hard look” at such issues, especially in the face of significantly increased coal transportation and STB’s general awareness of major problems like derailments that are associated with coal dust. *See Robertson*, 490 U.S. at 350; 42 U.S.C. § 4331 *et. seq.*; *Friends of the Boundary Waters Wilderness*, 164 F.3d at 1128,

Additionally, Alaska Railroad alleges that Alaska’s climate mitigates coal dust problems. The STB’s hearing on coal dust indicated that dust is episodic and the amount of dusting depends on high or gusty wind conditions, or dry weather followed by rain and cold temperatures, and other such factors. *See* Surface Transportation Board July 29, 2010, Hearing Transcript. Alaska’s more extreme climate and weather conditions would seem to make coal dust problems more likely, not less likely. Indeed, residents of Seward, Alaska, have reported problems with coal dust associated with the coal export and rail facility there.³³ In any event, the lack of analysis of coal dust problems in the DEIS or FEIS does not satisfy the “hard look” required by NEPA or demonstrate that the agency has properly considered such environmental consequences. Additional environmental analysis is necessary.

For the foregoing reasons, the FEIS must be supplemented and the PN must be revised and renoticed in order to comply with the CWA and NEPA. Ultimately, however, since the project, as proposed, will cause significant environmental degradation the 404 permit must be denied.

³¹ According to Burlington Northern Santa Fe (“BNSF”) studies, 500 to 2,000 lbs of coal can be lost in the form of dust for each rail car. In other studies, again according to BNSF, as much as three percent of the coal in each car (around 3600 lbs per car) can be lost in the form of dust.

³² *See* Decision, March 2, 2011, Arkansas Electric Cooperative Association—Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305. *See also*

³³ *See* Anchorage Daily News, *Coal Dust an Ugly Problem in Scenic Seward*, November 10, 2009. <http://www.adn.com/2009/11/10/1007256/coal-dust-an-ugly-problem-in-scenic.html>

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Sincerely,

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Exhibits:

- Ex. 1: OVEC v. U.S. Army Corps of Engineers, 2009 WL 4261321 (S.D. W.Va., Nov. 24, 2009)
- Ex. 2: The Institute for Water Resources, USACOE. Draft Nationwide Permits Draft Programmatic Environmental Impact Statement. Alexandria, Virginia. July 31, 2001.
- Ex. 3: Fennessy, Siohban. Comments on Public Notice POA-2007-1586 on the proposed Port Mackenzie Railroad extension, Knik Arm, Upper Cook inlet, Alaska. June 10, 2011.
- Ex. 4: Hocutt, Charles, Comments on Public Notice POA-2007-1586: The proposed Port Mackenzie Railroad extension Knik Arm, Upper Cook Inlet, Alaska, With emphasis on FISHERIES and COOK INLET BELUGA WHALE. July 12, 2011.
- Ex. 5: Port of Anchorage. Comments on the DEIS for the Rail Line Extension. May 10, 2010.
- Ex. 6: USEPA. Comments on the STB FEIS for the ARRC Rail Line Extension to Port MacKenzie, Alaska Project, EPA Project #08-011-DOT. May 2, 2011.
- Ex. 7: Tyner, John Comments of the Proposed Rail Line from Port MacKenzie, AK. July 8, 2011.
- Ex. 8: Landreth, Ed, Comments - Alaska District Corps of Engineers - Knik Arm Waterway - POA-2007-1586. July 10, 2011.