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SEA

SURFACE TRANSPORTATION BOARD

STB Finance Docket No. 35095

The Alaska Railroad Corporation – Petition for Exemption to Construct and Operate a Rail Line Extension to Port MacKenzie, Alaska

Decided: July 17, 2009

AGENCIES:

Lead: Surface Transportation Board.

Cooperating: U.S. Army Corps of Engineers, Alaska District; Federal Railroad Administration; and United States Coast Guard.

ACTION: Notice of Availability of Final Scope of Study for the Environmental Impact Statement (EIS)

SUMMARY: The Alaska Railroad Corporation (ARRC or Applicant) petitioned the Surface Transportation Board (Board) pursuant to 49 U.S.C. 10502 for authority to construct and operate a new rail line from Matanuska-Susitna Borough's (MSB) Port MacKenzie to ARRC's existing main line between Wasilla and north of Willow, Alaska. The project would involve the construction and operation of approximately 30 to 45 miles of new rail to the main line track. Figure 1 shows ARRC's existing track and the proposed rail line extension from Port MacKenzie to ARRC's existing main line (all figures are available for viewing on the Board's website at www.stb.dot.gov by going to "Environmental Matters," then selecting "Key Cases" in the dropdown; and then when the next page appears, clicking "Alaska Railroad – Port MacKenzie Rail Extension"). Because the construction and operation of this project has the potential to result in significant environmental impacts, the Board's Section of Environmental Analysis (SEA) has determined that the preparation of an Environmental Impact Statement (EIS) is appropriate. For further information about the Board's environmental review process and the EIS, you may also visit a Board-sponsored project website at www.stbportmacraileis.com.

To help determine the scope of the EIS, and as required by the Board's regulations at 49 CFR 1105.10(a)(2), SEA published in the *Federal Register* and mailed to the public on February 12, 2008, the Notice of Availability of Draft Scope of Study for the EIS, Notice of Scoping Meetings, and Request for Comments. SEA also prepared and distributed to the public a fact sheet that introduced ARRC's Port MacKenzie Rail Extension, announced SEA's intent to prepare an EIS, requested comments, and gave notice of six public scoping meetings to citizens; elected officials; Federal, state, and local agencies; tribal organizations; and other potentially interested stakeholders. SEA held six public scoping meetings in Knik, Big Lake, Willow, Houston, Wasilla, and Anchorage, Alaska on March 3, 4, 5, 6, 10, and 11, 2008, respectively.

The scoping comment period concluded March 21, 2008. The U.S. Army Corps of Engineers, Alaska District (USACE); Federal Railroad Administration (FRA); and United States Coast Guard (USCG) requested and were granted cooperating agency status in preparation of the EIS. After review and consideration of all comments received, this notice sets forth the final scope of the EIS. The final scope reflects any changes to the draft scope as a result of the comments, summarizes and addresses the principal environmental concerns raised by the comments, and briefly discusses pertinent issues concerning this project that further clarify the final scope.

FOR FURTHER INFORMATION CONTACT:

David Navecky, Section of Environmental Analysis, Surface Transportation Board, 395 E Street, SW, Washington, DC 20423-0001, 202-245-0294, or call SEA's toll-free number for the project at 1-888-257-7560. Assistance for the hearing impaired is available through the Federal Information Relay Service (FIRS) at 1-800-877-8339. The website for the Surface Transportation Board is www.stb.dot.gov.

Serena Sweet, U.S. Army Corps of Engineers, P.O. Box 6898, Elmendorf Air Force Base, AK 99506, 907-753-2819.

John Winkle, Passenger Programs Division, Federal Railroad Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590, 202-493-6067.

James Helfinstine, Seventeenth District, U.S. Coast Guard, P.O. Box 25517, Juneau, AK 99802-5517, 907-463-2268.

SUPPLEMENTARY INFORMATION

Background: Port MacKenzie is a deepwater facility on the west side of the Knik Arm in upper Cook Inlet in south-central Alaska. At present, freight truck is the only available surface mode of transportation to and from Port MacKenzie. The Applicant has stated that the proposed rail line would satisfy the need for an additional mode of transportation for the movement of bulk materials, intermodal containers, and other freight to and from Port MacKenzie. The proposed project is consistent with the MSB's economic development plans and with ARRC's statutory goal to foster and promote long-term economic growth in the State of Alaska. The project would support the Port's continued development as a multi-modal and bulk materials export and import facility. ARRC plans to support commercial freight rail service needs with the proposed project.

Major elements of the project would include:

- Approximately 30 to 45 miles of new railroad track depending on the alternative;
- A 200-foot wide right-of-way (ROW);
- Crossings (depending on the alternative) of the Little Susitna River, Lake Creek, Goose Creek, Little Willow Creek, Fish Creek, Rogers Creek, Lucile Creek, Little Meadow Creek, and Willow Creek, along with many other small stream crossings;
- Crossings of local roads and streets, including grade-separations;

- Pipeline, utility, and recreational trail crossings, including the Iditarod National Historic Trail;
- Road closures and relocations;
- Track sidings along the existing ARRC mainline;
- A terminal reserve area (consisting of yard sidings, storage areas, and a terminal building to support train maintenance); and
- Ancillary railroad support facilities including, but not limited to, communications towers and facilities, maintenance, power, signals, and access road.

Environmental Review Process: The Board is the lead agency, pursuant to 40 CFR 1501.5. SEA is responsible for ensuring that the Board complies with the National Environmental Policy Act (NEPA), 42 U.S.C. 4321-4335, and related environmental statutes, and for completing the environmental review process. The NEPA review process is intended to assist the Board, the cooperating agencies and the public in identifying and assessing the potential environmental consequences of a proposed action and the reasonable alternative before a decision is made.

ICF International is serving as an independent third-party contractor to assist SEA in the environmental review process. SEA is directing and supervising the preparation of the EIS. The USACE, FRA, and USCG are cooperating agencies, pursuant to 40 CFR 1501.6.

The Federal agency actions considered in this EIS will include decisions, permits, approvals and funding related to the proposed action. The Board will decide whether to grant authority to ARRC to construct and operate the rail line pursuant to 49 U.S.C. 10901 and 10502. The USACE will decide whether to issue permits pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1251-1376, as amended) and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). The USCG will decide whether to issue authority to construct bridges over navigable waters of the United States pursuant to the Department of Transportation Act of 1966 (49 U.S.C. 1651-1659). The FRA could provide funding to ARRC; however, the FRA would not provide funding for a Board-authorized alternative that would require the use of resources protected under Section 4(f) of the U.S. Department of Transportation (USDOT) Act (23 CFR 774) if there is a prudent and feasible alternative that does not use Section 4(f) resources, unless the Secretary of Transportation determines that the impacts to the protected resources would be *de minimis* in accordance with Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amendment to the Section 4(f) requirements, which do not require avoidance. The EIS should include all of the information necessary for the decisions by the Board and the cooperating agencies.

SEA and the cooperating agencies are preparing a Draft EIS for the proposed action. The Draft EIS will address those environmental issues and concerns identified during the scoping process and detailed in this final scope. It will also discuss a reasonable range of alternatives to the proposed action, including a no-action alternative, and recommend environmental mitigation measures, as appropriate.

The Draft EIS will be made available upon its completion for public review and comment. A Final EIS will then be prepared reflecting further analysis by SEA and the cooperating agencies, and the public and agency comments on the Draft EIS. In reaching their

decisions on this case, the Board and the cooperating agencies will take into account the full environmental record, including the Draft EIS, the Final EIS, and all public and agency comments received.

Purpose and Need: The Applicant has stated that the purpose of the Port MacKenzie Rail Extension is to establish a rail link between Port MacKenzie (or Port) and the ARRC rail system, providing Port customers and shippers with rail transportation between the Port and Interior Alaska. The Port is a deepwater facility on the west side of Knik Arm in upper Cook Inlet, in south-central Alaska. At present, freight truck is the only available surface mode of transportation to and from the Port.

The Applicant has also stated that the proposed rail line would satisfy the need for an additional mode of transportation for the movement of bulk materials, intermodal containers, and other freight to and from the Port. According to ARRC, the proposed project would support ARRC's statutory goal to foster and promote long-term economic growth and development in the State of Alaska and would be consistent with the Port's economic development plans, which include the continued development of the Port as a multi-modal and bulk materials export and import facility.

Port Activities: The proposed rail line extension would end at a terminal reserve (rail yard) approximately 2 or 3 miles, depending on the route, from the existing Port docks. Rail facilities the Port might construct to connect to the rail line extension would be particular to the specific traffic needs and would be expected to be generally consistent with Port master planning documents. These facilities might include buildings, roads, industrial spurs, sidings, loading/unloading tracks, and other ancillary facilities throughout the upland port district. These facilities would be developed as the Port continued to grow, but would be independent of the planned rail extension. At present, the MSB is developing a bulk materials facility at the Port to accommodate the need for expansion of Port facilities to handle bulk material cargo to be transported to the Port by truck, independent of the planned rail line extension to the Port. The MSB has stated that as it continues to plan for the bulk materials facility and future Port development, it will consider the location of ARRC's proposed rail extension in its decision making. The bulk material facility is not part of the proposed action, and a detailed environmental review of the bulk material facility is not within the scope of this EIS. The bulk materials facility, however, will be addressed in the cumulative impacts section of the EIS.

Proposed Action and Alternatives: The NEPA regulations require Federal agencies to consider a reasonable range of feasible alternatives to the proposed action. The President's Council on Environmental Quality (CEQ), which oversees the implementation of NEPA, has stated in *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* that "[R]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense...." In this EIS, SEA and the cooperating agencies are considering a full range of alternatives that meet the purpose and need of the project, as well as the no-action alternative. The reasonable and feasible alternatives included for detailed analysis and alternatives considered but not included in detailed study are discussed in more detail below.

A. Alternatives

Based on agency consultations, feedback from stakeholders, and a constraints analysis based on engineering and environmental studies, in January 2008 ARRC developed the Preliminary Environmental and Alternatives Report, which presented eight possible alignment configurations. All alignments start at a terminal reserve area near Port MacKenzie at the southern end and connect to the existing ARRC mainline to the north. The alignments are composed of a southern and northern segment with a possible connector tying the segments together. The southern segments, Mac West or Mac East, run either east or west of the Point MacKenzie Agricultural Project. Just north of the Point MacKenzie Agricultural Project, there are three main northern segments – Willow, Houston, and Big Lake – with Houston having a north or south variant. Connector segments link the north and south segments together to create eight possible alignment configurations as listed below and depicted in Figure 1.

After reviewing the eight ARRC-proposed alignments and considering all comments received during the scoping period, SEA and the cooperating agencies have decided to carry all eight alignments forward as alternatives for detailed analysis in the EIS. The no-action alternative will also be considered. The eight alternatives are listed below. Each would consist of a 200-foot right-of-way (ROW) for the railroad and associated facilities.

1. **Mac West – Connector 1 – Willow.** This alternative would be 44.8 miles long and contains the segments farthest west.
2. **Mac West – Connector 1 – Houston – Houston North.** This alternative would be 35.1 miles long, and is geographically one of the middle alignments.
3. **Mac West – Connector 1 – Houston – Houston South.** This alternative would be 34.5 miles, and is geographically one of the middle alternatives.
4. **Mac West – Connector 2 – Big Lake.** This alternative would be 35.8 miles. It includes the southern segment along the west side of the Point MacKenzie Agricultural Project and the most eastern north segment going towards Big Lake.
5. **Mac East – Connector 3 – Willow.** This alternative would be 45 miles and is the longest. It includes the southern segment along the east side of the Point MacKenzie Agricultural Project and the most western north segment going towards Willow.
6. **Mac East – Connector 3 – Houston – Houston North.** This alternative would be 35.3 miles, and is geographically one of the middle alternatives.
7. **Mac East – Connector 3 – Houston – Houston South.** This alternative would be 34.7 miles long, and is geographically one of the middle alignments.
8. **Mac East – Big Lake.** This alternative would be 31.8 miles long and is the shortest alternative. It includes the southern segment along the east side of the Point MacKenzie Agricultural Project and the most eastern north segment going toward Big Lake.

Descriptions of the individual segments that complete the eight build alternatives for the EIS are provided below.

Southern Segments

Mac West Segment

The Mac West Segment would begin in the terminal reserve area and would proceed northwest across relatively flat terrain toward the southwest corner of the Point MacKenzie Agricultural Project. The segment would continue west of the agricultural area, traversing along the eastern boundary of Susitna Flats State Game Refuge. The terminal reserve area is proposed along the southern side of Mac West.

Mac East Segment

The Mac East Segment would begin in the terminal reserve area and would proceed north along the side of a ridge along the east side of the Point MacKenzie Agricultural Project. Near Mile Post 4.7, the segment would cross a ravine and then curve to the northeast along the top of another ridge. North of Mile Post 6, the segment would follow the alignment of Port MacKenzie Road, offset 200 feet or more to the west. The segment would continue along undulating terrain before reaching its junction with the Big Lake Segment or Connector Segment 3. The terminal reserve area is proposed along the north side of Mac East.¹

See Figure 2 for a detailed map of the southern segments and terminal reserve area.

Connectors

Connector Segment 1

This 4.1-mile-long segment would connect the Mac West Segment to the Willow or Houston segments. From Mac West, this connector segment would continue north along the eastern boundary of the Susitna Flats State Game Refuge on level terrain. The segment would cross a tributary of the Little Susitna River.

Connector Segment 2

This 3.7-mile-long segment would connect the Mac West Segment to the Big Lake Segment. At the northwestern end of the Point MacKenzie Agricultural Project, this connector segment would turn due east and travel along the southern boundary of the Point MacKenzie Correctional Farm.

Connector Segment 3

This 4.5-mile-long segment would connect the Mac East Segment to the Willow or Houston segments. At the northeastern end of the Point MacKenzie Agricultural Project, this connector segment would shift to the northwest and cross Ayrshire Avenue and Farmers Road at

¹ Based on Port planning and development information and additional field data collected during the summer of 2008, ARRC has revised the proposed location for the terminal reserve area to serve Mac East. This terminal reserve area is shifted slightly to the west relative to the previous location. This change occurred after issuance of ARRC's Preliminary Environmental and Alternatives Report and the scoping period for the EIS.

grade. The segment would continue north of My Lake and cross an adjacent ravine. The remaining mile of the segment is nearly level.

See Figure 3 for a detailed map of the connector segments.

North Segments

Willow Segment

From Connector Segment 1 or 3, the Willow Segment would continue northwest where it would immediately cross the Little Susitna River (see Figure 4). Over the next 7 miles, the segment would continue north through rolling terrain. The segment would cross Fish Creek, the outlet for Red Shirt and Cow lakes. The Willow Segment would then proceed north, generally following the west-facing slope of a glacial moraine west of Red Shirt Lake. It would continue north through the Nancy Lake State Recreation Area for approximately 0.5 mile. The Willow Segment would cross the outlet for Vera Lake, continue over rolling terrain, and cross Willow Landing Road at grade. The segment would then continue through the Willow Creek State Recreation Area, where it would cross Willow Creek. The segment would curve to the east and cross Parks Highway with a grade separation, before connecting to the existing ARRC main line near Mile Post 188.9 along the proposed rail line.

Houston Segment

From Connector Segment 1 or 3, the Houston Segment would proceed northeast, traveling through slightly undulating terrain with areas of wetland (See Figure 5). The segment would pass between Papoose Twins Lakes and Crooked Lake, traversing an area of hilly terrain. The remaining 4 miles of the Houston Segment would be in a gradually rising wetland area to a point near Muleshoe Lake and Little Horseshoe Lake, where it would connect to either the Houston North Segment or the Houston South Segment.

Houston North Segment²

From the Houston Segment, the Houston North Segment would continue north (see Figure 5), crossing over the Castle Mountain Fault. The Houston North Segment would cross the Cow Lake Trail, which is part of the Houston Lake Loop Trail. It would continue through the Little Susitna Recreation Area, where it would cross the Little Susitna River. The segment would continue north on rolling terrain along the east side of Houston and Little Houston lakes, descending gradually to lower terrain adjacent to Lake Creek. The Houston North Segment would tie into the existing ARRC main line near Mile Post 178 without crossing the Parks Highway.

Houston South Segment

Also beginning between Muleshoe Lake and Little Horseshoe Lake, this proposed segment would traverse northeast, passing just west of Pear Lake (Figure 5). The segment would

² Based on environmental impact associated with the original proposed connection with the main line as presented in the Preliminary Environmental and Alternatives Report and considered during the scoping period, ARRC shifted the connection point approximately 1 mile southeast to its present location.

traverse several gravel ridges that parallel the lakes in this area. The segment would tie into the existing mainline near Mile Post 174.0 without crossing the Parks Highway.

Big Lake Segment

From the Mac East Segment or Connector Segment 2, the Big Lake Segment would run northeast for approximately 3 miles, crossing Burma Road at grade (Figure 6). It would continue on rolling terrain, crossing over Goose Creek, Fish Creek, Lucille Creek, and tributaries of Lucille Creek and Little Meadow Creek. The segment would cross Burma Road at grade and Big Lake Road, where it would be grade-separated above Big Lake Road. The Big Lake Segment would continue north through a residential area before crossing under Parks Highway. The Big Lake Segment would connect with the existing ARRC main line near Mile Post 170.3 along the proposed rail line in a wetland area surrounding a stream that feeds into Long Lake.

The refined information collected during the 2008 summer field season provided ARRC with better data to consider the tie-in location for the Big Lake Segment. The following information supplements the Preliminary Environmental and Alternatives Report (Figure 6). These refinements of the Big Lake Segment will be addressed in the EIS.

- Construct an approximately 430-foot bridge on the Parks Highway over the proposed rail line and an unnamed anadromous fish stream.
- Relocate approximately 2,400 feet of unnamed anadromous fish streams adjacent to the proposed rail line.
- Relocate approximately 1,000 feet of Hawk Lane on the south side of the Parks Highway (because of the new Parks Highway bridge).
- Close approximately 865 feet of Cheri Lake Drive where it crosses the existing main line and intersects with the Parks Highway.
- Extend Ray Street approximately 1,405 feet from Loon Street to the Parks Highway, which would include an at-grade crossing of the existing ARRC main line.
- Acquire eight recreational/residential parcels along Loon Lake because access to the parcels would be permanently blocked due to lack of access from the relocated road crossing (Cheri Lake Drive) and the new siding.
- Relocate the business on the southwest corner of the Parks Highway and Cheri Lake Drive due to the Hawk Lane relocation.

B. Alternatives Considered But Not Included in Detailed Study

Following review of scoping comments received and the potential route alignments presented by ARRC in the Preliminary Environmental and Alternatives Report, SEA asked ARRC to consider the feasibility of making adjustments to the Willow, Big Lake, Mac West, and Houston North Segments, and to consider a new segment to reduce potential environmental impacts. The adjustments were proposed to reduce potential impacts to state recreation areas and game refuges, a road crossing, and wetlands. The proposed new segment would have utilized already existing corridors. ARRC considered SEA's proposed changes and explained that making these

adjustments would create additional impacts or the terrain would be unsuitable for railroad construction. For example, SEA proposed shifting the Willow Segment west to avoid Willow Creek State Recreation Area, but ARRC explained that this approach would require closing or relocating the Willow Airport. In response to ARRC's concerns about the feasibility of SEA's proposed changes, and based on its own independent analysis, SEA determined that its proposed modifications to the routes were not feasible.

SEA also notes that rail across the proposed Knik Arm crossing connecting Port MacKenzie to the ARRC main line in Anchorage was considered, but determined impractical for several reasons. The Federal Highway Administration (FHWA) determined this option to be financially infeasible in the Knik Arm Crossing Final Environmental Impact Statement. The nearly \$1 billion cost (in 2005 dollars) estimated for constructing this rail crossing would have exceeded the \$600 million limit for the Knik Arm Crossing project. In addition, a route to Interior Alaska via the Knik Arm crossing would have been considerably longer than the alternatives being analyzed and would not meet the Applicant's stated purpose of providing a rail connection suitable for shipment of bulk materials from Interior Alaska to Port Mackenzie.

C. Public Participation

As part of the environmental review process to date, SEA has conducted broad public outreach activities to inform the public about the proposed action and to facilitate public participation. SEA consulted with and will continue to consult with Federal, state, and local agencies; affected communities; and all interested parties to gather and disseminate information about the proposal. SEA and the cooperating agencies have also developed and implemented a Government-to-Government Consultation and Coordination Plan to seek, discuss, and consider the views of Federally recognized Tribal Governments regarding the proposed action and alternatives.

D. Response to Comments

SEA and the cooperating agencies reviewed and considered the comments received on the draft scope (130 comments with approximately 1,332 signatures) in preparing this final scope of the EIS. The final scope reflects any changes to the draft scope as a result of comments. Other changes in the final scope were made for clarification or because of additional analysis. Additions and modifications reflected in the final scope include:

- Analysis of impacts on fisheries and fish habitat, specifically anadromous streams. Federal and state agencies provided comments on the potential impacts on fish and fish habitat. As a point of clarification, the EIS will consider project-related effects on fish resources including impacts from rail and road construction, types and locations of water crossings and the accommodation of ice formation.
- Analysis of impacts on nesting waterfowl and eagles. Comments stated concerns about the potential impacts on nesting waterfowl and eagles, as well as migrating waterfowl, including cranes and grebes. As a point of clarification, the analysis in the EIS will consider the locations of eagle nests and migrating waterfowl near proposed alignments.

- Analysis of impacts on moose and other wildlife. Comments stated that moose strikes by trains are among the greatest wildlife concerns. Comments also indicated that other mammals that reside in the area could be affected. To clarify, the EIS will address wildlife habitat impacts, including potential impacts to moose.
- Analysis of socioeconomic impacts. Comments recommend that the EIS consider the impacts of the proposed project on property values, land access and use (i.e., agricultural), and quality of life. Comments also stated concerns about the potential negative affects on income generated from recreation tourism. The EIS will consider potential project-related effects on local services as potential land use impacts.
- Analysis of impacts on water resources. Comments requested that the EIS evaluate the potential loss of wetland habitat. Comments also stated concerns regarding the potential project impacts on watersheds (i.e., rail embankment acting as a barrier that would disrupt natural drainage systems). Comments also recommended the study of possible impacts of the Little Susitna River overflowing its banks and the compounded effect of a possible spill on this interconnected hydrologic system. The EIS will consider these potential impacts.
- Analysis of impacts on cultural resources. Comments stated concerns over potential impacts to known and unidentified cultural resources (e.g., Iditarod Trail and native sites). Comments also stated concerns over loss of subsistence resources. The EIS will address cultural resources and subsistence.
- Analysis of rail safety. Comments stated concerns over rail and highway safety related to hazardous materials transport, at-grade crossings, fire hazards, and crossing seismic zones (i.e., crossing fault lines). In addition, comments stated concerns about the safety of potential rail crossings at recreational trails. The EIS will examine the potential safety impacts of the proposed action.
- Analysis of noise and vibration impacts. Comments stated concerns over noise and vibration impacts near residential and wilderness areas. The EIS will consider noise and vibration impacts including potential project-related impacts to sensitive receptors.
- Analysis of recreation and access. Comments requested that the EIS address the potential impacts on recreation areas, access to these areas, and safety. Concerns specifically addressed the potential loss of access to recreational trails including the Iditarod, Junior Iditarod, and Iron Dog trails. Comments noted that many trails are unmarked through most recreation areas. Concerns were also raised about undisturbed state and Federal parks. Analysis of these issues will be included in the EIS.
- Analysis of land use impacts. Comments stated concerns about impacts to private properties as well as Federal, state and borough public lands. Analysis of these issues will be included in the EIS.

- Analysis of geology and soils. Comments stated concerns about the Castle Mountain fault, which would be crossed by one of the proposed alternatives. This issue will be addressed in the EIS.

E. Environmental Impact Analysis

Proposed New Construction

Analysis in the EIS will address the proposed activities associated with construction and operation of new rail facilities and their potential environmental impacts, as appropriate.

Impact Categories

The EIS will analyze potential impacts from construction and operation of new rail facilities on the human and natural environment for each alternative, or in the case of the no-action alternative, the potential impacts of these activities not occurring. Impact areas addressed will include the categories of geology and soils, water resources including wetlands and other waters of the U.S., biological resources, cultural and historic resources, subsistence, air quality, noise and vibration, energy resources, transportation safety and delay, navigation, land use, socioeconomics as they relate to physical changes in the environment, and environmental justice. The EIS will include a discussion of each of these categories as they currently exist in the project area and will address the potential impacts of each alternative on each category as described as follows:

1. Geology and Soils

The EIS will:

- a. Describe the geology, soils, and seismic conditions found within the project area, including unique or problematic geologic formations or soils, prime farmland, prime and unique soils, and hydric soils and analyze the potential impacts on these resources resulting from the various alternatives for construction of a new rail line.
- b. Propose mitigative measures to minimize or eliminate potential project impacts to geology and soils, and seismic hazards, as appropriate.

2. Water Resources

The EIS will:

- a. Describe the existing surface water and groundwater resources within the project area, including lakes, rivers, streams, ponds, wetlands, and floodplains and analyze the potential impacts on these resources resulting from each alternative.
- b. Describe the permitting requirements applicable to wetlands, stream and river crossings, water quality, floodplains, and erosion control.
- c. Propose mitigative measures to avoid, minimize, or compensate for potential project impacts to water resources, as appropriate.
- d. Identify and evaluate potential impacts to the Su-Knik Mitigation Bank along the Big Lake Segment. Note: the Big Lake Segment would go through two mitigation bank

parcels that are part of the Su-Knik Mitigation Bank. Use of these two mitigation bank parcels for the proposed rail line could require concurrence from the entities that created the mitigation bank or ROW acquisition by ARRC through eminent domain.

3. Biological Resources

The EIS will:

- a. Evaluate the existing biological resources within the project area, including vegetative communities, wildlife and fisheries, and Federal and state threatened or endangered species and the potential impacts to these resources resulting from each alternative.
- b. Describe any wildlife sanctuaries, refuges, national or state parks, forests, or grasslands and evaluate the potential impacts to these resources resulting from each alternative.
- c. Propose mitigative measures to avoid, minimize, or compensate for potential impacts to biological resources, as appropriate.

4. Cultural and Historic Resources

The EIS will:

- a. Analyze the potential project-related impacts to historic structures or districts previously recorded and determined potentially eligible, eligible, or listed on the National Register of Historic Places within or immediately adjacent to the right-of-way for the proposed rail alignments.
- b. Evaluate the potential impacts of each alternative to archaeological sites previously recorded and either listed as unevaluated or determined potentially eligible, eligible, or listed on the National Register of Historic Places within the right-of-way for the alternative rail alignments and the no-action alternative.
- c. Analyze the potential impacts to historic structures or districts or archaeological sites identified by ground survey and determined potentially eligible, eligible, or listed on the National Register of Historic Places within or immediately adjacent to the right-of-way for the alternative rail alignments.
- d. Evaluate the potential general impacts to paleontological resources in the project area due to project construction, if necessary and required.
- e. Propose mitigative measures to minimize or eliminate potential project impacts to cultural and historic resources, as appropriate.

5. Subsistence

The EIS will:

- a. Analyze the potential impacts of the project alternatives on subsistence activities in the project area.
- b. Propose mitigative measures to minimize or eliminate potential project impacts on subsistence activities, as appropriate.

6. Air Quality

The EIS will:

- a. Evaluate air emissions from rail operations, if the alternative would affect a Class I or non-attainment or maintenance area as designated under the Clean Air Act.
- b. Describe the potential air quality impacts resulting from new rail line construction activities.
- c. Propose mitigative measures to minimize or eliminate potential project impacts to air quality, as appropriate.

7. Noise and Vibration

The EIS will:

- a. Describe the potential noise and vibration impacts during new rail line construction.
- b. Describe the potential noise and vibration impacts of rail line operations over new and existing rail lines.
- c. Propose mitigative measures to minimize or eliminate potential project impacts to sensitive noise receptors, as appropriate.

8. Energy

The EIS will:

- a. Describe and evaluate the potential impact of the new rail line on the distribution and use of energy resources in the project area for each alternative, including petroleum and gas pipelines and overhead electric transmission lines.
- b. Propose mitigative measures to minimize or eliminate potential project impacts to energy resources, as appropriate.

9. Transportation

The EIS will:

- a. Evaluate the potential impacts of each alternative, including new rail line construction and operation, on the existing transportation network in the project area, including vehicular delays at grade crossings.
- b. Describe existing road/rail grade crossing safety and analyze the potential for an increase in accidents related to the new rail operations, as appropriate.
- c. Describe existing rail operations and analyze the potential for increased probability of train accidents, as appropriate.
- d. Evaluate the potential for disruption and delays to the movement of emergency vehicles due to new rail line construction and operation for each alternative.
- e. Propose mitigative measures to minimize or eliminate potential project impacts to transportation systems, as appropriate.

10. Navigation

The EIS will:

- a. Identify existing navigable waterways within the project area and analyze the potential impacts on navigability resulting from each alternative.
- b. Describe the permitting requirements for the various alternatives concerning navigation.
- c. Propose mitigative measures to minimize or eliminate potential impacts to navigation, as appropriate.

11. Land Use

The EIS will:

- a. Evaluate potential impacts of each alternative on existing land use patterns within the project area and identify those land uses that would be potentially impacted by new rail line construction.
- b. Analyze the potential impacts associated with each alternative to land uses identified within the project area. Such potential impacts could include incompatibility with existing land uses and conversion of land to railroad uses.
- c. Propose mitigative measures to minimize or eliminate potential impacts to land use, as appropriate.
- d. Evaluate existing conditions and the potential impacts of the alternatives on recreational opportunities in the project area.
- e. Propose mitigative measures to minimize or eliminate potential project impacts on recreational opportunities, as appropriate.
- f. Identify and evaluate potential impacts to resources protected under the U.S. Department of Transportation (USDOT) regulation known as “Section 4(f).” (Note: the STB is an independent agency and is not subject to Section 4(f) requirements). 23 Code of Federal Regulations (CFR) 774 and 49 U.S.C. 303 mandate that the Secretary of Transportation shall not approve any transportation project requiring the use of publicly owned parks, recreation areas or wildlife and waterfowl refuges, or significant historic sites, regardless of ownership, unless there is no prudent and feasible alternative to using that land, and the program or project includes all possible planning to minimize harm to the public park, recreation area, wildlife or waterfowl refuge, or significant site, resulting from that use. Because FRA is a USDOT agency, they could not provide funding for the project if the Board authorizes construction and operation of an alternative that requires the use of resources protected under Section 4(f) of the USDOT Act if there is a prudent and feasible alternative that does not use Section 4(f) resources, unless the use would result in *de minimis* impacts to Section 4(f) resources, which do not require avoidance. Note: the Willow-Connector 1-Mac West alternative would traverse the Willow Creek State Recreation Area, Nancy Lake State Recreation Area, Little Susitna Recreation River, and Susitna Flats State Game Refuge. The Houston North Segment would cross the Little Susitna Recreation River. These recreation and refuge areas are all Section 4(f) resources and FRA funding for any rail line alternative affecting these resources could be prohibited.

- g. Identify sites in the proposed project area that are known to or might have been contaminated by hazardous materials, identify sites that are regulated hazardous waste facilities, and describes the potential impacts of constructing and operating the proposed rail line on or near known hazardous materials and waste sites.

12. Socioeconomics

The EIS will:

- a. Analyze the effects of a potential influx of construction workers and the potential increase in demand for local services interrelated with natural or physical environmental effects.
- b. Propose mitigative measures to minimize or eliminate potential project adverse impacts to social and economic resources, as appropriate.

13. Environmental Justice

The EIS will:

- a. Evaluate the potential impacts of each alternative, including construction and operation of the rail lines, on local and regional minority populations and low-income populations.
- b. Propose mitigative measures to minimize or eliminate potential project impacts on environmental justice issues, as appropriate.

Cumulative Impacts

The EIS will analyze cumulative impacts for the alternatives for the proposed construction and operation of new rail facilities on the human and natural environment, or in the case of the no-action alternative, of the lack of these activities. SEA will analyze the potential additive effects of the proposed action and alternatives to the effects on applicable resources of relevant past, present, and reasonably foreseeable projects or actions in the area of the proposed action. SEA will determine appropriate time and geographic boundaries for applicable resource-specific analyses in order to focus the cumulative impacts analysis on truly meaningful effects. Resources addressed may include the categories of geology and soils, water resources including wetlands and other waters of the U.S., biological resources, cultural and historic resources, subsistence, air quality, noise and vibration, energy resources, transportation safety and delay, navigation, land use, socioeconomics as they relate to physical changes in the environment, and environmental justice. The EIS will review all relevant past, concurrent, and reasonably foreseeable actions that could result in collectively significant impacts to each of the categories of impacts listed above, and to any other categories of impacts that may be addressed as a result of comments received during the scoping process or the Draft EIS comment period.

By the Board, Victoria Rutson, Chief, Section of Environmental Analysis.

Anne K. Quinlan
Acting Secretary