DEPARTMENT OF THE ARMY
UNITED STATES ARMY GARRISON, ALASKA

FINAL ENVIRONMENTAL ASSESSMENT

CONSTRUCTION AND OPERATION OF A RAILHEAD FACILITY AND TRUCK LOADING COMPLEX

FORT WAINWRIGHT, ALASKA

AUGUST 2007

APPROVED BY:

DAVID L. SHUTT
COL, AR
Commander, US Army Garrison Alaska

2 Aug 2007
Date

This Page Intentionally Left Blank

FINAL FINDING OF NO SIGNIFICANT IMPACT

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the potential environmental impacts prior to undertaking a course of action. Within the Department of the Army, NEPA is implemented through regulations promulgated by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500-1508), with supplemental requirements provided under Army Regulations 32 CFR Part 651, *Environmental Analysis of Army Actions*. In adherence with NEPA and 32 CFR Part 651, the US Army Garrison Alaska (USAG Alaska) has prepared an Environmental Assessment (EA) to consider the environmental effects of a proposed railhead facility and truck loading complex at Fort Wainwright, Alaska.

Description of Action: USAG Alaska proposes to construct and operate a new railhead facility and truck loading complex at Fort Wainwright that would support the mission of the U.S. Army Alaska (USARAK). USARAK units were transformed into a Stryker Brigade Combat Team (SBCT) in 2004, and as part of their mission, they must be able to deploy within 96 hours (four days). The proposed railhead facility and truck loading complex would decrease the current deployment time to no more than 96 hours by increasing the existing train loading capacity from 49 rail cars per day to 80 to 100 rail cars per day.

Under the Proposed Action the new railhead facility and truck loading complex would be in close proximity to supply warehouses and ammunition supply points, in addition to being located near existing rail lines. The complex would have the following features: reinforced loading infrastructure, capability for year-round transfer and loading of equipment, truck loading capabilities for 10 vehicles at a time, truck loading and unloading support at variable heights, and indoor transfer and loading capability. After the completion of the new railhead facility and truck loading complex, USAG Alaska would decommission the existing railhead facility.

The two alternatives proposed are:

- Alternative 1: Proposed Action – Construction and operation of a new railhead facility and truck loading complex and decommissioning of the existing railhead facility
- Alternative 2: No Action – Continued use of the existing railhead facility

Other alternatives, including expanding the existing railhead facility, were considered and eliminated because they did not satisfy the purpose and need or objectives of the proposed project or support the Army's mission.

Procedure: An analysis of the potential environmental impacts associated with both alternatives is discussed in the *Environmental Assessment for the Construction and Operation of the Railhead Facility and Truck Loading Complex, Fort Wainwright, Alaska, June 2007.* The findings of this EA are incorporated into this final decision document. Potential resource related issues and impacts were determined relevant if they fell within the scope of the Proposed Action, if they suggested different actions, or if they influenced the decision on the Proposed Action.

Summary of Comments: Public comments were welcomed after the release of the EA and Draft Finding of No Significant Impact in June 2007. Only one comment was received. This comment was from the Alaska Department of Natural Resources, Office of Habitat Management and Permitting (OHMP), and stated that a Fish Habitat Permit from the OHMP would not be necessary because the

project does not appear to affect a stream that supports fish. OHMP stated that they have no objection to the project.

Discussion of Anticipated Environmental Effects: Implementation of Alternative 1, the Proposed Action, would result in minor impacts to the following resources:

- Air quality due to emissions of carbon monoxide;
- Soils due to soil compaction and increased erosion;
- Water resources (surface water, groundwater, and floodplains) due to the further canalization of Clear Creek, stormwater runoff and associated sedimentation, and floodplain alterations;
- Biological resources due to loss of vegetative habitat and displacement of wildlife species; and
- Transportation due to increased truck traffic on Badger and Montgomery roads.

Implementation of the Proposed Action would result in moderate impacts on wetlands. Construction of the railhead facility, truck loading complex, and associated infrastructure would require clearing and filling of potentially 62.5 acres of wetlands. USAG Alaska has entered into consultation with the U.S. Army Corps of Engineers to conduct a wetland delineation to accurately capture the total amount of potential wetland disturbance and to apply for a Clean Water Act Section 404 permit.

The Proposed Action would contribute to minor cumulative impacts on air quality, geology and soils, water resources, wetlands, biological resources, cultural and historic resources, hazardous materials and hazardous waste, noise, socioeconomics, and transportation.

Under Alternative 2, the No Action Alternative, a new railhead facility, truck loading complex, and their associated infrastructure would not be constructed. The existing facilities would remain in use under the current operating practices and would not be decommissioned. Therefore, there would be no impact on environmental and human resources. However, Army mission objectives would not be achieved.

Mitigation Measures: The following measures, which are identified in Section 4.0 of the *Environmental Assessment for the Construction and Operation of the Railhead Facility and Truck Loading Complex, Fort Wainwright, Alaska,* will be undertaken as part of the Proposed Action.

- Minimize exposure time of soils during construction and the extent of vegetation disturbance.
- Develop sites to minimize clearing and grading, cut-and-fill actions, and new impervious surfaces.
- Finalize preconstruction environmental survey to ensure construction site does not contain petroleum or hazardous material contamination.
- Protect the vegetative buffer areas around the Chena River and Flood Control Channel B, as well as Clear Creek, where practical.
- Fill area would be minimized for wetlands through site-specific design and limiting construction staging to upland areas. All mitigation measures required as a condition of receiving a Clean Water Act Section 404 permit will be followed.
- Where necessary, natural drainage patterns would be maintained by installing culverts of adequate number and size to prevent flooding or excessive drainage of adjacent wetlands.
- No fill or construction materials would be stockpiled in wetlands or waters of the U.S. All equipment operation would be confined to the project footprint to prevent unnecessary damage to adjacent wetlands and vegetation.
- Clearing of vegetation areas must occur before 1 May or after 15 July to minimize impacts on ground and tree nesting birds, unless it can be confirmed that no active nests are present.

Conclusions: A review of available sites on the installation shows there are no practicable alternative locations capable of meeting the Army's requirements that is situated outside of a floodplain or that do not contain wetlands. Based on the review of the information contained in the EA and intended mitigation measures, USAG Alaska has determined that the Proposed Action would not significantly affect the quality of the environment within the meaning of NEPA Section 102(2)(C). The preparation of an EIS for the Proposed Action is not required.

Point of Contact: For further information, please direct requests to Ms. Carrie McEnteer, Directorate of Public Works, ATTN: IMPA-FWA-PWE (McEnteer), 1060 Gaffney Road #4500, Fort Wainwright, AK 99703-4500. The EA and FNSI are available at http://www.usarak.army.mil/conservation/NEPA_home.htm.

APPROVED BY:

DAVID L. SHUTT
COL, AR
Commander, US Army Garrison Alaska

2 Aug 2007
Date

This Page Intentionally Left Blank

Environmental Assessment

Construction and Operation of a Railhead Facility and Truck Loading Complex Fort Wainwright, Alaska

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
AFB	Air Force Base
AQCR	Air Quality Control Region
AR	Army Regulation
ARRC	Alaska Railroad Corporation
BHP	Brake Horsepower Rating
BLM	Bureau of Land Management
BMP	Best Management Practice
CEA	Cumulative Effects Analysis
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
CO	carbon monoxide
dbh	diameter-breast-height
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Mapping
FNPA	Finding of No Practicable Alternative
FNSB	Fairbanks North Star Borough
FNSI	Finding of No Significant Impact
ITAM	Integrated Training Area Management
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standard for Hazardous Air Pollutants
NHL	National Historic Landmark
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NO_x	nitrogen oxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetland Inventory
O_3	ozone
Pb	lead
PCB	polychlorinated biphenyl
PFO	palustrine forested
$PM_{2.5}$	Particulate Matter with a diameter of 2.5 micrometers or less
PM_{10}	Particulate Matter with a diameter of 10 micrometers or less
PSS	palustrine scrub shrub
ROD	Record of Decision
ROLF	Railcar Off-Loading Facility
SBCT	Stryker Brigade Combat Team
SHPO	State Historic Preservation Officer

SIP	State Implementation Plan
SO_2	sulfur dioxide
SOP	Standard Operating Procedure
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAG Alaska	U.S. Army Garrison, Alaska
USARAK	U.S. Army Alaska
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

The following sections introduce the action proposed by the U.S. Army Garrison, Alaska (USAG Alaska); discuss the background of the Proposed Action; and present the purpose, need, and objectives of the Proposed Action. This is followed by a discussion of the scope of the analysis, including issues of concern, the decision to be made, the related documentation prepared under the National Environmental Policy Act (NEPA), and a listing of Federal permits required to support the Proposed Action.

1.1 Introduction

Under the Proposed Action, USAG Alaska would construct a new railhead facility and truck loading complex and decommission the existing railhead facilities on the Main Post of Fort Wainwright, Alaska. The existing facilities are dated, not up to current Army deployment standards, and are scattered throughout Main Post resulting in inefficient shipping and receiving operations. The proposed new railhead facility and truck loading complex would provide up-to-date facilities, including reinforced loading docks, vehicle hardstands and end ramps, increase loading and unloading capacity, and consolidate operations at a single location for efficient shipping and receiving.

1.2 Background

The Fort Wainwright Military Reservation is located in central Alaska, north of the Alaska Range in the Tanana River Valley. The installation lies approximately 120 miles south of the Arctic Circle near Fairbanks, and encompasses approximately 1,645,825 acres, with the Main Post containing approximately 13,423 acres. The Main Post is situated on a flat alluvial plain and is bordered on the west by Fairbanks and on the other three sides by a combination of open space owned by the State of Alaska, the Fairbanks North Star Borough (FNSB), the city of Fairbanks, and private entities. Fort Wainwright has a northern continental climate typical of the Alaskan Interior, which is characterized by short summers with moderate temperatures, long and cold winters, and low precipitation or humidity. Weather is influenced by mountain ranges on three sides, usually forming an effective barrier to the flow of warm and moist, maritime air. The surrounding uplands also cause the settling of cold Arctic air into the Tanana Valley lowlands.

The Army is currently undergoing a major organizational transformation that includes most aspects of the Army's doctrine, training, leader development, organizations, installations, materiel, and Soldiers. As a result, an increase in military activity in Alaska is inevitable. This increase will reflect the type and level of training that the Army must have as it transforms and prepares to respond to new challenges in support of National Defense in Alaska (USARAK, 2004a). For additional information, see Final Environmental Impact Statement for Transformation of U.S. Army Alaska, Vol. 1-2 at http://www.usarak.army.mil/conservation.

The Department of the Army issued a Record of Decision (ROD) in May 2004 to transform U.S. Army Alaska (USARAK) forces to help meet the Nation's security requirements of the 21st century. Towards this purpose, the 172nd Infantry Brigade (Separate) at Fort Wainwright and Fort Richardson, Alaska, began transformation into a Stryker Brigade Combat Team (SBCT), and the 1-501st Parachute Infantry Regiment began expanding to the 4-25th Airborne Brigade Combat Team (ABCT) in June 2005. The 172nd SBCT was subsequently renamed the 1/25th SBCT. These units are presently stationed at Fort Wainwright and Fort Richardson, with additional major training facilities at Donnelly Training Area (formerly Fort Greely). USARAK's transformation is a necessary step to fill a current shortfall as the Army develops its future force and combat systems over the next 30 years. Various activities on USARAK's military training lands would be altered to provide a baseline capability and foundation to support Army transformation requirements.

1.3 Purpose and Need and Project Objectives

The purpose and need for the Proposed Action is to meet the military deployment requirements that would support the mission of USARAK, specifically rapid deployment of the SBCT at Fort Wainwright (loading up to 100 railcars per day). The Proposed Action would accomplish the purpose and need through the development and operation of a new railhead facility and truck loading complex at Fort Wainwright. The existing railhead facility has a loading capacity of approximately 49 railcars per day, due to the dated infrastructure and inefficient siting of the existing railhead facility, warehouses, and truck loading complex.

The project objective is to increase deployment capability at Fort Wainwright so that the entire SBCT can be deployed within 96 hours, as required by the Army's SBCT mission. To meet this objective, USAG Alaska proposes to:

- Increase train loading capacity by up to almost 100 percent, from approximately 49 rail cars per day to 80 to 100 rail cars per day;
- Construct a new railhead facility and truck loading complex with the following features:
    - Reinforced loading infrastructure;
    - Capability for year-round transfer and loading of equipment;
    - Truck loading capacity for ten vehicles at one time;
    - Truck loading and unloading support at variable heights; and
    - Indoor transfer and loading.
- Locate the new railhead facility and truck loading complex in close proximity to supply warehouses and ammunition supply points; and
- Locate the new railhead facility and truck loading complex deployment facilities near existing rail lines.

In addition, USAG Alaska proposes to decommission the existing railhead facility following construction of the proposed new railhead facility and truck loading complex.

1.4 Scope of Environmental Analysis and Decision to Be Made

This Environmental Assessment (EA) considers direct, indirect, and cumulative effects of the Proposed Action and the No Action alternatives. It was prepared in accordance with the NEPA of 1969 [42 USC 4321 *et seq*.], Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) Parts 1500-1508, and Army Regulations (ARs) 32 CFR Part 651 (*Environmental Analysis of Army Actions*). A specific requirement for this EA is an appraisal of impacts of the proposed project, including a determination of a Finding of No Significant Impact (FNSI) or a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS).

The construction and operation of the proposed railhead facility, truck loading complex, and ancillary structures (e.g., administration buildings, access roads, fences, and lighting) within the Fort Wainwright Main Post is the focus of this EA. This EA provides a discussion of the affected environment and the potential impacts to physical, natural, and socioeconomic resources. The following resources were identified and analyzed for the Proposed Action and No Action alternatives:

- Air Quality
- Geology and Soils
- Water Resources (surface water, groundwater, and floodplains)

- Wetlands
- Biological Resources (vegetation, wildlife, and protected species)
- Cultural and Historic Resources (including aesthetics)
- Hazardous Materials and Hazardous Waste
- Noise
- Socioeconomics, Environmental Justice, and Protection of Children
- Transportation

Health and Safety and Land Use were also reviewed; however, such resources would not be affected, so a detailed analysis is not presented in Section 3.0. During construction and operation of the railhead facility and truck loading complex, USAG Alaska would follow existing standard operating procedures (SOPs) for the handling and transfer of hazardous materials and comply with occupational health and safety standards. Because SOPs are in place and operational conditions during deployment are expected to improve through the modernization of equipment, health and safety impacts are not discussed further in Section 3. The location of the railhead facility and truck loading complex and removal of the existing railhead facility would be consistent with USAG Alaska's *Real Property Master Plan for Fort Wainwright (Document in preparation; USAG Alaska Master Planning Office, Fort Wainwright, Alaska)*. Therefore, no land use conflicts would occur under the Proposed Action, and this issue is not discussed further in Section 3.0.

This EA will provide the decision-maker, the Commander of USAG Alaska, with the information necessary to evaluate the impacts associated with the Proposed Action and No Action alternatives. The decision-maker will take into account technical, economic, environmental, and social issues, and the Proposed Action's ability to meet the purpose and need and the objectives. The following reasonable alternatives have been evaluated for presentation to the decision-maker:

- Alternative 1: Proposed Action – Construction and operation of a new railhead facility and truck loading complex and decommissioning of the existing railhead facility
- Alternative 2: No Action – Continued use of the existing railhead facility

Related Environmental Documentation

In 2004, USARAK prepared the *Final Environmental Impact Statement for Transformation of U.S. Army, Alaska* which describes the conversion of USARAK's Light Infantry Brigade to a SBCT (USARAK, 2004). The EIS outlines future military operations by the SBCT combat team, the primary user of the proposed railhead facility. In March 2007 USAG Alaska approved the *Integrated Natural Resource Management Plan for Army Installations* in Alaska (USAG Alaska, 2006b). This plan describes standard policies and procedures for managing natural resources to ensure sustainability of Army lands. These policies and procedures apply to the Proposed Action described in this EA.

1.5 Issues of Concern

Relevant environmental and social concerns regarding the construction and operation of the proposed railhead facility and the truck loading complex include potential impacts on air quality, geology and soils, water resources, wetlands, biological resources, cultural and historic resources, hazardous substances, noise, socioeconomics, and transportation.

1.6 List of Federal Permits, Licenses, or Entitlements

Table 1.6-1 lists the applicable and relevant laws and regulations and their associated regulatory agency consultations and permits that would be required with the implementation of the Proposed Action. A description of each law or regulation is provided in Appendix A.

Table 1.6-1. List of Laws, Regulations, and Associated Consultations and Permits
Alaska Department of Natural Resources (ADNR) Alaska State Anadromous Fish Act AS 41.14.870 ADNR Fishway Act AS 41.14.840
Alaska Department of Environmental Conservation (ADEC) Air Quality Operating Permit No. 236TVP01
American Antiquities Act [16 USC 431 et seq.]
American Indian Religious Freedom Act [42 USC 1996]
Archeological and Historic Preservation Act [16 USC 469 et seq.]
Archaeological Resources Protection Act [16 USC 470aa et seq.]
Bald and Golden Eagle Protection Act [16 USC 668 et seq.]
Clean Air Act (CAA) [42 USC 7401 et seq.]
CAA: National Ambient Air Quality Standards (NAAQS) State Implementation Plan (SIP) [42 USC 7409 et seq.]
Clean Water Act (CWA) [33 USC 1251 et seq. Sections 401 and 402]
CWA [33 USC 1313 Section 404]
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Superfund)
Endangered Species Act (ESA) of 1973 [16 USC 1531 et seq.]
Executive Order (EO) 11988: Floodplain Management
EO 11990: Protection of Wetlands
EO 12088: Federal Compliance with Pollution Control Standards [43 FR 47707 October 17, 1978]
EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations [59 FR 7629 February 16, 1994]
EO 13045: Protection of Children from Environmental Health Risks and Safety Risks
EO 13112: Invasive Species [64 FR 6183 February 8, 1999]
EO 13186: Responsibilities of Federal Agencies to Protect Migratory Birds [66 FR 63349 December 6, 2001]
EO 13007: Indian Sacred Sites [61 FR 26771]
Farmland Protection Policy Act [7 USC 4201 et seq.]
Fish and Wildlife Coordination Act [16 USC 661-667e March 10, 1934]
Hazard Communication Standard [29 CFR 1910.1200]
Hazardous Materials Transportation Law [49 USC 51015127 et seq.]
Magnuson-Stevens Fishery Conservation and Management Act [16 USC 1801 et seq.]
Migratory Bird Treaty Act [16 USC 703 et seq.]
National Historic Preservation Act, as amended [16 USC 470 et seq.]
Native American Graves Protection and Repatriation Act [25 USC 3001]
NEPA [42 USC 4321 et seq. 40 CFR 1500-1508] and Army Regulations 200-1; 200-4; 32 CFR Part 651
Noise Control Act [42 USC 4901 et seq.]

Table 1.6-1. List of Laws, Regulations, and Associated Consultations and Permits
Occupational Safety and Health Act [29 USC 651 et seq.]
Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities [40 CFR 112]
Protection of Historic Properties [36 CFR 800]
Safe Drinking Water Act [42 USC 300j-9(i) December 12, 1974]
Toxic Substances Control Act [42 USC 2601 et seq.]

This Page Intentionally Left Blank

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The following sections describe the Proposed Action (Alternative 1), construction and operation of a new railhead facility and truck loading complex and decommissioning of the existing railhead facility; and the No Action Alternative (Alternative 2), continued use of the existing railhead facility. A discussion of alternatives considered and eliminated from detailed study is presented at the end of this section. A summary of the potential environmental effects of both alternatives is also presented.

2.1 Proposed Action

Under the Proposed Action, USAG Alaska would construct and operate a new railhead facility and truck loading complex in the southwestern portion of Fort Wainwright's Main Post, and decommission the existing railhead facility northeast of Ladd Army Airfield (Figure 2.1-1). The railhead facility and truck loading complex and its associated infrastructure (e.g., administration buildings and storage and staging areas) would encompass a contiguous area of up to 83 acres. Based on the final design and layout, the overall size of the contiguous area could be smaller; however, for the purposes of evaluating impacts in this EA, the proposed facility is considered to be 83 acres. The proposed construction of the additional rail lines and access roads includes an additional 19 acres of land disturbance, for a total of 102 acres of land disturbed for the development of the proposed railhead facility and truck loading complex and associated rail lines and access roads.

The proposed railhead facility and truck loading complex area is near existing SBCT maintenance and supply facilities on undeveloped land that is used for small unit training. The small unit training areas include all or portions of a confidence course (consisting of 30 obstacles), a 40-foot rappel tower, the Manchu Pick-up Zone (unpaved prepared surface centered within a cleared area used for special landing and takeoff operations for rotary wing aircraft), the Buffalo Trench (a trench line objective utilized for squad level training), and Splinter Village (an urban training area). The area is used for ground and air combat forces to practice movements and tactics. Blank ammunition rounds, flares, and explosives are also used to simulate grenade and artillery in the area.

The proposed railhead facility and truck loading complex area is bordered to the north by Montgomery Road, to the south by an existing ARRC rail line, to the east by Flood Control Channel B (a flood control ditch), and to the west by Old Badger Road.

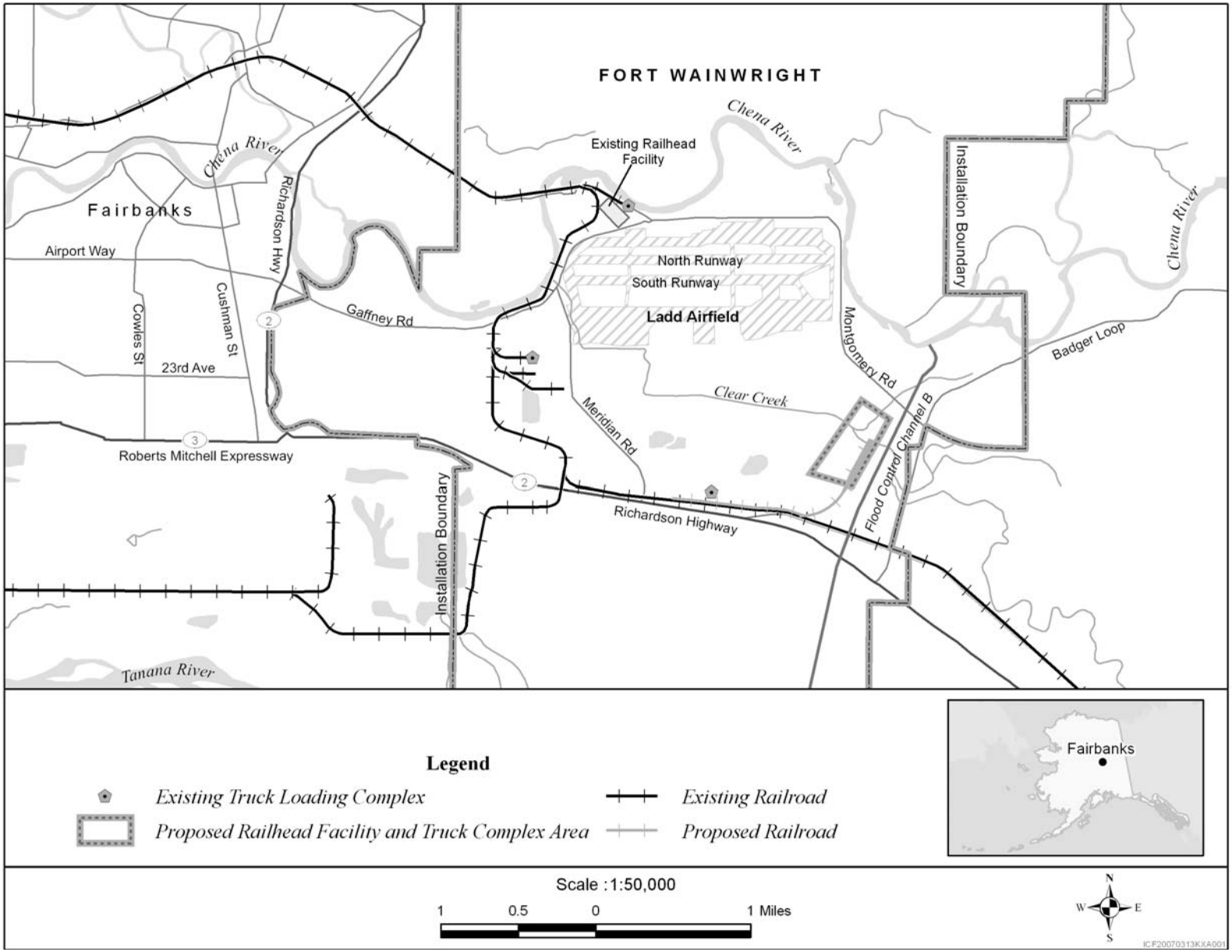


Figure 2.1-1. Map of Proposed Location of Railhead Operations and Truck Loading Facility

2.1.1 Railhead Facility and Truck Loading Complex

The proposed railhead facility and truck loading complex would be constructed in several phases over three or more years. The initial construction activities would focus on the basic elements of the railhead facility and would include:

- Clearing and grubbing 30 acres;
- Installation of up to 2.8 miles of track, comprised of:
    - Loading track – four lengths at 1,400 feet each (within railhead facility);
    - Ladder track – four branches for a total of 2,501 feet (within and outside of railhead facility); and
    - Single track – 1,801 feet (from railhead facility to ARRC track)
    - Side track – 4,573 feet (from single track and paralleling ARRC track)
- Up to seven rail line switches; and
- Access roads, including:
    - Two roads, 12 feet wide each along both sides of the single track;
    - One road, 12 feet wide along one side of the side track; and
    - Three roads, 30 feet wide by 66, 226, and 39 feet long to the proposed railhead facility and truck loading complex from existing roads.

After the completion of the basic elements of the railhead facility, the next phase of construction would focus on the infrastructure of the railhead facility and would include all or some of the following elements:

- A 6,000 square foot shipping and receiving building;
- 10 rail loading and unloading ramps;
- Side loading ramp;
- A 200 feet by 1,400 feet gravel area surrounding the loading track;
- High mast lighting between tracks;
- Access roads;
- Clearing and grubbing an additional 35 acres;
- Hard pack loading surfaces;
- Incoming train inspection camera pit; and
- Perimeter fencing (8 feet high with three-strand barb wire).

After the completion of the infrastructure of the railhead facility, the next phase of construction would focus on the truck loading complex and would include:

- 10 truck loading ramps;
- A 4,000 square foot operational building;
- 10 hardstands;
- Latrines;
- A 24,000 square foot general purpose warehouse;
- A connex storage area (connex containers are 20 to 40 foot steel shipping containers);
- A fire protection system;
- Communication and electrical infrastructure;
- Radio frequency identification system; and
- Lightning protection.

The proposed railhead facility, truck loading complex, and associated access roads would encompass up to 83 acres. The single track and side track and their associated roads and rights-of-way (200 feet for the single track and 100 feet for the side track) would encompass approximately 19 acres. Figure 2.1-2 shows the detailed map of the proposed facilities, including the proposed locations of structures, staging areas, rail tracks and access roads. The proximity of the proposed facilities to surrounding infrastructure (i.e., existing roads, railroads, and buildings) and area of potential contamination (Operable Units [OUs]) are also displayed in Figure 2.1-2.

New buildings associated with the Proposed Action would tie into the existing on-Post utility infrastructure, to include steam, water, condensate, sewer, and electrical utilities. The utility corridor to the proposed railhead facility and truck loading complex would be run along one of the three access roads leading to area.

Activities to be conducted prior to construction of the proposed railhead facility and truck loading complex would involve site grubbing, clearing and grading, stockpiling of timber; and surveying and siting of proposed structures, utility connections, and access roads. The site clearing and grading would be completed in approximately one month, with the surveying and siting of the proposed facility completed within two weeks of clearing and grading activities. The design and construction of the infrastructure and structures associated with the Proposed Action would account for regional earthquake hazards. Clearing, grading, surveying, and siting could begin as early as the Fall of 2007, with construction beginning in Spring, 2008. Each phase of construction would take up to two years to complete.

Several investigative surveys within the proposed project area would be completed prior to construction. A geotechnical survey would evaluate soil structure for constructability, to include groundwater samples to determine location and quantity, as well as soil quality to detect any potential contamination. The level of sampling for contaminants would be dependent upon initial field screening results. Should areas of permafrost be encountered during the geotechnical survey, sufficient fill thickness or insulation would be incorporated into the facility design to prevent detrimental thermal degradation. In addition, a formal wetland delineation and function and value assessment would be completed that would supplement existing wetland data presented in this EA and fulfill the wetland permitting requirements as administered by the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA). Finally, a pedestrian survey for surface munitions constituents would be conducted by qualified Explosive Ordnance Division personnel within the project area. This survey would not include techniques to address potential munitions constituents that would be located underground, as a review of past use in the area did not indicate anything other than small arms ammunition, blanks, and simulators that were used in the area. Any munitions constituents would be removed and disposed of prior to any site-related construction activity.

The results of these surveys would be considered during the design and siting of the proposed facilities. If the surveys indicate that contamination, wetlands, or other siting constraints are present within the proposed project area, additional sampling or surveys would be conducted to determine the extent of the constraint, and the results would be used to make a determination on whether the proposed facilities can be reconfigured to avoid such areas or if the siting constraints should be addressed (i.e., removal of contamination). In addition, during construction of the railhead facility and truck loading complex, USAG Alaska would follow existing SOPs for the handling and transfer of hazardous material and would adhere to relevant and applicable occupational health and safety standards listed under 29 CFR Parts 1910 and 1920.

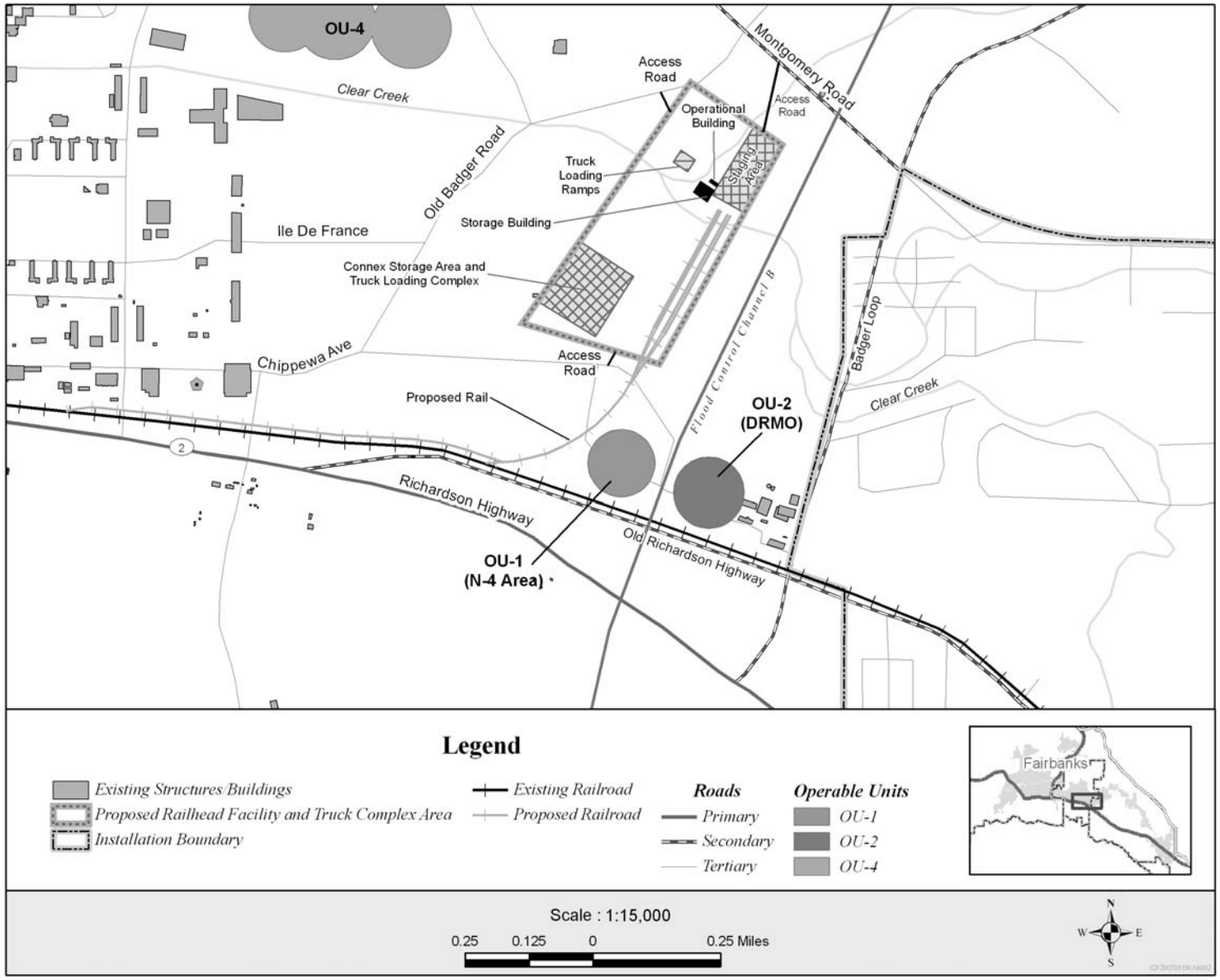


Figure 2.1-2. Detailed Map of Proposed Facilities

Construction of the infrastructure associated with the initial development of the railhead facility would take approximately four months. All fill material and ballast for the proposed railhead facility and truck loading complex and associated rail lines would either be obtained from existing onsite stockpiled sources or would be purchased from off-site sources. The construction of the additional railhead elements and for the truck loading complex would each take approximately four months to complete.

Best Management Practices (BMPs) would be implemented during all construction activities. The BMPs would be developed in accordance with the existing Fort Wainwright Storm Water Pollution Prevention Plan and State and local sediment and erosion control ordinances, and Federal and State Pollution Discharge Elimination System permits would be followed. Such measures may include:

- Silt fencing and use of hay bales to control sediment transport;
- Stormwater retention/detention basins;
- Temporary stormwater ditches and other engineering controls;
- Temporary reseeding;
- Wetting the construction area to control fugitive dust emissions; and
- Stabilizing of all disturbed areas resulting from project construction using native vegetation to minimize erosion and subsequent sedimentation of wetlands and streams.

In addition to the BMPs, Fort Wainwright would implement the following measures:

- The Army has management responsibility for vegetation rights at the proposed site. There could be a timber sale within the construction area to clear timber for the railhead operations facility and truck loading complex. Timber sales would be coordinated by USAG Alaska and comply with existing timber harvest regulations (See Appendix C).
- In accordance with the Fort Wainwright's adherence to the Migratory Bird Treaty Act, clearing of vegetation would occur before 1 May or after 15 July to minimize impacts on ground and tree nesting birds. Clearing of vegetation may occur from 1 May to 15 July if surveys confirm that no active nests are present in the project area.

The Army has determined, pursuant to EO 11990 – *Protection of Wetlands* and EO 11988 – *Protection of Floodplains*, that there is no practicable alternative to constructing the project within wetlands and a floodplain and that adverse impacts of doing so would be minimized if the Proposed Action is carried forward (see Appendix E).

Prior to any potential construction, USAG Alaska would submit an individual CWA, Section 404 permit application detailing exact amounts of wetlands to be filled and acres affected. USAG Alaska would comply with all permitting conditions.

In compliance with Sections 106 of the National Historic Preservation Act, all undertakings associated with this proposed action would be presented to the Alaska State Historic Preservation Officer for review and concurrence prior to construction.

2.1.2 Operation of the Proposed Railhead Facility and Truck Loading Complex

The SBCT, in accordance with its mission, would be required to deploy within 96 hours (four days) when called upon to respond to a wartime or training situation. During a deployment event, SBCT would load up to 100 railcars per day resulting in one train arriving and departing Fort Wainwright each day during the 96-hour (four-day) period. SBCT estimated there would be approximately four deployments per year.

Implementation of the Proposed Action would not increase the number of deployments already occurring each year and would not increase the annual rail activity to and from Fort Wainwright.

During a deployment event, SBCT vehicles would be driven and hauled directly to the proposed railhead facility from existing maintenance and storage facilities. The vehicles would be driven directly onto flatbed railcars from the rear loading ramps. Each 1,400-foot loading track can hold up to 20 flatbed rail cars. The SBCT equipment and supplies would be transported to the proposed truck loading complex for consolidation prior to shipment. Once the equipment and supplies are consolidated it would be transported to the proposed railhead loading area and side-loaded onto the flatbed railcars. The total number of truck trips between the SBCT maintenance and storage facilities to the truck loading complex would not increase current levels. However, because the proposed railhead facility and truck loading complex would (1) be co-located; (2) be closer to the existing the SBCT maintenance and storage facilities; and (3) have a greater capacity than the existing railhead facility and truck loading complex, the distance the vehicles would travel and the duration of their operation would be less than current levels (see Figures 2.1-1 and 2.1-2).

The ARRC owns and operates a rail line that enters Fort Wainwright from the northwest corner of the Post, traverses the Post, and exits from the southwest corner. This rail line is connected to the greater Alaska Railroad network that extends from Seward, Alaska, through Anchorage and Fairbanks, and ending at Eielson Air Force Base (AFB) near North Pole, Alaska. The Fort Wainwright rail segment lies along the rail line from Fairbanks to Eielson AFB and services commercial freight traffic. ARRC trains make approximately three round trips per day for freight transport between Fairbanks and North Pole (ARRC, 2006a). In addition, trains that transport coal to supply Fort Wainwright's coal-fired power plant make four round trips per week, for a total of 25 round trips per week for freight and coal transport.

The proposed railhead facility would tie into the existing track at Fort Wainwright. All inbound and outbound trains would travel along this track. Upon completion of its mission, SBCT equipment would be transported back to Fort Wainwright. Except for unloading and transferring the equipment from the proposed railhead facility and truck loading complex, there would be no change over the existing operations for returning to Fort Wainwright.

USAG Alaska would continue to operate under Army Regulation (AR) 200-1, which addresses environmental protection and enhancement procedures for issues such as air quality, hazardous material management, and water resources management. USAG Alaska follows Department of Transportation Regulations (49 CFR Parts 100-185) for the transfer of hazardous material. During operation of the railhead facility and truck loading complex, USAG Alaska would follow existing SOPs for the handling and transfer of hazardous material and would adhere to relevant and applicable occupational health and safety standards listed under 29 CFR Parts 1910 and 1920. In addition, a Spill Pollution Prevention and Countermeasure Plan would be employed to prevent spills and effectively address cleanup strategies before the spill contaminants could reach surface water or groundwater resources.

2.1.3 Decommission Existing Railhead Facility

USAG Alaska proposes to decommission the existing railhead facility following construction of the new railhead facility and truck loading complex. The existing railhead facility, rail spurs, and a concrete platform is located in the northwest corner of the Cold War Historic District, but not within the boundaries of the Ladd Field National Historic Landmark (NHL). The existing railhead facility is considered a National Register eligible property that is adjacent to both the NHL and the Cold War Historic District. However, since the mid-1940s, the existing railhead facility has undergone extensive modifications related to the development and utility of operations on Ladd AFB and Fort Wainwright (USAG Alaska, 2006c).

Decommissioning would include the removal of portions of the railhead facility infrastructure (rail spurs and loading ramps) as agreed upon under the Section 106 process of the National Historic Preservation Act. Decommissioning would also include maintaining the grade of the rail bed and grading the surrounding area where facilities were located to match the surrounding topography, and revegetating the area with native species. All material removed from the existing railhead facility would be disposed of in accordance with applicable and relevant Federal, State, and local waste disposal standards.

The existing railhead facility has been identified as an OU in a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) ROD between USAG Alaska, the State of Alaska, and EPA (EPA, 1997). The ROD indicates that soil and groundwater contamination is present at the existing railhead facility and specifies the measures that would be used to remediate the site. The decommissioning of the existing railhead facility would not disrupt or interfere with the ongoing remediation of the OU.

2.2 No Action Alternative

Under the No Action Alternative, a new railhead facility, truck loading complex, and their associated infrastructure would not be constructed. The existing facilities would remain in use under the current operating practices and would not be decommissioned. The deployment of the following equipment would not change under the No Action Alternative:

- Aviation units and their assets;
- 309 Stryker vehicles;
- 72 HEMTT vehicles; and
- More than 200 20-foot containers.

The current railhead facility is located northwest of Ladd Army Airfield at Fort Wainwright. Under the current system, SBCT vehicles are taken directly to the railhead facility; while equipment and supplies are transported to one of the separate truck loading complexes for consolidation prior to shipment (see Figure 2.1-1). Once the equipment and supplies are consolidated, the shipment is transported across Main Post to the railhead facility. The trains at the railhead facility are backed into offloading ramps at the end of three short rail spurs. Units from the SBCT load and unload containers using a single truck that accesses the railcars via a ramp at the end of the rail spur. Containers for deployment must be carefully sequenced by priority – placing the most-needed containers at the end of the train. Deployment rates are currently limited to 49 railcars per day because only one container can be loaded or unloaded at a time and because of limitations imposed by sequencing of containers. At this rate, total deployment times exceed 168 hours (one week).

In addition, because the truck loading complex is not located in the immediate vicinity of the existing railhead facility, all SBCT cargo must be transported via tractor trailer across Fort Wainwright to the railhead facility, adding to the logistical challenge of the railcar container sequencing. Once the equipment is loaded onto the railcars, the train departs Fort Wainwright and travels to the Port of Anchorage for shipment.

2.3 Alternatives Considered and Eliminated from Detailed Study

USAG Alaska considered both modifying the existing facility and alternate siting locations on Post for the railhead facility and truck loading complex. The current railhead facility area is too small to fit the proposed structures necessary to fulfill the purpose and need and the stated objectives. The current

location of the railhead facility is also not proximate to the SBCT warehouses and ammunition supply facilities. The proposed location of the railhead facility and truck offloading complex is the only location on Post that has sufficient available space near the existing railroad, the SBCT supply warehouses, and ammunitions facility. Thus, alternate locations on the Post and modification of the existing facility were not considered for further analysis.

2.4 Summary of Environmental Consequences

This section summarizes the conclusions of the analyses based on the application of the described methodology. Table 2.4-1 contains a summary matrix of alternatives comparing their environmental consequences for the specific resource categories. The table describes the range of environmental consequences of the Proposed Action and the No Action alternatives discussed in Section 3.0. The qualitative terms used in the matrix are generally defined as:

- None – No measurable impacts are expected to occur.
- Minor – Short-term but measurable adverse impacts are expected. Impacts may have slight impact on the resource.
- Moderate – Noticeable adverse impacts that would have a measurable effect on a resource and are not short-term.
- Severe – Adverse impacts would be obvious, both short-term and long-term, and would have serious consequences on a resource. These impacts would be considered significant.

Table 2.4-1. Summary of Potential Environmental Effects for the Proposed Action and No Action Alternatives

Resource Area	Proposed Action	No Action Alternative
Air Quality	Minor	None
Geology and Soils	Minor	None
Water Resources (Surface Water, Groundwater, and Floodplains)	Minor	None
Wetlands	Moderate	None
Biological Resources (Vegetation, Wildlife, and Protected Species)	Minor	None
Cultural and Historic Resources (including Aesthetics)	Minor	None
Hazardous Materials and Hazardous Waste	None	None
Noise	None	None
Socioeconomics, Environmental Justice, and Protection of Children	None	None
Transportation	Minor	None

This Page Intentionally Left Blank

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the affected environment (existing conditions) and the environmental consequences for the Proposed Action and No Action alternatives. This section also describes recommended mitigation measures for the Proposed Action.

Health and Safety and Land Use were also reviewed; however, such resources would not be affected so a detailed analysis is not presented in this section. During construction and operation of the railhead facility and truck loading complex, USAG Alaska would follow existing SOPs for the handling and transfer of hazardous materials and comply with occupational health and safety standards. Because SOPs are in place and operational conditions during deployment are expected to improve through the modernization of equipment, health and safety impacts are not discussed further. The location of the railhead facility and truck loading complex and removal of the existing railhead facility would be consistent with USAG Alaska's *Real Property Master Plan for Fort Wainwright (Document in preparation; USAG Alaska Master Planning Office, Fort Wainwright, Alaska)*. Therefore, no land use conflicts would occur under the Proposed Action, and this issue is not discussed further.

Section 3.1 presents the overall methodology for evaluating the potential impacts on the affected resources (see Table 3.1-1 for a list of the affected interests). The methodology presents the considerations to evaluate the context and intensity of an impact and presents specific factors for the evaluation of significance.

3.1 Impact Assessment

Context and intensity are taken into consideration in the determination of a potential impact's significance, as defined at 40 CFR Part 1508.27. The context of an impact takes into account the affected region (region of influence), the affected interests, and the locality. In the case of the site-specific alternatives presented in Section 2.0, the affected region is the general location associated with the alternatives. The region of influence for each of the potentially affected resources is presented in Table 3.1-1 and is based on the potential impacts on the affected resource. The region of influence may be limited to the specific location of an alternative, the installation and surrounding area, or may include the entire airshed or watershed. The intensity of a potential impact refers to the impact's severity and includes consideration of beneficial and adverse impacts, the level of controversy associated with a project's impacts on human health, whether the action establishes a precedent for future actions with significant effects, the level of uncertainty about project impacts, or whether the action threatens to violate Federal, State, or local law requirements imposed for protection of the environment.

Table 3.1-1 presents the region of influence and the relevant factors in evaluating the context and intensity of a potential impact to determine if the impact may be significant.

Table 3.1-1. Factors Considered in Evaluating the Context and Intensity of a Potential Impact

Resource/Issue of Concern	Region of Influence	Factors
Air Quality	Northern Alaska Intrastate Air Quality Control Region (AQCR)	The degree to which the action affects attainment and maintenance of State and/or Federal air quality standards. Activities that do not exceed regulatory thresholds but result in a measurable change would be considered minor impacts.
Geology and Soils	Installation	The degree to which the action causes erosion resulting in soil loss, compaction that precludes establishment of native vegetation, or sediment delivery. Activities that would not result in uncontrolled erosion and adhere to Federal, State, and local BMPs would be considered minor impacts.
Water Resources (Surface Water, Groundwater, and Floodplains)	Watersheds	The degree to which the action increases sedimentation in waterways, degrades surface water or groundwater quality, or alters the floodplain. Activities that would not result in uncontrolled erosion/sedimentation and adhere to Federal, State, and local BMPs would be considered minor impacts. Activities that would not result in notable floodplain alteration or changing flood elevations or flows would be considered a minor to moderate impact.
Wetlands	Contiguous wetlands within Installation	The degree to which the action affects the functions and values of wetlands or whether the action violates Federal or State discharge permits. Activities that do not result in substantial wetland losses of regionally unique or rare wetlands and where suitable mitigation measures for wetland losses is available would be considered a minor to moderate impact.
Biological Resources (Vegetation, Wildlife, and Protected Species)	Installation and surrounding area	The degree to which the action affects fragmentation, loss, or degradation of high quality natural areas or sensitive sites; local extirpation of rare or sensitive plant species; or the introduction or extreme increased prevalence of undesirable non-native species. The degree to which the action causes population-level impacts (e.g., potential to reduce local populations below self-sustaining levels, or long-term loss or impairment of substantial portions of local habitat [species-specific]). The degree to which the action has impacts on species protected under the ESA or the Migratory Bird Treaty Act, or other Federal, State, or local natural resource protection law. Activities that do not violate regulatory conditions and do not substantially alter the local biological conditions or result in regional impacts would be considered a minor to moderate impact.
Cultural and Historic Resources (including Aesthetics)	Installation to include the Area of Potential Effect	The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. Activities that do not violate regulatory conditions but would alter a cultural or historic resource would be considered a minor to moderate impact.

Table 3.1-1. Factors Considered in Evaluating the Context and Intensity of a Potential Impact

Resource/Issue of Concern	Region of Influence	Factors
Hazardous Materials and Hazardous Waste	Location of alternative	The degree to which the Proposed Action increases risks to human health and safety resulting from encountering hazardous waste or handling, storage, and disposal of hazardous materials; or whether the action creates conditions leading to a Notice of Violation of laws pertaining to the generation, use, or disposal of hazardous and/or toxic materials or wastes. Activities that would adhere to Federal, State, and local hazardous material handling requirements and would not result in the uncontrolled generation of hazardous waste would be considered a minor to moderate impact.
Noise	Installation and surrounding area	The degree to which the noise associated with an action affects public health or safety. Activities that would not result in a notable change in over the existing noise level or exceed a 65 A-weighted decibel day night average would be considered a minor to moderate impact.
Socioeconomics, Environmental Justice, and Protection of Children	Installation and surrounding area	The degree to which the action affects levels of employment, use of existing infrastructure, or family income; disproportionate impacts to minorities or low-income individuals; or causes health and safety risks for children. Activities that do not notably alter levels of employment, or disproportionately impact minorities or low-income individuals, or result in health and safety risks for children would be considered a minor impact.
Transportation	Installation and surrounding area	Whether the action increases the level of service on roadways and increases the level or intensity of rail use. Activities that would not alter existing levels of service or notably degrade the level of service would be considered a minor to moderate impact.
Cumulative Impacts	Varies by resource area	Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

3.2 Air Quality

The following sections describe the existing air quality at Fort Wainwright and the environmental consequences of the Proposed Action and No Action alternatives on air quality.

Affected Environment

Fort Wainwright is located within the Northern Alaska Intrastate Air Quality Control Region. The EPA has classified the air quality on Fort Wainwright's Main Post, including the proposed facility, as in attainment or unclassifiable with respect to all NAAQS. A portion of Main Post resides within the former Fairbanks North Star Borough (FNSB) non-attainment area for carbon monoxide (CO). The area was re-designated attainment in 2004, but federal actions within a former non-attainment or maintenance area are subject to General Conformity Review (40 CFR 93).

This project does not involve the addition of any new stationary emission sources on Fort Wainwright and is therefore not subject to air quality permitting. Nevertheless, a portion of Main Post that includes the proposed railhead facility and truck loading complex is located within the FNSB CO maintenance area, and the activities to develop and operate the facility are subject to the provisions of the General Conformity Rule. If impacts are identified, mitigation measures must be identified and included in the conformity documentation for the project.

Environmental Consequences of the Proposed Action

In accordance with the provisions of General Conformity, USAG Alaska reviewed the emissions of criteria pollutants, including CO, related to the Proposed Action. To estimate air quality impacts, USAG Alaska reviewed the annual emissions associated with construction of the proposed railhead facility and truck loading complex, demolition of the existing railhead facility, and the operation of the proposed railhead facility and truck loading complex. During construction of the proposed railhead facility and truck loading complex (up to four months in any given year) and decommissioning of the existing railhead facility (up to two months), the air quality in the vicinity would be affected by temporary increases in vehicle and fugitive dust emission. The air quality impact due to fugitive dust emission will be mitigated by watering or employing other dust control measures. Table 3.2-1 summarizes the potential CO emission from construction equipment. The total CO emissions on an annual basis would be 31 tons, which is less than the *de minimis* threshold of 100 tons per year. The impacts on air quality during construction would be minor.

Table 3.2-1. Carbon Monoxide Emissions During Construction

Non-road Equipment Type	Total Unit Hours	Brake Horsepower Rating (bhp)	In-Use Transient Adjustment Factor[1]	CO Emission Factor (g/bhp/hour)[1]	Total CO (tons/ year)	Tier Emission Standard and Phase In Schedule for Model Year
D-7 Caterpillar	800	134	1.53	0.87	0.16	Tier 1 (1997-2002)
Truck-mounted Backhoe	1,600	71	2.57	2.40	0.77	Tier 1 (1998-2003)
Road Grader	800	147	1.53	0.87	0.17	Tier 1 (1997-2002)
Large Crane	1,200	194	1.00	0.75	0.19	Tier 1 (1996-2002)
Welder/Generator (two units)	1,600	35	2.57	1.50	0.24	Tier 1 (1999-2003)
Front-end Loader	800	356	2.57	1.30	1.05	Tier 1 (1996-2000)
Railway Track Laying Engine[2]	800	4,000	1.00	8.00	28.19	Tier 0 (1973-2001)
Total Construction Emissions		N/A	N/A	N/A	**30.77**	N/A

Operation of the railhead facility and truck loading complex would not increase the annual rail traffic on or off the Main Post above current levels; however, it would increase the intensity of rail movements during a deployment event. The proposed new facility would reduce the duration of a deployment event to four days as opposed to the current timeframe of one week or more. Therefore, the annual emissions from locomotives would not be greater than current levels. Consolidation of the railhead and truck

loading facilities would decrease the vehicle miles traveled by trucks for loading and unloading of the rail cars during deployment. This would have a beneficial impact on air quality by reducing vehicle-related emissions, including CO emissions, during deployment (See Appendix B).

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex. Therefore, there would be no change in the activities affecting air quality.

3.3 Geology and Soils

The following section describes the affected environment and the environmental consequences of the Proposed Action and No Action alternatives for geology and soils.

Affected Environment

Fort Wainwright lies within the Tanana-Kuskokwim Lowland of the Western Alaska province. Alluvial deposits from the Tanana and Chena rivers underlie the area. Soils in this area are generally Quaternary deposits characterized by shallow silt loam over gravelly sand or silt loam with sandy clay loams of widely variable texture. Soils adjacent to the rivers and their tributaries are classified as Salchaket Association, and soils in the upland sites are classified as Fairbanks-Steese-Gilmore Association (USACE, 1999).

The bedrock geology of interior Alaska is dominated by Precambrian micaceous schist of the Birch Creek formation, also including metamorphic, sedimentary, and volcanic rocks of Paleozoic age. Upland areas adjacent to the Tanana River are usually covered with Pleistocene windblown silt (e.g., loess) deposits. Fluvial sediments of the Tanana River occupy a large portion of the Fort Wainwright area (USACE, 1999). Geologic materials in the Tanana lowland are river deposits consisting of sand and gravel with a mantle of finer material. Geologic materials in the Yukon-Tanana upland area consist of weathered bedrock with a mantle of windblown silt. Permafrost is present at Fort Wainwright in the lowland areas, on lower slopes of hills, and north-facing slopes of hills, but is not located in the proposed railhead facility and truck loading complex area (USDA NRCS, 2006).

The Fairbanks area is seismically active, as the Denali Fault is an active strike-slip fault that arcs through Alaska. The seismic behavior of the Denali Fault is characterized by infrequent but large earthquakes (USGS, 2002a and USGS, 2002b).

Environmental Consequences of the Proposed Action

Impacts on geology and soils would be minor. Impacts on soils would result from construction of the proposed railhead facility and the truck loading complex. Construction of the railhead facility and the truck loading complex and associated rail lines would start with site clearing and grading. Approximately 102 acres of land would be disturbed. Construction vehicles would compact soils, which may lead to reduced water absorption during stormwater runoff events and could cause mixing of established soil horizons. Stormwater runoff could lead to increased erosion in areas with exposed soils and result in sediment delivery to nearby waterways, such as Clear Creek and Flood Control Channel B (a flood control ditch). Surface soils would also be disrupted by bulldozers grubbing tree roots.

During construction, BMPs would be used to ensure soil impacts would be limited. During construction, exposure time of soils would be minimized. Sites would be developed to minimize clearing and grading,

cut-and-fill, and new impervious surfaces. All construction, including mechanical digging or drilling, would not be undertaken until the appropriate National Pollutant Discharge Elimination System (NPDES) stormwater permits have been obtained. In accordance with the Real Property Master Plan and Natural Resources Conservation Service data, no prime or unique farmland soils would be disturbed (USDA NRCS, 2007).

As described in Section 2.1.1, the design and construction of the infrastructure and structures associated with the Proposed Action would be designed to account for the regional earthquake hazards.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification. The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts to soils or geology would not change due to the No Action Alternative.

3.4 Water Resources (Surface Water, Groundwater, and Floodplains)

The following sections describe the affected environment and the environmental consequences of the Proposed Action and No Action alternatives for water resources.

3.4.1 Surface Water

Affected Environment

The Fort Wainwright Main Post lies within the Tanana River drainage basin. The main tributary to the Tanana River within the drainage area of proposed new facilities and the existing railhead is the Chena River. The Chena River meanders westward through the northern portion of the Main Post and is the primary receiving water body for surface water flows within the Main Post. Hydrology is primarily supplied by groundwater for the majority of the year, with the exception of surface water discharges during periods of snow and ice melt and rainfall (ATSDR, 2003). The river is not used as a drinking water source on or off-post; predominant uses of the river are for recreation activities and fishing. The Chena River is listed on Alaska's 303(d) list for sediments and petroleum impairment (ADEC, 2007a). The Chena River water quality currently meets recreational and water plant discharge use designations (ADEC, 2007a). The existing railhead facility is located adjacent to an oxbow of the Chena River.

Clear Creek is the only surface water resource located within the proposed site boundaries, and it lies within the proposed railhead facility footprint. Historically, Clear Creek was the primary drainage for the project area and for locations off the installation to the east, with its drainage basin extending beyond Badger Road. However, during the late 1970s and early 1980s, drainage channels were created as part of the Chena River Flood Control Project to control flooding along the Chena River. Flood Channel B (discussed below) was created as part of the flood control effort, connecting the floodplains of the Chena and Tanana Rivers (See Figure 2.1-1 and Section 3.5).

Construction of Flood Channel B resulted in the creation of a perpendicular ditch to Clear Creek, intercepting all surface water drainage and flows from Clear Creek to the east of Flood Channel B. The portion of Clear Creek within the proposed railhead facility is located downstream of its interception with Flood Channel B. At this location, Clear Creek is a semi-ephemeral, channelized, and ditched stream

(Adams, 2007). Clear Creek flows are directed to the west within developed portions of the Main Post through a channelized ditch and ultimately empty into the Chena River.

Flood Channel B is located to the east of the proposed railhead facility and truck loading complex; outside of the proposed site boundaries. Flood Channel B is a perennial, human-made channel approximately 30 to 40 feet wide, and is bordered by areas of mixed evergreen/deciduous forest. The volume of flow within surface waters of the area typically fluctuates seasonally, during periods of freeze (from October to May), and flow is limited to groundwater seepage from aquifers into streams (USAG Alaska, 2007). The direction of flow within Flood Channel B is primarily north towards the Chena River; however, direction of flow can change based on snow melt (or break-up), storm events, and fluctuating water levels in the Chena and Tanana rivers (EPA, 1997).

Public health assessment studies (ATSDR, 2003) indicate that no contamination exists in Flood Channel B from the adjacent Resource Management Office site, and these studies have not detected any surface migration of contamination existing at the Resource Management Office Yard towards Flood Channel B (see Sections 3.4.2 and 3.8).

Clear Creek does not provide any recreational opportunities near the project area or areas downstream. Salmon fry have been known to occur in Channel B which connects the Chena River and Tanana River (see Section 3.6.3).

Environmental Consequences of the Proposed Action

Impacts on surface water resources would be minor, with the permanent loss of a segment of Clear Creek within the proposed railhead facility and potential short-term sedimentation in adjacent waterways. These impacts, along with the potential for impacts to water quality resulting from accidental spills during construction and operation, are further discussed below.

Under the Proposed Action, direct impacts would occur to surface water resources due to construction of the proposed railhead facility. Approximately 1,300 linear feet of Clear Creek would be permanently impacted by either placement of fill or by piping the semi-ephemeral surface flows beneath the proposed railhead facility. As the historic volumes of stream flow and channel shape have been previously altered, the 1,300 feet of stream loss would be considered minor in terms of the loss of both habitat and water quality function. Alteration of Clear Creek would be addressed as part of the application for a CWA Section 404 Permit to place fill within wetlands. USAG Alaska will adhere to all mitigation requirements imposed as a condition to approval of the CWA Section 404 Permit, to ensure no significant impact to the water course.

Indirect impacts to surface water resources could include increased surface water runoff, erosion, and sedimentation due to land-disturbing activities during construction and the increase of impervious surfaces required for the operations of the proposed railhead facility and truck loading complex. However, as the surrounding topography of the site has little to no sloping, the potential for runoff, erosion, or sedimentation affecting Flood Channel B would be considered to be low. Demolition of the existing railhead facility could result in temporary impacts to water quality of the Chena River and Tanana River; removal of the existing infrastructure could result in temporary increases of sedimentation, which could be transported into these rivers. Additionally, as Flood Channel B is considered an anadromous stream (See Section 3.6), additional controls would be implemented during construction and incorporated into the site design for spill control and pollution prevention to avoid any impacts, including the potential for contamination due to accidental spills (See Section 4.0).

The use of BMPs, including site stabilization during and after construction and demolition, and those conditions required in the Fort Wainwright Storm Water Pollution Prevention Plan, would prevent sediments and petroleum products from entering adjacent surface waters. Retention ponds could trap and remove any impervious runoff (e.g., stormwater runoff containing fuels and oils) before entering Clear Creek or Flood Channel B. Appropriate engineering controls used during and following construction would stabilize exposed soils and control stormwater runoff, including seeding, hay bale placement, and siltation fence techniques. Well-maintained construction equipment and Spill Pollution Prevention and Countermeasure Plans employed during both construction and operations would prevent spills and effectively address cleanup strategies before the spill contaminants could reach surface water resources. All cuts, fills, and disturbed areas resulting from project construction would be stabilized using native vegetation to minimize erosion and subsequent sedimentation of streams and wetlands.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, surface water quality would not change due to the No Action Alternative.

3.4.2 Groundwater

Affected Environment

Much of Fort Wainwright is underlain by alluvial aquifer. Groundwater in the Fort Wainwright area tends to have relatively high, naturally occurring levels of metals, especially iron and arsenic (USAG Alaska, 2007). Army-related industrial activity within the Main Post has caused groundwater pollution generally associated with underground storage tanks, facilities where chemicals were stored, and places where chemicals were dumped during the early history of the Post. Pollution is generally localized, and there are no indications of deep groundwater pollution. The recent trend has been toward improvement as Army restoration projects mitigate past damage to groundwater quality (USAG Alaska, 2007).

Groundwater flow beneath Fort Wainwright generally occurs to the northwest (ATSDR, 2003). Groundwater levels occur between 10 to 12 feet below the surface at the proposed railhead operations and truck loading facility (UAF, 2007). No characterization studies exist for groundwater within the proposed railhead operations and truck loading facility footprint. Groundwater studies have been conducted at the nearby Site N-4 (located approximately 0.2 miles to the southeast of the proposed facilities) to determine whether or not past landfill activities at Site N-4 resulted in contamination. Analytical results of groundwater from collected samples did not detect any levels of contaminants exceeding allowable regulatory concentrations, and the N-4 site was removed from the ADEC contaminated sites database (EPA, 1997). Groundwater studies have also been conducted at the Resource Management Office Yard, located to the east of N-4 and Channel B (See Figure 2.2-1 and Section 3.8). Petroleum-related groundwater contamination, VOCs, perchloroethylene, and trichloroethylene groundwater contaminant plumes were found to occur at the Resource Management Office site (EPA, 1997). Groundwater monitoring and remediation has been ongoing at the Resource Management Office site since 1997 and has resulted in decreasing levels of VOCs (ATSDR, 2003). Additional groundwater surveys are not planned for the proposed project site.

Environmental Consequences of the Proposed Action

Impacts on groundwater resources would be minor; with the potential for impacts to groundwater quality resulting from accidental spills during construction and operation. This potential impact is further discussed below.

No direct impacts would occur to groundwater. The Proposed Action would not affect the quality or availability of groundwater. Construction of the proposed railhead facility and truck loading complex is not anticipated to require more than six feet of subsurface disturbance. Indirect impacts to groundwater resources within the area would include loss of aquifer recharge due to increased impervious surface area required for the construction and operation of the proposed facility. However, as the footprint of impervious surface is relatively small compared to the overall surface recharge area of the aquifer, any impacts are anticipated to be minimal. Substances (i.e., fuel, oils, and other lubricants) associated with construction equipment have the potential for leaking into soils and could potentially enter the groundwater aquifer. Any substances transported during operation of the facility also have the potential for spill and could enter the aquifer. The implementation of BMPs during both construction and operation of the proposed facility would decrease the potential for spills and would minimize or avoid impacts to groundwater resources. Potential stormwater impacts would be managed in a manner conforming to the existing Fort Wainwright Storm Water Pollution Prevention Plan. This would help prevent contaminants from reaching either surface water or groundwater resources.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, existing groundwater quality levels would not change due to the No Action Alternative. Operations would continue at the existing facility utilizing BMPs to address potential spills.

3.4.3 Floodplains

Affected Environment

EO 11988, *Floodplain Management*, states that structures should not impede or channelize stream flow. This EO also requires that alternatives to development within a floodplain be considered. In the event that there are no practicable alternatives for development within a floodplain, a Finding of No Practicable Alternative (FNPA) is required to demonstrate that all practicable measures have been taken to minimize harm to the floodplain.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping (FIRM) indicates a small portion surrounding Flood Channel B, to the north of Montgomery Road, is within the 100-year floodplain; however, this portion is outside of the proposed project boundary (FEMA, 1992a). The FIRM mapping also indicates Clear Creek has a Flood Zone A width of up to 300 feet within the proposed railhead operations facility. Flood Zone A corresponds to a 1-percent annual chance of flooding determined in the Flood Insurance Rate Study by approximate methods of analysis. Over time, construction of Flood Control Channel B (which runs perpendicular to Clear Creek, and connects to the Chena and Tanana rivers) and extensive ditching of Clear Creek as it flows through Fort Wainwright's Main Post have altered Clear Creek's original floodplain by reducing its aerial extent.

The FEMA FIRM data show the 100-year floodplain for the Chena River is located outside of the existing railhead facility (FEMA, 1992b).

Environmental Consequences of the Proposed Action

Impacts on floodplains would be minor, with the direct impact occurring to Clear Creek's floodplain due to construction. This impact is further discussed below.

Because the proposed railhead facility is located within the 100-year floodplain of Clear Creek, the potential exists for floodplain impacts. This could include alteration of surface water hydrology to the east of the proposed railhead facility and truck loading complex. As the proposed site design would be perpendicular to the floodplain of Clear Creek, surface water flows could back up to the east of the proposed facilities, causing increased flooding as a result of construction. However, the location of Flood Channel B to the west of the proposed site would reduce any spatial amounts of flooding, confining it to undeveloped areas within the installation.

A FNPA was prepared to address unavoidable impacts to the 100-year floodplain of Clear Creek. The FNPA determined that no practicable alternative exists to entirely avoid 100-year floodplain impacts to Clear Creek (See Appendix E). The Army will take all practicable measures to minimize potential harm to or within the 100-year floodplain. Proper site design and FNSB permitting requirements would address impairment of drainage at the site and floodplain impacts. The proposed site design would ensure all finished elevations for the railhead operations facility would be at or above the Base Flood Elevation listed by the FNSB for this site. Additional features to facilitate drainage at the site (e.g., culverts and roadside ditches) may be required and would be incorporated during site design and layout. The cumulative effect of the proposed development would not create an obstruction to the floodplain, increase the water surface elevation of the base flood, or increase the flood heights or velocities associated with Clear Creek.

All demolition activities associated with the removal of the existing railhead facility and construction associated with the truck loading complex would be located outside of the 100-year floodplain; therefore, no impacts are anticipated.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, therefore, there would be no additional impact on floodplains.

3.5 Wetlands

The following section describes the affected environment and the environmental consequences of the Proposed Action and No Action alternatives for wetlands.

Affected Environment

Relatively flat topography within the area of the proposed new facilities, combined with poorly drained soils, creates a hydrologically-influenced terrestrial community. These communities have been qualitatively identified through two different wetland inventories within the region - the National Wetland

Inventory (NWI) mapping program conducted by the U.S. Fish and Wildlife Service (USFWS) and the USACE Waterways Experiment Station (USAG Alaska, 2007). These resources indicate that approximately 5,974 acres of wetlands are located on the Main Post and that wetlands occur throughout the proposed railhead facility and truck loading complex areas. The majority of the existing wetlands occur within the northern portion of the proposed railhead facility (See Figure 3.5-1).

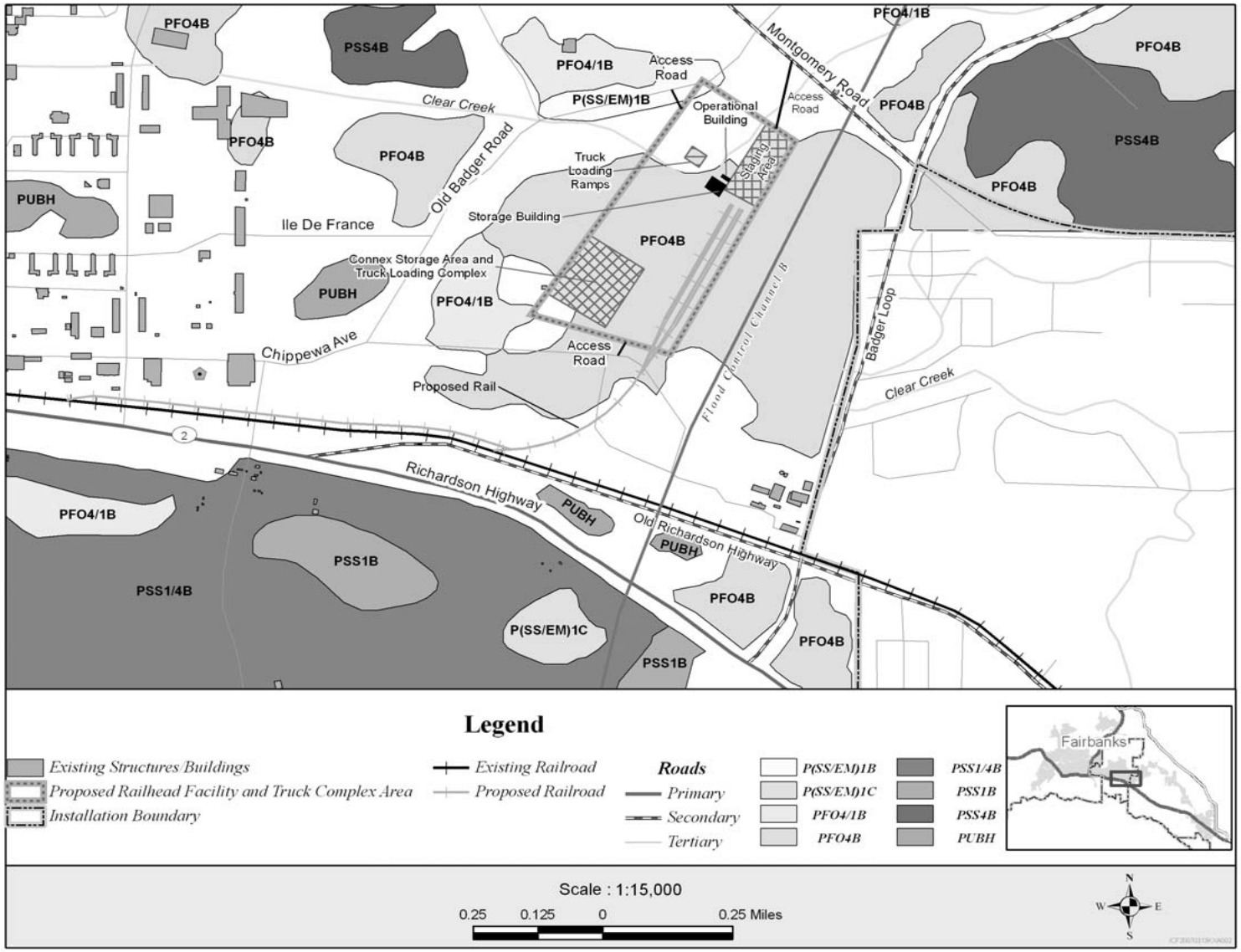
According to NWI wetland overlays, approximately 62.5 acres of wetlands are located within the boundary of the proposed railhead facility[1]. These wetlands are classified as predominantly palustrine forested (PFO) (USFWS, 2006). No wetlands occur at the existing railhead facility.

A detailed field investigation of wetlands was conducted in August 2005 for a 20-mile rail improvement project proposed by ARRC. A portion of this investigation included the proposed railhead facility, which are summarized in a report entitled *Wetlands Technical Report Final Eielson Branch Realignment Project* (ARRC, 2006). The study consisted of aerial wetland photo interpretation, followed by wetland verification, including wetland data point collection. The study identified the following palustrine scrub shrub (PSS) and PFO wetland types occurring within location of the proposed facilities:

- **PSS1B**: saturated bog typically dominated by alder and willow.
- **PSS1/4B**: saturated bog mixed with stunted black spruce. This wetland community was found to be the dominant wetland type, comprising over 50 percent of the wetlands at the proposed new facilities.
- **PSS4/1B**: saturated, open canopy, stunted black spruce bog with a deciduous understory.
- **PFO4B**: saturated, black spruce bogs and black spruce mixed with a scrub-shrub understory (restricted to the corridor along Clear Creek).

No data points were collected within the proposed railhead facility and truck loading complex during the investigation. The closest wetland data point was WO 25; NWI mapping indicates that this area has a similar wetland type to the PSS4/1B communities within the proposed new facilities. Typical vegetation within this data point includes black spruce (*Picea manana*), Labrador tea (*Ledum greenlandica*), lingonberry (*Vaccinium vitus idea*), and myrtleleaf willow (*Salix myrtilifolia*) (ARRC, 2006). Soils were described as very poorly drained; however, no primary indicators of hydrology were present.

[1] Actual acreage of wetlands is subject to a jurisdictional determination by USACE.



Source: Center for Environmental Management of Military Lands, 2005.

Figure 3.5-1. Wetlands at the Proposed Railhead Facility and Truck Loading Complex

Environmental Consequences of the Proposed Action

Impacts on wetlands would be moderate, with the permanent loss of up to 62.5 acres of wetlands. This impact and other potential indirect impacts are further discussed below.

Under the Proposed Action, potentially up to 62.5 acres[2] of wetlands would be permanently lost through placement of fill to accommodate facility construction, reducing the overall wetland acreage within the Main Post to 5,911 acres (a decrease of 1 percent), and a loss of up to 11 percent of PFO4B wetlands on the Main Post. Operations of the proposed railhead facility and truck loading complex would not be anticipated to create any additional direct wetland impacts; all activities would be restricted to developed surfaces. Section 404 of the CWA would require all activities within wetlands or areas recognized as waters of the U.S. to obtain a permit. As specified in AR 200-1, military activities involving the discharge of dredged or fill material into wetlands or other waters of the U.S. would be coordinated with the local USACE district. None of the wetlands that could be affected are recognized as rare or unique habitats, and are commonly occurring throughout the region.

Indirect impacts could include alteration of wetland hydrology through impedance of east/west flow from construction of the facility. Wetlands to the west of the facility could become isolated from wetland communities to the east of the facility. Additional loss of wetlands under this scenario would be unlikely as the facility would not completely isolate or entirely obstruct wetland hydrology. Operations of the facility would not be anticipated to create any indirect impacts; all activities would be restricted to developed surfaces.

A FNPA was prepared to address unavoidable impacts to wetlands. The FNPA determined that no practicable alternative exists to entirely avoid wetlands (See Appendix E). Mitigation and BMPs (See Section 4.0) would be implemented to minimize impacts to wetlands. USAG Alaska will adhere to all mitigation requirements imposed as a condition to receiving a CWA 404 permit, to ensure no significant impact.

As no wetlands are located at the existing railhead facility, no direct impacts would occur from the removal of the existing facility.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts to wetlands would not change due to the No Action Alternative.

3.6 Biological Resources

The following section describes the affected environment and the environmental consequences of the Proposed Action and No Action alternatives for vegetation, wildlife, and protected species.

[2] Actual acreages of impacts are dependent upon final design and a jurisdictional determination by USACE.

3.6.1 Vegetation

Affected Environment

The Fort Wainwright area is within the Northern Boreal Forest. The proposed project area for the railhead facility and truck loading complex contains a relatively isolated patch of mixed coniferous/ deciduous forest, predominantly consisting of white spruce (*Picea glauca*) and paper birch (*Betula papyrifera*). Other tree species include black spruce (*Picea mariana*), larch (*Larix laricina*), quaking aspen (*Populus tremuloides*), and cottonwood (*Populus deltoides*). The understory likely consists of wild rose, willow, fireweed, and grasses. Gravel roads and trails run throughout the project area. Vegetation is periodically disturbed from foot maneuver training occurring in the area. Similar undisturbed vegetative communities are available outside the Post boundaries. Most of the proposed project area contains timber that is of commercial quality or quantity. See Appendix C for details of the timber use policy for Fort Wainwright.

Vegetation surrounding the existing railhead loading facility is primarily maintained grasses that are mowed on a regular basis.

Environmental Consequences of the Proposed Action

Construction of the railhead facility, truck loading complex, and rail spurs would require the clearing, grading, and removal of up to 102 acres of forest. The dust and increased runoff associated with construction activities could temporarily affect adjacent plant and wetland communities and affect downstream waterbodies by increasing siltation and turbidity. Although the Proposed Action would permanently remove up to 102 acres of forest, clearing and grading activities would only remove a small percentage of similar vegetation on the Main Post and in the surrounding areas, and therefore, only have a minor impact on the Main Post vegetation.

Removal of the existing railhead loading facility would temporarily disturb grasses surrounding the facility.

Following construction and demolition, open areas would be replanted and maintained with ornamental trees, shrubs, and grasses. A strip of natural riparian vegetation would be left intact along Flood Channel B, which is located east of the proposed project area. This would maintain existing cover and forage area for aquatic species. Protection of the riparian vegetation would also decrease the occurrence of erosion and downstream siltation.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts to vegetation resources would not change due to the No Action Alternative.

3.6.2 Wildlife

Affected Environment

Many species of the boreal forest, including migratory birds, small mammals, moose, red fox, lynx, coyotes, and beaver, inhabit or use the portions of Fort Wainwright Main Post. Larger mammals, such as moose and the black bear, occasionally visit portions of the Post. The Chena River, Clear Creek, and Flood Control Channel B provide habitat for fish and insect larvae. The Chena River is considered Essential Fish Habitat (EFH) for salmon. Occasionally, salmon also use Flood Control Channel B to travel between the Tanana and Chena Rivers. As Clear Creek is semi-ephemeral, and the portion of Clear Creek within the project area is well upstream from its confluence within the Chena River, the presence of salmon is unlikely.

Most of the land near the proposed project location has been developed into roads, offices, training facilities, and maintenance and storage facilities. Species adapted to urban landscapes and human disturbances use these areas.

Environmental Consequences of the Proposed Action

Clearing, grubbing, and grading activities and the loss or alteration of upland plant and wetland communities would affect some wildlife. Mobile wildlife species, such as birds, would be displaced and their habitat lost, while less mobile species, such as small rodents, might be harmed. Displaced wildlife and wildlife that are not tolerant of human disturbances would migrate from the construction area to similar habitat near the proposed railhead facility and truck loading complex. The displacement could, at least temporarily, increase the density of wildlife in the surrounding areas and increase the inter- and intra-specific competition for available resources, including foraging and nesting areas. Though some individuals would be affected, no changes in wildlife populations are expected to occur on a regional scale.

For aquatic species that inhabit Clear Creek, the increased runoff and erosion and the associated increase in suspended particles during construction could adversely affect the water quality. Because Clear Creek is the primary drainage system in the area of the proposed railhead facility and truck loading complex, runoff and erosion associated with construction are not expected to affect Flood Control Channel B (see Section 3.4.1). The relatively flat topography would limit the construction runoff impacts to the water within the Clear Creek. Increases in turbidity in Clear Creek associated with stormwater runoff could decrease the concentration of dissolved oxygen in the water column and interfere with the ability of aquatic species to respire, feed, and find suitable habitat. Recommended mitigation measures and BMPs would also minimize the amount of sediment in the stormwater runoff that would affect the water quality (see Section 4.0). The ADNR, Office of Habitat Management and Permitting, concluded the project does not appear to affect a stream that supports fish, and therefore, a Fish Habitat Permit would not be necessary (see Appendix D).

Removal of the existing railhead facility would require demolition and grading activities. Because the areas surrounding the existing facilities consist of managed lawns or other disturbed habitat, removal of these facilities would have a negligible impact on wildlife.

The operations and maintenance activities at the proposed railhead facility and truck loading complex would include lawn maintenance; security lighting; equipment maintenance; and increased noise from equipment, workers, and vehicular and train traffic in and around the facility. Such activities would

preclude non-tolerant wildlife species from using the site and immediately surrounding habitats. Small animal species would be excluded from areas that are cleared because of loss of habitat. Overall, the Proposed Action would affect approximately 0.66 percent of the 13,423 acres of land on Fort Wainwright's Main Post.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts to wildlife resources would not change due to the No Action Alternative.

3.6.3 Protected Species

Affected Environment

USAG Alaska took special consideration of biological resources regulated by specific regulatory programs, including but not limited to the following:

- Federally-listed threatened, endangered, and candidate species, and designated critical habitat regulated by the ESA of 1973;
- Migratory Bird Treaty Act;
- Alaska state-listed endangered species or species of special concern;
- Managed fisheries regulated by the Magnuson-Stevens Fishery Conservation and Management Act (EFH and managed species); and
- Managed fisheries protected by the Alaska State Anadromous Fish Act (AS 41.14.870).

There are no known federally-listed threatened or endangered species that inhabit areas within or near the cantonment area of the Main Post. Migratory birds may use the forested habitat.

The Chena and Tanana rivers are identified as waterways important for spawning, rearing, or migration of anadromous fish by ADNR and are considered EFH for freshwater larval, juvenile, and adult Chum and Chinook salmon (Johnson and Weiss, 2006 and NOAA Fisheries, 2005). Flood Channel B is located directly east of the proposed railhead facility and truck loading complex area, but is not the primary drainage channel for the area (see Section 3.4.1). The channel is a perennial (containing water year-round), human-made, and has connections to both the Chena and Tanana Rivers. Though the system is human-made, salmon, an anadromous fish species (fish that live in both marine and freshwater environments), have been observed to use Flood Channel B as a connector between the Chena and Tanana Rivers, both of which are EFH for salmon. As Clear Creek is a semi-ephemeral tributary to the Chena River, and the location of the proposed facilities is well upstream Clear Creek's confluence with the Chena River, it is unlikely to provide habitat for salmon.

The existing railhead facility, which would be decommissioned under the Proposed Action, is separated by a forested buffer approximately 50 meters wide from the Chena River.

Anadromous fish species are protected under the Magnuson-Stevens Fishery Conservation and Management Act administered by National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) and under two Alaska statutes, the Anadromous Fish Act (AS 41.14.870) and the Fishway Act (AS 41.14.840), administered by ADNR.

- The Magnuson-Stevens Act established a mandate for NOAA Fisheries, regional fishery management councils, and other Federal agencies to identify and protect important marine and anadromous fish habitat. The EFH provisions of the Act support one of the Nation's overall marine resource management goals in maintaining sustainable fisheries.
- The Anadromous Fish Act requires that an individual or Federal agency provide prior notice and obtain approval from ADNR "to construct a hydraulic project or use, divert, obstruct, pollute, or change natural flow or bed" of a specified anadromous waterbody.
- The Fishway Act requires that an individual or Federal agency notify and obtain authorization from ADNR for activities within or across a stream used by fish if the department determines that such activities could represent an impediment to the efficient passage of fish.

Environmental Consequences of the Proposed Action

The Migratory Bird Treat Act requires no disturbance to nesting migratory birds. Therefore, USAG Alaska would avoid clearing vegetation from 1 May through 15 July to prevent disturbance to nesting migratory birds.

Runoff from the construction of the railhead facility and truck loading complex and decommissioning of the existing rail facility could increase turbidity in the Chena River (see Section 3.6.2). Increased runoff and erosion and the associated increase in suspended particles during construction could interfere with the ability of salmon to respire, feed, and find suitable habitat. However, the relatively flat topography would limit stormwater runoff (Section 3.4.1), and the mitigation and BMPs would reduce the amount of sediment in the stormwater affecting the channel (Section 3.6.4). These measures would control stormwater runoff and reduce the sediment contained in the stormwater. Impacts on the EFH species, their habitat, and food sources would be negligible.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts to protected species would not change due to the No Action Alternative.

3.7 Cultural and Historic Resources (including aesthetics)

The following section describes the affected environment and the environmental consequences of the Proposed Action and No Action alternatives on cultural and historic resources.

Affected Environment

Fort Wainwright contains a rich collection of cultural resources, which are identified in the 2001-2005 Integrated Cultural Resources Management Plan for Fort Wainwright and Fort Greely. Fort Wainwright and Fort Greely contain 150 archaeological sites, three archaeological districts, 289 historic buildings, and three historic districts. Two historic districts, the Ladd Field NHL District designated in 1985 and the Cold War Historic District designated in 2001, are both located on the Main Post of Fort Wainwright. The period of significance for the Ladd Field NHL is 1939 to 1945. The period of significance for the Cold War Historic District is 1947 to 1961. The boundaries for both districts encompass the original Ladd air fields, barracks and support buildings, but the Cold War Historic District is slightly larger, surrounding the Ladd Field NHL, and includes several Post-World War II buildings (USAG Alaska, 2006a). The Cold War Historic District is bounded on the north, east, and west by the Chena River, and roughly along the south by Montgomery Road. For more information on the cultural resources located on Fort Wainwright and for cultural contexts refer to the *Integrated Cultural Resources Management Plan 2001-2005: Fort Wainwright and Fort Greely, Alaska, United States Army Alaska.*

No previously recorded archaeological sites noted in Fort Wainwright's site inventory were identified at the proposed railhead facility and truck loading complex. An archaeological survey was conducted in the proposed railhead facility and truck loading complex in May 2005. Pedestrian survey and shovel testing did not reveal any cultural material (Raymond-Yakoubian and Elsken, 2006). No resources related to or falling under the jurisdiction of a Traditional Cultural Property or Native American Graves Protection and Repatriation Act were identified within the proposed railhead and truck loading area. The archaeological survey has been cleared through the Section 106 process with the Alaska State Historic Preservation Officer (SHPO).

No non-Federal or military historic buildings are located in the proposed railhead facility and truck loading complex. According to historical records, several homesteads were located in the proposed railhead facility and truck loading complex; however, use and occupation of the area by the military has removed all evidence of these structures (Raymond-Yakoubian and Elsken, 2006). Thus, no architectural survey was completed or required.

The existing railhead facility, rail spurs, and a concrete platform are located northwest of the Cold War Historic District, but not within the boundaries of the Ladd Field NHL. This facility is a National Register eligible property and is visible throughout the viewshed of both districts. Since the mid-1940s, the existing railhead facility has undergone extensive modifications related to the development and utility of operations on Ladd AFB and Fort Wainwright (USAG Alaska, 2006c).

Environmental Consequences of the Proposed Action

Construction and operation of the proposed railroad facility and truck loading complex would have minor effects on cultural resources within the proposed railhead facility and truck loading complex. The proposed railhead facility and truck loading complex are in the extreme southeastern viewshed of the Ladd Field NHL and the Cold War Historic District, but construction of the proposed facilities would minimally affect the overall viewshed of the districts due to distance and the presence of evergreen vegetation.

The proposed railhead facility and truck loading complex is located approximately 0.45 mile to the southeast of the Ladd Field NHL and 0.3 mile to the southeast of the Cold War Historic District. These distances and the presence of evergreen vegetation between the districts and the proposed railhead and truck loading area decrease the potential for any visual effect. Finally, a railhead facility has always been

integral to the functioning of Fort Wainwright. Significance for the existing railhead is derived from this relationship, as the facility is tangible evidence of the strategic capability to move troops and materials.

The existing railhead facility, which is a contributing element of the Cold War Historic District, would be decommissioned. Decommissioning of the current railhead facility would involve some removal of the existing rail spurs located along the northwestern edge of the Cold War Historic District. Upon removal, the grade would be retained as remains of the track. Final concurrence from the Alaska SHPO is complete as part of the Section 106 process and the SHPO concurs that the proposed action would result in No Historic Properties Adversely Affected (Appendix D).

Environmental Consequences of No Action

The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). The existing railhead facility and truck loading complex would not be subject to modification; therefore, there would be no effect on either the Ladd Field NHL or the Cold War Historic District and this resource would remain a National Register eligible property to the Cold War Historic District.

3.8 Hazardous Materials and Hazardous Waste

The following section describes the affected environment and the environmental consequences of the Proposed Action and No Action alternatives for hazardous materials and hazardous waste.

Affected Environment

Fort Wainwright was listed on the EPA National Priorities List on August 30, 1990, under the CERCLA of 1980, also known as Superfund (*et seq.*). In the Spring of 1992, the Army, EPA, and ADEC signed a Federal Facility Agreement, which requires a thorough investigation of suspected historical hazardous waste source areas and appropriate remediation actions taken to protect public health. Fort Wainwright is in the process of cleanup activities under an Installation Restoration Plan. Any discovery of hazardous material contamination as outlined in the Federal Facilities Agreement would require appropriate regulatory coordination and compliance.

Five separate OUs have been identified as requiring remediation at the Fort Wainwright facility as part of the CERCLA investigation and cleanup activities. Table 3.8-1 lists each OU and provides a brief summary of the area.

The entire installation is under Institutional Controls, which are administrative measures to control property access and usage. They are applicable to all known or suspected contaminated sites within USAG Alaska. Institutional Controls (i.e., limitations on the location and depth of excavations, water use, property transfer agreement restrictions, etc.) are designed to supplement active contaminant reduction and remediation actions, as appropriate, for short-term and long-term management to prevent or limit exposure to hazardous substances, pollutants, or contaminants.

As described in Section 2.0, the presence of hazardous substances, pollutants, or contaminants within the areas of the Proposed Action would be addressed through review of historical records and field investigative surveys. The Five Year Review Report for Fort Wainwright and the Fort Wainwright Public Health Assessment were used as the primary sources of information on the current status of hazardous waste site assessment and remediation in proximity to the Proposed Action (USAEC, 2006).

Environmental Consequences of the Proposed Action

No contamination has been identified at the location of the proposed railhead facility and truck loading complex (see Figure 3.8-1). The closest area identified as requiring clean up of environmental contamination is the Resource Management Office Yard, referred to as OU-2, located approximately 1,200 feet southwest of the proposed project area on the opposite side of Flood Channel B. The Resource Management Office Yard was used to store old and discarded materials from the base, including vehicle parts and electronics. Typical contaminants associated with Resource Management Office yards include petroleum solvents, diesel, and gasoline from spills associated with storage and handling of these materials. A soil vapor extraction treatment system is operating at the Resource Management Office to address petroleum products (diesel range organics) in groundwater (USAEC, 2006). Contaminated groundwater from OU-2 does not flow toward the area of the Proposed Action. Construction and operation of the proposed railhead facility would not affect ongoing remedial activities at the Resource Management Office.

Another area that was investigated for the presence of contaminants in soil and groundwater is located 700 feet from the proposed project, west of the Resource Management Office and on the same side of Flood Channel B as the Proposed Action, and is referred to as Area N4 and is part of OU-1. Area N4 was historically used as a surface dumping area. The N4 site did not require clean up since the levels of contamination were determined not to pose any risks given the current use of the area. Because the Proposed Action would not encompass Area N4 and the site does not require clean up, there would be no hazardous waste or hazardous material-related impacts.

The location for the proposed railhead facility and truck loading complex is within Training Area 104. This area of Main Post has been used for small unit training for more than 20 years. Training activities included use of smoke grenades, small arms ammunition (blank and inert), and flares; by-products of their use could remain in the area. As described in Section 2.0, a pedestrian survey for surface munitions constituents would be conducted by qualified Explosive Ordnance Division personnel within the project area. This survey would not include techniques to address potential munitions constituents that would be located underground, as the review of past use of the area did not indicate anything other than small arms ammunitions were used within the area. Prior to initiating any construction activity, USAG Alaska will complete an environmental survey of the site. Based upon past use of the property, it's unlikely that any significant amount of hazardous material or contamination will be found within the proposed construction area. In the event that hazardous material or contamination is discovered, it will be properly managed according to Federal and State regulations.

Table 3.8-1. Summary of Operable Units and Other Areas at Fort Wainwright

OU/Area	Site/Source	Contaminants by Media			
		Groundwater	Soil	Surface Water	Air
1	801 Drum Burial Site. Drums were reported to contain diesel/jet fuel, gasoline, solvents, pesticides, and lubricants.	VOCs	Pesticides and arsenic	(*)	N/A
2	Resource Management Office. A variety of materials were spilled on the yard surface, including diesel fuel. North Post Site. Petroleum, oil and lubricant spills. Building 1168 Leach Well. Disposal of engine and transmission oil, gasoline, diesel fuel, jet fuel, solvents, hydraulic fluid, and engine coolants.	VOCs, primarily benzene VOCs and metals VOCs and metals (arsenic and manganese)	Arsenic and PAHs Arsenic and PAHs Not sampled	 (*)	N/A
3	Birch Hill Tank Farm Facility. Numerous leaks and spills of varied fuels. Railcar Off-Loading Facility (ROLF). Fuels spills. Fairbanks-Eielson Pipeline Spill Sites. Petroleum releases.	VOCs and lead VOCs, primarily benzene VOCs, primarily benzene	Petroleum, oils, and lubricants (POLs) POLs POLs	(*)	N/A
4	Fort Wainwright Sanitary Landfill. Coal Storage Yard. Waste oil, solvents, and fuel sprayed on coal to increase the heat capacity of the coal.	VOCs and metals VOCs and arsenic	Contaminants below Agency for Toxic Substances and Disease Registry CVs Metals, POLs, and VOCs	N/A	N/A
5	East and West Quartermaster's Fueling Stations. Use and disposal of solvents in maintenance activities.	VOCs, primarily benzene	Diesel and gasoline related constituents and lead	(*)	N/A
Other Areas/ Hazards	Coal-Fire Power Plant. Coal Ash used for road grit. Various physical hazards. Exposed tar, unexploded ordnance, abandoned structures. Buried radiological material.	Metals	Metals	N/A	Varied Metals

Notes: * These sites border and may contribute contamination to the Chena River.
N/A = Not Applicable.
Source: Fort Wainwright Public Health Assessment, 2003.

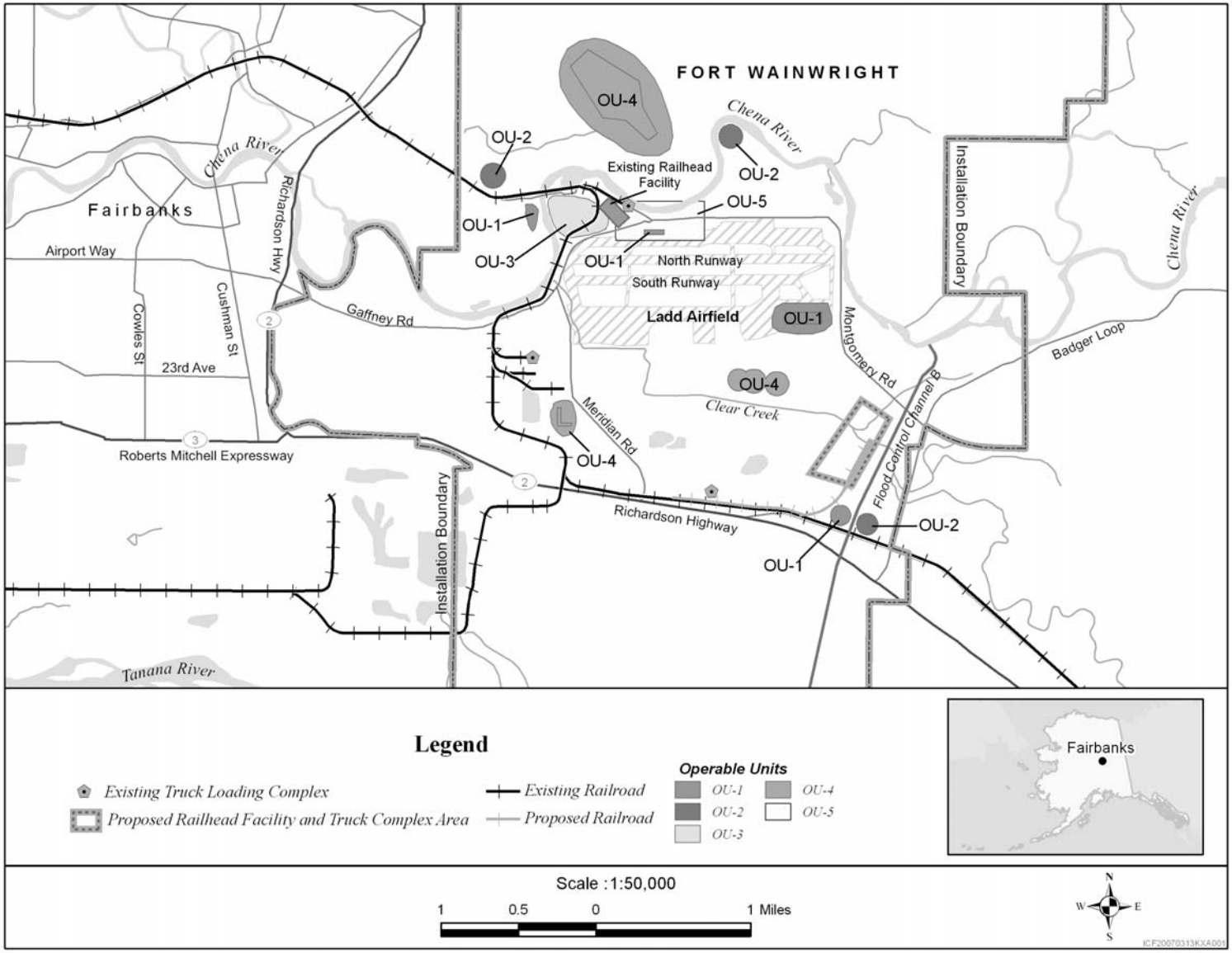


Figure 3.8-1. Operable Units at Fort Wainwright

The area of the existing railhead facility, which would be removed as part of the Proposed Action, is located within OU-3, in a sub-area referred to as Remedial Area 2. Remedial Area 2 is a valve pit associated with a 40-acre ROLF built in 1939 to receive fuel from railcars and distribute the fuel to airfield refueling points. Petroleum contamination is present in groundwater and soil throughout the area, and is being treated through a soil vapor extraction system (Malen, 2007). Procedures would be implemented to avoid the soil vapor extraction system during removal activities. Though groundwater is contaminated, it is approximately 12 feet below grade and is not expected to be encountered during removal activities (Malen, 2007). Soil will be tested during any excavation. Any contaminated soil encountered will be managed in accordance with Federal and State law.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts to hazardous materials or hazardous wastes would not change due to the No Action Alternative.

3.9 Noise

The following section describes the affected environment and the environmental consequences of the Proposed Action for noise.

Affected Environment

The land in the immediate vicinity of the proposed railhead facility and truck loading complex consists of industrial complexes and small unit training areas. The small unit training includes navigation courses and small arms fire. The training activities occurring in the vicinity of the proposed railhead facility and truck loading complex account for the largest source of noise (Montgomery et al., 2001). The nearest noise-sensitive receptors (residential properties outside the fence of the Main Post) to the proposed railhead facility and truck loading complex are more than 1,000 feet away and are separated from the area by a stand of evergreen trees.

The existing railhead facility is located just north of the airfield. Noise contours from the *Installation Environmental Noise Management Plan for Fort Wainwright*, show that the existing railhead offloading facility experiences limited noise impacts from the airfield (Montgomery et al., 2001). The nearest noise-sensitive receptors, on-Post housing units, are more than 1,000 feet away from the existing railhead facility.

The rail line that passes through Fort Wainwright and would be used under the Proposed Action is an active rail line. ARRC trains make approximately three round trips per day for freight transport between Fairbanks and North Pole (ARRC, 2006). Coal transport trains make an additional four round trips per week, for a total of up to 25 round trip trains per week. Due to sharp turns in the track on the Main Post, trains travel no faster than 10 miles per hour through the Post. The existing track has at least five at-grade crossings, and at each crossing trains are required to sound warning horns.

Environmental Consequences of the Proposed Action

Noise from construction activity would be intermittent and dependent on the type of mechanical equipment used (e.g., bulldozers and dump trucks). Because noise dissipates with distance, construction activities associated with the Proposed Action (including the construction of new facilities and the demolition of existing facilities) are not expected to affect noise-sensitive receptors. The closest residential areas are greater than 1,000 feet away from proposed construction and demolition activities, and evergreen vegetation is located between the proposed construction and demolition sites and the sensitive noise receptors, which would further reduce the noise at the sensitive noise receptor.

Under the Proposed Action, there would be an increase in train activity during a 96-hour (four-day) deployment event. The overall number of trains needed for deployment would not increase, only the intensity would increase. All the train activity that currently occurs in one week or more would take four days under the Proposed Action. USAG Alaska estimates that this translates into one additional train per day during deployment.

Rail loading activities, under the Proposed Action, would be moved from an area near the entrance of Main Post to an area on the other side of the Main Post. Because the rail loading activities would be moved to a new location on Post, deployment trains would travel through five additional at-grade crossings, blowing the warning horn at each of these crossings.

ARRC, in support of the Eielson Branch Realignment EA, prepared a noise and vibration analysis study examining the impact of proposed realignments around the Post and the addition of passenger rail service between Fairbanks and North Pole (ARRC, 2006b). The noise study included short-term and long-term ambient noise monitoring, identification of sensitive noise receptors, and noise modeling (see Table 3.9-1). In this study, ARRC examined three re-alignment alternatives through the Post, including one alignment that closely follows the existing track through the populated areas of the Post. This same track would be used under the Proposed Action for deployment activities. ARRC evaluated the impact of two to four additional trains per day above existing conditions traveling through the Post.

Table 3.9-1. Sensitive Receptors along ARRC's Existing Track Through Fort Wainwright Identified by ARRC's Noise Analysis Study

Receptor	Approximate Distance from Track to Nearest Receptor (feet)
Birchwood Housing	Between 50 and 200
Bassett Army Community Hospital	250
New Army Hospital (replacement)	300
Fort Wainwright Temporary Housing	1,200
Taku Gardens Housing Project (in progress)	5,000
Ladd AFB Historic District/ Ladd Air Field NHL	Between 200 and 2,000
Ladd AFB Cold War Housing	1,400

Source: ARRC, 2006b.

Through their noise analysis study, ARRC found that there would be no perceptible change in noise levels to receptors compared to existing conditions even with the addition of four passenger trains per day.

Therefore, USAG Alaska does not expect the addition of one train per day during deployment to affect sensitive receptors on the Post.

The proposed truck traffic that would be re-routed to Badger Gate would travel along Richardson Highway and exit onto Badger Road and proceed to Badger Gate along Montgomery Road (see Figure 2.1-2). As discussed in Section 3.11, rerouting the trucks would result in a less than one percent increase in truck traffic, which would result in no notable change in the noise levels along Badger and Montgomery roads.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification**.** The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, there would be no additional impact on noise-sensitive receptors.

3.10 Socioeconomics, Environmental Justice, and Protection of Children

The following sections describe the affected environment and the environmental consequences of the Proposed Action for socioeconomics, Environmental Justice, and protection of children.

3.10.1 Socioeconomics

Affected Environment

Fort Wainwright is located within FNSB, with Fairbanks as the closest population center. According to 2000 Census data, FNSB has a total population of 82,840, and the city of Fairbanks has 30,224 residents. The unemployment rates in the Borough and the city of Fairbanks are 5.8 percent and 6.2 percent, respectively. The median household incomes for the Borough and the city of Fairbanks are $49,076 and $40,577, respectively (U.S. Census Bureau, 2007). A few houses are located along Badger Road near its intersection with Richardson Highway. Between the proposed facilities and the residences are evergreen trees, a drainage ditch, and a large fence.

Environmental Consequences of the Proposed Action

No impacts on socioeconomics would occur under the Proposed Action. The Proposed Action would not have a large enough effect on the local economy to alter the population of the city of Fairbanks or the FNSB, nor to overburden the existing infrastructure (e.g., water supply, wastewater treatment, and public services). There would be no noticeable changes in housing values or unemployment rates. The Proposed Action would result in a temporary increase in local employment during construction; however, no additional staff would be necessary to operate the proposed facilities.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification. The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in

their current conditions (USAG Alaska, 2006). Therefore, impacts to socioeconomics would not change due to the No Action Alternative.

3.10.2 Environmental Justice

Affected Environment

Environmental Justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, tasks Federal agencies to make achieving Environmental Justice part of their mission by identifying and addressing disproportionately high and adverse public health or environmental effects of programs, policies, and activities on minority and low-income populations. In addition, the Department of Defense Strategy on Environmental Justice requires implementation of EO 12898, principally through compliance with the provisions of NEPA.

CEQ guidance was utilized to identify minority and low-income communities (CEQ, 1997). CEQ defines the following population groups as minorities:

- Black/African American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native
- Hispanic populations (regardless of race)

According to CEQ, a minority population exists where either:

- The minority population of the affected area exceeds 50 percent; or
- The minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

CEQ defines low-income using the annual statistical poverty thresholds from the U.S. Census Bureau. A low-income population exists when the low-income population percentage in the area of interest is meaningfully greater than the low-income population in the general population. For purposes of the analysis, "meaningfully greater" equates to 5 percent above the general population. In this analysis, the "general population" is considered the State of Alaska.

Environmental Consequences of the Proposed Action

No impacts to Environmental Justice populations would occur under the Proposed Action.

The Proposed Action would not result in any significant impacts to any other resource areas; therefore, there are no high and adverse impacts to Environmental Justice populations. Even though no high or adverse impacts are associated with the Proposed Action that would disproportionately affect a low-income or minority population, Environmental Justice demographic data are presented in this section.

Census data for Fairbanks and the FNSB were compared to data for Alaska. The population of Black/African Americans in the city of Fairbanks is 7.5 percent greater than the average for Alaska. However, the African American community is distributed throughout the city of Fairbanks, not necessarily near the proposed facilities. The Alaska Native population in Fairbanks is slightly less than throughout the state (13.3 percent in Fairbanks compared to 15.6 percent for the state). Likewise, the comparative rates of low income households in Fairbanks and throughout Alaska are nearly identical (both approximately 11 percent). The project is located approximately 0.3 to 0.5 miles from some low density housing sites, but these are not distinctly low income or minority neighborhoods.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification. The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, there would be no impact to Environmental Justice populations.

3.10.3 Protection of Children

Affected Environment

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, directs Federal agencies, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children.

Environmental Consequences of the Proposed Action

No impacts to children would occur under the Proposed Action.

The Proposed Action would not result in any significant impacts to any other resource areas; therefore, there are no disproportionate impacts or health or safety impacts on surrounding populations of children.

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification. The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, there would be no disproportionate impacts or health or safety impacts on surrounding populations of children.

3.11 Transportation

The following section describes the affected environment and the environmental consequences of the Proposed Action and No Action alternatives for transportation.

Affected Environment

The proposed railhead facility and truck loading complex would be located in the southeastern corner of the Main Post. Currently, most truck traffic related to deployment, about 200 to 400 truck loads, enters and departs from the Post through the Main Gate, located off of Airport Way/Gaffney Road, and through Trainer Gate, located off of Steese Expressway and Trainer Road.

Environmental Consequences of the Proposed Action

Impacts to transportation would be minor. Under the Proposed Action, most of this truck traffic would shift from the Main and Trainer Gates to the Badger Gate located along Montgomery Road off of Badger Road on the eastern side of the Main Post. Truck traffic would proceed along Richardson Highway and onto Badger Road to Montgomery Road through Badger Gate (see Figure 2.1-2). USAG Alaska estimates that deployment of the Stryker brigade would occur approximately four times per year. This shift in truck traffic would result a negligible increase in traffic on Badger Road or Holmes Road (Table 3.11-1).

Environmental Consequences of No Action

Under the No Action Alternative, USAG Alaska would not construct the proposed railhead facility and truck loading complex, and the existing facilities would not be subject to modification. The No Action Alternative would result in the continued use of the existing railhead facility and truck loading complex in their current conditions (USAG Alaska, 2006). Therefore, impacts transportation would not change due to the No Action Alternative.

Table 3.11-1. Average Daily Traffic near the Badger Gate Entrance to the Main Post

Location	Average Daily Traffic[1]	Proposed Action Projected Increase in Daily Truck Traffic During an 8-Day Deployment Period[2]	Proposed Action Percentage Increase
Badger Road	9,550	50	> 1%
Holmes Road (into Main Post)	3,700	50	≈ 1%

[1] Source: ADOT, 2004a and ADOT, 2004b.
[2] Conservative estimate of 400 trucks entering Badger Gate during an 8-day deployment period.

3.12 Cumulative Impacts

CEQ regulations that implement the procedural provisions of NEPA define cumulative effects as "the impact on the environment which results from the incremental consequences of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions." USAG Alaska evaluated the potential cumulative impacts of the Proposed Action in accordance with NEPA (42 USC 4321-4347), CEQ regulation (40 CFR Parts 1500-1508), AR (32 CFR part 651), and CEQ guidelines for conducting cumulative impact analysis (*Considering Cumulative Effects under the National Environmental Policy Act*, Executive Office of the President, January, 1997). Table 3.12-1 lists actions that were reviewed to complete the cumulative impact analysis.

Although certain direct and indirect impacts are determined insignificant, they require further evaluation for potential contributions to cumulative impacts on the resource. Three levels of cumulative effects analyses were used on the resources or issues covered in this EA (Quick Look, Analysis and Discussion, and Detailed Analysis). The level of analysis was based on Quick Look questions (Canter et al. 2006; USAG Alaska 2006a). Quick Look questions are used to determine if detailed cumulative effects analyses are needed for each resource or issue. If the answers to the Quick Look questions are no, the likelihood of significant cumulative impacts is small and no further analysis is necessary. If the answer to a Quick Look question is less certain, then more detailed attention was required to address potential effects using a second level of analysis (Analysis and Discussion). Issues that had definite, potentially significant incremental impacts required more rigorous analysis (Detailed Analysis).

Table 3-12-1. Past, Present, and Future Actions

Project or Activity	Time Frame	Spatial Extent (if known)
Past Actions		
Military Training	1950s to present	Throughout the cantonment area of Fort Wainwright Main Post.
Development of the cantonment area	1950s to present	Development concentrated south of the Chena River and north of the Richardson highway.
Construction and operation of the railroad	1917 to present	Rail line extends from Seward to Fairbanks.
Present and Future Actions		
Development of the cantonment area	2006-2013 -FWA Housing Projects* -Information System Facility -Aviation Task Force Constr.* -Replace Electrical Substation -Training Support Center -Company Operations Facilities -Barracks Complex* -Stryker Wash Facility* -Organizational Vehicle Parking -Air Support Operations Facility -Child Development Center* -Physical Fitness Center /Pool* -SBCT Complex* **denotes development on relatively undisturbed open space within cantonment area; other projects are on sites that were previously disturbed*	Plans include approximately 144 acres of development on relatively undisturbed lands within the cantonment area.

Table 3-12-1. Past, Present, and Future Actions

Project or Activity	Time Frame	Spatial Extent (if known)
Development and Modification Activities at Fort Wainwright	Firing Ranges	Plans include development or upgrade on approximately 24 acres of land used for firing ranges on Fort Wainwright Main Post
Proposed addition of OH-58D Kiowa Warrior Helicopters	A proposed plan exists for an Aviation Unit at Fort Wainwright to receive new model helicopters	Activity would occur near or within Ladd Air Field.
Bureau of Land Management (BLM) Alaska Fire Service Expansion	BLM plans to renovate, expand, or construct new facilities to support Alaska Fire Service Operations on Fort Wainwright. Activities are scheduled to start in 2007.	Proposed plans would occur within the BLM Exclusive Use Area northeast of Ladd Air Field. Construction activities would affect approximately 8.8 acres of land (BLM, 2007).
ARRC Fort Wainwright Realignment Project [1]	Funds appropriated to finish design and begin construction in 2007 (ARRC, 2007b).	Approximately five miles of new track through the Main Post away from post infrastructure and personnel.
ARRC Fairbanks Area Realignment Project	Medium potential to begin construction within the next 10 years.	19 miles of track around Fairbanks. Would connect to the Fort Wainwright Realignment Project.
ARRC Northern Rail Extension Project [2]	Medium potential to begin construction within the next 10 years.	Approximately 80 miles of new track between North Pole, Alaska, and Delta Junction, Alaska.
City of Fairbanks and FNSB Development (none identified in the immediate project area project area)	FNSB has experienced steady growth between 1960 and 2000. This is expected to continue (FNSB, 2006).	

[1] The ARRC is preparing an EA for this proposed project.
[2] The Surface Transportation Board is preparing an EIS for this proposed project.

As described in the footnotes of Table 3.12-1, and briefly in Section 1.4, NEPA documents are being prepared for the ARRC Fort Wainwright Realignment Project and the ARRC Northern Rail Extension Project.

For the ARRC Fort Wainwright Realignment Project, the ARRC is preparing an EA, independent of USAG Alaska, evaluating the potential impacts of rerouting rail traffic through the northern portion of Fort Wainwright from the current alignment which traverses developed areas in the Main Post. The realignment project would save 30 minutes in rail travel time from Fairbanks to Eielson AFB. The ARRC has identified two proposed alternative alignments that pass through Fort Wainwright. Both alignments are adjacent to the USAG Alaska's proposed railhead facility and truck loading complex and exit at the southeastern corner of the Main Post. Though the proposed alternative alignments would connect to the railhead facility if constructed, the railhead facility has independent utility from the ARRC's realignment. The railhead facility and truck loading complex would operate using the existing track if the routing did not occur (ARRC, 2007a).

For the ARRC Northern Rail Extension Project, the ARRC is planning on filing a petition with the Surface Transportation Board to construct and operate a railroad from North Pole, Alaska, to Delta Junction, Alaska. The Board is preparing an EIS to evaluate the 80-mile Northern Rail Extension Project. If constructed, SBCT may use the rail extension to transport Stryker vehicles and other equipment from Fort Wainwright to the Tanana Flats and Donnelly Training Areas near Delta Junction. The ARRC's proposed Northern Rail Extension Project and USAG Alaska's proposed railhead facility and truck loading complex have independent utility from one another. USAG Alaska anticipates that SBCT can still achieve their training mission without the Northern Rail Extension.

The Department of the Army is currently considering the reorganization and increase of existing aviation units in Alaska. A Notice of Intent to prepare an Environmental Impact Statement (EIS) was published in the Federal Register on April 4, 2007. The EIS will include a cumulative impact analysis based upon the potential impacts of stationing and training of aviation units in Alaska. Because the decision to reorganize and increase the existing aviation units in Alaska has not been made, this potential action was not included in the cumulative impact analysis.

The following analyses constitute an additional evaluation for each resource or issue. The nature of identified direct or indirect impacts are evaluated in Section 3.0 along with recommended mitigation measures (presented in Section 4), and the final nature and characteristics of these impacts are used to ascertain the need for further cumulative effects analysis.

The geographic scope and time frame are discussed for each resource in the following sections. In general, the geographic scope is limited to the areas directly affected and immediately adjacent to the Proposed Action described in Section 2.0.

The following presents the analysis of the impacts of the alternatives presented in Section 2.0 using the Quick Look Questions and considering the projects listed in Table 3.12-1. As presented below, the likelihood of significant cumulative impacts is small and no further analysis is necessary for air quality, geology and soils, water resources, biological resources, cultural resources, hazardous materials and hazardous waste, noise, socioeconomics and environmental justice, and transportation. A more detailed analysis was required to address potential effects using a second level of analysis (Analysis and Discussion) for wetlands. No resources had definite, potentially significant incremental impacts that required more rigorous analysis (Detailed Analysis).

3.12.1 Air Quality

USAG Alaska defined the scope of the air quality cumulative effects analysis to the Fairbanks CO Maintenance Area. Cumulative air quality impacts would occur from concurrent construction projects within the same geographic area and from motor vehicles. The cumulative impacts on air quality resulting from the emissions of other construction activities in the Fairbanks CO Maintenance Area would occur from late spring to early fall; and would not occur during periods of atmospheric stability (winter months) when CO concentrations exceed the NAAQS thresholds. Four other large scale construction projects may occur at the same time as the Proposed Action (Development of the Cantonment Area, Development and Modification of the Firing Ranges, BLM Expansion Projects, and the ARRC Realignment Project), up to 69 tons of CO may be emitted from late spring to early fall. This is based on similar types of equipment operating at approximately the same level as they would under the Proposed Action, with the exception of only one additional railway track laying engine being in operation. The cumulative emissions of up to 69 tons of CO are below the *de minimis* threshold of 100 tons annually.

During the winter when CO concentrations exceed NAAQS thresholds, most CO emissions in the Fairbanks area occur from "cold-starting" motor vehicles (FNSB, 2003). The FNSB Motor Vehicle Emission Budget for 2008 is 23.08 tons per day (8,424 tons per year), and the total CO emissions inventory for 2008 is 29.19 tons per day (10,654 tons per year) (FNSB, 2003). As identified through the Quick Look questions, no air quality cumulative impacts would be expected to occur associated with the Proposed Action.

Air Quality Quick Look Table	
Yes	Is Fort Wainwright located completely, or partially, in a designated non-attainment area or maintenance area relative to compliance with ambient air quality standards? *The Main Post is located completely within the Fairbanks CO Maintenance Area.*
Yes	Will the Proposed Action emit a criteria air pollutant and/or hazardous air pollutants during its construction and/or operational phase? *The Proposed Action would emit criteria air pollutants during construction activities. Because the annual deployment frequency would not change under the Proposed Action, operation of the facility would not result in an increase in air pollutants.*
No	Would such emissions exceed "*de minimus*" standards, as designated in Federal or State air quality regulations?
Yes	Are there wide variations in the monthly and/or seasonal patterns of atmospheric dispersion conditions at the installation? *Construction activities would not occur during the winter months when inversion is likely to occur.*
No	Are there any concerns that Federal and State source-oriented permits may not be up to date, and are there any specified conditions not being met?
No	**Is additional cumulative effects analysis needed?** **Cumulative Effects Analysis (CEA) Level: (1)** *Given the de minimis level of CO emissions from the Proposed Action and the fact that such activities are taken into account in the development of the Fairbanks Maintenance Plan impacts to air quality are expected to be minor.*

3.12.2 Geology and Soils

USAG Alaska determined that the Proposed Action would have a negligible impact on geology and soil resources on Main Post. Impacts from the Proposed Action would be fairly localized and mitigated through the use of BMPs. The other construction projects on the Main Post (Development of the Cantonment Area, Development and Modification of the Firing Ranges, BLM Expansion Project, and the ARRC Realignment Project) would involve up to 298 acres. Therefore, the cumulative impact on soils (102 acres from the Proposed Action and 298 acres from the other activities) would be 400 acres of soil disturbance, which represents approximately 3% of the 13,423 acres of land available on the Main Post. As identified through the Quick Look questions, negligible cumulative impacts on geology and soils would be expected to occur associated with the Proposed Action.

Geology and Soils Quick Look Table	
No	Would the Proposed Action result in a significant impact to soil resources? *Impacts would be minor. Impacts would be localized impacts including soil compaction, mixing of soil horizons, and soil erosion; however, these would be minimized by the use of BMPs.*

Geology and Soils Quick Look Table	
No	Does the Proposed Action involve a new range or maneuver area, or does it extend beyond the existing boundaries of either?
Yes	Is the proposed site effectively managed as part of an installation Integrated Training Area Management Program? *Institutional implementation of Integrated Training Area Management should ensure less impacts and proactive management.*
No	Does the Proposed Action increase the level of intensity of military activity? *The Proposed Action would increase the efficiency of deployment activities but not increase the overall level of activity.*
No	Are there other potential impacts to soil resources that individually or collectively could result in significant cumulative effects? *Additional impacts to soils result primarily from construction activities, but the incremental impacts are localized.*
No	Is the site characterized by gullies and or/poor vegetative cover? *The site is not characterized by gullies or poor vegetative cover.*
No	Are there sensitive downstream land uses, and has sedimentation been a downstream issue in the past? *The rivers carry a naturally heavy sediment load and the affect of the Proposed Action would be negligible.*
No	Will permafrost be significantly impacted? *Should permafrost be encountered, additional fill material or other measures would be implemented to avoid altering the permafrost.*
No	**Is additional cumulative effects analysis needed?** **CEA Level: (1)** *Given the localized nature of impacts to soil resources and the institutional management available to protect them, the potential contributions of the Proposed Action do not warrant further CEA.*

3.12.3 Water Resources

USAG Alaska defined the scope of the water resources cumulative effects analysis as the Clear Creek and Chena River. USAG Alaska determined that the Proposed Action would not result in a significant impact on water resources. All construction activities would occur within the boundary of the Main Post. As discussed in Section 3.4.1, the Chena River is listed on Alaska's 303(d) list for sediments and petroleum impairment (ADEC, 2007a). Urban runoff is indicated as a potential source of these pollutants (ADEC, 2003). Cumulative construction activities occurring on Fort Wainwright (Development of the Cantonment Area, Development and Modification of the Firing Ranges, BLM Expansion Project, and the ARRC Realignment Project) would likely result in temporary increases in sedimentation and turbidity in the Chena River. The cumulative land disturbance (102 acres from the Proposed Action and 298 acres from the other activities) would be 400 acres, which represents approximately 3% of the 13,423 acres of land available on the Main Post.

To control erosion and sediment runoff during construction, contractors would prepare project specific stormwater pollution prevention plans in order to comply with NPDES permits for Fort Wainwright, FNSB, and Fairbanks. Use of the plans and the associated BMPs would minimize the cumulative impact of sediment loading to the Chena River from construction activities. To further study and control the cumulative sediment loading to the Chena River, ADEC plans to develop a Total Maximum Daily Load for the Chena River for sediment and petroleum hydrocarbons by 2007 (ADEC, 2007b).

In addition, all new facilities would be subject to the installation-wide stormwater pollution prevention plan, which would limit the cumulative stormwater related impacts to include drainage pattern alterations and potential contaminants (oils and solvents) associated with stormwater. As indicated in the wetlands discussion, the cumulative loss of up to 230 acres of wetlands may result in an adverse cumulative impact on the water quality of the adjacent streams and rivers. However, site-specific stormwater management plans would be developed to ensure that the cumulative impact would not be significant.

Surface Water Quick Look Table	
No	Would the Proposed Action result in a significant impact to surface water? *The impacts of the Proposed Action on floodplains, waterways, and water quality would range from none or minor.*
No	Does the Proposed Action involve a new range or maneuver area, or does it extend beyond the existing boundaries of either?
Yes	Is the Proposed Action effectively within a floodplain? *Portions of the activities would occur within a floodplain; however, the floodplain is under active management via Flood Control Channel B, and the Proposed Action would not alter the floodplain.*
Yes	Are streams, lakes, or ponds present within the expected training routes? *The Proposed Action would affect an ephemeral stream, Clear Creek, which is a tributary to the Chena River.*
No	Does the Proposed Action increase the level of intensity of military activity? *The Proposed Action would increase the efficiency of deployment activities but not increase the overall level of activity.*
No	Are there other potential impacts to surface water that individually or collectively could result in significant cumulative effects?
No	Has sedimentation/pollution been a downstream issue in the past? *The rivers carry a naturally heavy sediment load and the affect of the Proposed Action would be negligible.*
No	**Is additional cumulative effects analysis needed?** **CEA Level: (1)** *Given the localized nature of impacts to surface water resources at stream crossing or near wetlands, and the institutional management available to protect them, the potential contributions of the Proposed Action do not warrant further CEA.*

Groundwater Quick Look Table	
Yes	Are there any known or suspected contaminated sites at (or near) the proposed training sites? *Yes, contaminated groundwater has been found in the vicinity of the proposed site, but has not been identified on site.*
Yes	Are there any major groundwater aquifers under the project site? *Groundwater flows from the Alaska Range toward the Tanana River.*
No	Is there risk of aquifer contamination? *Risk of any subsurface water contamination or soil contamination is very minor (negligible), given Army management control and spill response provisions.*
No	Is any water being removed from existing aquifers to support the Proposed Action?

Groundwater Quick Look Table	
N/A	Will surface water diversions reduce aquifer recharge? *No surface water diversions are proposed as part of this action.*
No	Is the region characterized by periodic water shortages?
Yes	Are aquifers a major source of community water supplies? *The primary water supply is groundwater; however, risk of contamination or loss of aquifer productivity is negligible.*
No	**Is additional cumulative effects analysis needed?** **CEA Level: (1)** *Given the localized nature of impacts to groundwater resources and the institutional management available to protect them, the potential contributions of the Proposed Action do not warrant further CEA.*

3.12.4 Biological Resources

USAG Alaska determined that the Proposed Action would have a negligible effect on wildlife populations and vegetation. For the cumulative impacts analysis, USAG Alaska limited the scope to the Fort Wainwright Main Post. The other construction projects on the Main Post (Development of the Cantonment Area, Development and Modification of the Firing Ranges, BLM Expansion Projects, and the ARRC Realignment Project) would involve approximately 298 acres. Therefore the cumulative impact on biological resources (102 acres of land disturbance from the Proposed Action and 298 acres of land disturbance from the other activities) would be 400 acres of new land disturbance, which represents approximately 3% of the 13,423 acres of land available on the Main Post. The Main Post (and cantonment area) is an active installation with a high level of active human disturbance routinely occurring. Suitable and similar available wildlife habitat for any displaced species occurs in close proximity to the Main Post and the cantonment area. Cumulative impacts on biological resources would be minor. As identified from the Quick Look questions, impacts under the Proposed Action and the cumulative impacts on wildlife habitat and populations would be localized and minor; therefore further CEA is not warranted.

Biological Resources Quick Look Table	
No	Would the alternatives result in a significant impact to wildlife or fisheries? *Impacts would be localized and affect only a small portion of marginal, isolated habitat.*
No	Would habitats or populations of any threatened or endangered species or species of concern be affected? *Habitats or populations of threatened or endangered species would not be affected by the Proposed Action.*
No	Does the Proposed Action involve a new range or maneuver area, or does it extend beyond the existing boundaries of either?
Yes	Is the proposed site effectively managed as part of an installation ITAM Program? *Institutional implementation of ITAM should ensure less impacts and proactive management.*
No	Does the Proposed Action increase the level of intensity of military activity? *The Proposed Action would increase the efficiency of deployment activities but not increase the overall level of activity.*
No	Is the area characterized by sensitive habitat? *The site is not characterized by sensitive habitat.*

Yes	Are there special interest management areas in the vicinity? *The Chena River is considered Essential Fish Habitat for Chinook and chum salmon. Impacts to would be minor and would be related to temporary increases to erosion from construction activities.*
No	**Is additional cumulative effects analysis needed?** **Cumulative Effects Analysis Level: (1)** *Given the localized nature of impacts to wildlife habitat and populations at stream crossings or near wetlands, and the institutional management available to protect these areas, the potential contributions of the Proposed Action do not warrant further CEA.*

3.12.5 Cultural and Historic Resources

For the CEA, USAG Alaska considered projects occurring on the Fort Wainwright Main Post. USAG Alaska determined that the Proposed Action would have no effect on cultural or historic resources on the Main Post. As identified from the Quick Look questions, no cumulative impacts on cultural and historic resources would be expected to occur associated with the Proposed Action.

Cultural and Historic Resources Quick Look Table	
No	Would the Proposed Action result in a significant impact to any cultural resources?
Yes	Has the area been surveyed for cultural resources?
No	Are prehistoric sites present? *No previously recorded prehistoric sites noted in Fort Wainwright's site inventory were identified in the vicinity of the Proposed Action.*
Yes	Are historic sites present? *Two historic districts, the Ladd Field NHL designated in 1985 and the Cold War Historic District designated in 2001, are both located on the Main Post of Fort Wainwright and are located near the proposed project area.*
Yes	Have these sites been evaluated for National Register eligibility?
Yes	Are any sites eligible for listing on the National Register? *The Ladd Field National Historic Landmark District (Ladd Field NHL) designated in 1985 and the Cold War Historic District designated in 2001 are on the National Register.*
Yes	Are the sites contributing resources to an eligible or listed district or cultural landscape? *The existing railhead facility is a potentially contributing element to the Cold War Historic District that is currently being re-evaluated and is visible throughout the viewshed of both districts.*
No	Are there other potential impacts to cultural resources that individually or collectively could result in significant cumulative effects? *Since the mid-1940s, the existing railhead facility has undergone extensive modifications related to the development and utility of operations on Ladd Air Force Base and Fort Wainwright (USAG Alaska, 2006c). Therefore the affect to the Cold War Historic District would be minor.*
No	Is the project located in or near an Alaskan Native cemetery, traditional cultural property or sacred site?

Cultural and Historic Resources Quick Look Table	
No	**Is additional cumulative effects analysis needed?** **CEA Level: (1)** *The Proposed Action would not have an effect on cultural or historic resources on the Fort Wainwright Main Post. The existing railhead facility has undergone significant changes since the development of operations on Ladd Air Force Base and Fort Wainwright. Therefore removal of the existing railhead facility would result in no historic properties adversely affected and would not contribute to a cumulative effect on historic properties.*

3.12.6 Hazardous Materials and Hazardous Waste

USAG Alaska determined that the scope of the hazardous materials cumulative effects analysis should be the Fort Wainwright Main Post. USAG Alaska determined that the Proposed Action would not interrupt ongoing remediation activities on Fort Wainwright, and potentially contaminated areas within the area of the Proposed Action would be remediated prior to site development. This project, in combination with ongoing or proposed construction would contribute to additional generation of hazardous waste, but with continued implementation of institutional controls the cumulative impacts would be minor. As identified through the Quick Look questions, no cumulative hazardous materials and hazardous waste impacts would be expected to occur associated with the Proposed Action.

Hazardous Materials and Hazardous Waste Quick Look Table	
Yes	Will the Proposed Action occur on an existing installation?
Yes	Are all aspects of the Proposed Action covered by a SPCCP?
Yes	Have project proponents taken steps to eliminate the use and potential release of hazardous materials? *A preconstruction survey would be completed prior to construction*
Yes	Are there any existing local or regional concerns related to chemical contamination of ground or surface waters? *Five OUs have been identified on the Main Post. The OUs are being addressed under the EPA Superfund program.*
No	**Is additional cumulative effects analysis needed?** **Cumulative Effects Analysis Level: (1)** *Given the localized nature of impacts of the Proposed Action to hazardous resources, plans to conduct preconstruction surveys, and steps taken to minimize impacts to existing, ongoing remediation activities, an additional cumulative effects analysis is not needed.*

3.12.7 Noise

USAG Alaska determined that the Proposed Action would not result in a perceptible difference in the noise profile to sensitive receptors on Fort Wainwright and the nearby Fairbanks community. This determination was based on an analysis conducted by the ARRC for their railroad realignment project around Fort Wainwright and a review of the rerouting of truck traffic into the Fort Wainwright. ARRC analysis determined that even a cumulative increase in train traffic for future passenger rail service from Fairbanks through Fort Wainwright to Delta Junction would not result in a perceptible increase in noise, and the rerouting of trucks around Fort Wainwright would have a negligible effect on the noise levels. As identified through the Quick Look questions, no cumulative noise impacts would be expected to occur associated with the Proposed Action.

Noise Quick Look Table	
No	Will the Proposed Action create noise zones that will extend off the installation? *Construction activities would be limited to the Main Post. There would be no net increases in train activities; therefore, there would not be an increase perceptible noise levels on the Main Post or off the Main Post.*
No	Does the Proposed Action increase the level or intensity of military activity? *The annual level of deployment activities would remain the same under the Proposed Action. The intensity of activity would increase to one deployment train per day for four days approximately four times per year.*
No	Does the Proposed Action include the use of noisier equipment (or munitions) than that historically used at the proposed site(s)?
Yes	Are there other future military or non-military proposed projects that would increase the level of train activity originating from or passing through Fort Wainwright Main Post? *ARRC plans to add passenger rail service between North Pole, Alaska and potentially Delta Junction, Alaska to Fairbanks. This would add between two to four trains per day through the Main Post. ARRC's noise analysis found that there was no perceptible increase to noise impacts.*
No	**Is additional cumulative effects analysis needed?** **CEA Level: (1)** *Given the negligible impacts to noise sensitive receptors from current and proposed rail and construction activities from the Proposed Action and ARRC's rail activities, no further analysis is needed.*

3.12.8 Socioeconomics and Environmental Justice

USAG Alaska determined that the Proposed Action would not have socioeconomic or Environmental Justice impacts on the Fairbanks community. As indicated in the cumulative impact analysis from the Army Transformation EIS, the interior region (including Clear Air Force Station, Nenana, Fairbanks, and Delta Junction) will be significantly affected by construction of the Space and Missile Defense System, currently underway. The total construction cost for the all the related projects is estimated to be $1.2 billion dollars over five years, beginning in 2002. The $1.2 billion dollars does not include the additional permanent workforce that will be in place after the completion of the construction of the Space and Missile Defense System, more than 750 personnel. The proposed railhead and truck loading complex would cost approximately $6.1 million in its initial phase, which is less than 1% of the cost of the other projects in the region. In addition, the proposed railhead facility and truck loading complex would not increase the permanent workforce as it just replaces and consolidates existing infrastructure.

As identified through the Quick Look questions, no socioeconomic, environmental justice, or impact to children cumulative impacts would be expected to occur associated with the Proposed Action.

Socioeconomics and Environmental Justice Quick Look Table	
No	Is the Fairbanks or Fort Wainwright community undergoing rapid growth, or is the community seeing reduction in growth?
No	Does the Proposed Action add to that trend, or does it reduce (mitigate) that trend?
No	Would the Proposed Action result in any significant impacts to any resource areas? *The Proposed Action would not result in significant impacts to any of the resource areas; therefore, there are no high and adverse impacts to Environmental Justice populations or children.*

Socioeconomics and Environmental Justice Quick Look Table	
No	**Is additional cumulative effects analysis needed?** **Cumulative Effects Analysis Level: (1)** *The Proposed Action would not have an impact to the local economy because of the relatively small size of the project.*

3.12.9 Transportation

USAG Alaska limited the scope of the transportation cumulative effects analysis to Fort Wainwright Main Post and the roads immediately surrounding the installation. The Alaska Department of Transportation estimated in 2000 that over the next 20 years, traffic on Badger Road, near the intersection of Badger Road and the Richardson Highway, would increase to more than 11,000 cars per day (FNSB, 2000). This is an increase in close to 1,500 cars per day over current traffic levels (ADOT, 2004). The cumulative increase of an estimated 50 trucks per day over an eight-day period four times a year would be only a minor increase. As identified through the Quick Look questions, no transportation cumulative impacts would be expected to occur associated with the Proposed Action.

Transportation Quick Look Table	
Yes	Has a recent (last five to 10 years) regional transportation study been conducted via a collaborative effort between the installation and nearby towns and cities?
No	Are there any historical or current conflicts between the installation and various governmental agencies, and/or stakeholder groups, relative to on-post or off-post traffic-related concerns?
No	Will the Proposed Action over the planning horizon cause increases of more than five percent to on-post and/or off-post traffic levels?
No	**Is additional cumulative effects analysis needed?** **CEA Level: (1)** *The Proposed Action would have negligible impacts on traffic resources.*

3.12.10 Wetlands

USAG Alaska defined the scope of the wetlands cumulative effects analysis to be the Fort Wainwright Main Post and the surrounding city of Fairbanks area. Based on the Quick Look questions, USAG Alaska determined that additional cumulative effects analysis was needed for wetlands.

Wetlands Quick Look Table	
Yes	Would the Proposed Action result in a significant impact to wetlands or vegetation? *The Proposed Action would result in localized moderate impacts to wetlands. These wetland account for only a fraction of the similar available wetland habitat on the Main Post.*
No	Are Fort Wainwright Main Post wetlands subject to a significant decrease in overall size due to the Proposed Action and other military actions? *Impacts are localized and relatively small compared to wetland and habitat availability on the Main Post and in the region.*
No	Are there any threatened or endangered species associated with the wetlands in the vicinity of the Proposed Action?

Wetlands Quick Look Table	
No	Are any wetlands in the vicinity of the Proposed Action considered to be particularly ecologically important? *The wetlands in the vicinity of the Proposed Action are regularly used for training activities and are relatively isolated.*
Yes	Will the Proposed Action cause losses in the size and/or function of local wetland resources? *The Proposed Action will result in a reduction in the size of the wetlands on the Main Post.*
No	Have past actions caused negative potential impacts to wetlands resources? *Overall, the Army's impacts to wetlands are moderate, but impacts are offset by institutional controls, monitoring, and rehabilitation (USARAK, 2004a; USAG Alaska, 2005; and USAG Alaska, 2006a).*
Yes	Are future actions by non-military and other military entities expected and would they cause impacts on wetland resources? *Wetland impacts from non-military and other military entities would occur in the vicinity of the Proposed Action.*
Yes	**Is additional cumulative effects analysis needed? CEA Level: (2) *Analysis and Discussion***

The additional analysis to assess the potential cumulative impact on wetlands included a review of the projects described in Table 3.12-1. According to CWA Section 404 permits submitted within the last year, in the surrounding area of Fairbanks, most projects affecting wetlands are for residential developments and industrial operations. In total, these projects would affect approximately 230 acres of wetlands distributed throughout the Fairbanks area. The project with the largest wetland impact, affecting approximately 170 acres, is the expansion of a material site for commercial gravel operations off of Van Horn Road in Fairbanks. CWA Section 404 permit applications cite mitigation measures for these impacts.

Cumulative impacts to wetlands would result from these projects. USAG Alaska estimated in Section 3.5 that the Proposed Action would affect approximately 62.5 acres of wetlands through the construction of the railhead and truck loading facility. On the Main Post of Fort Wainwright, other USAG Alaska projects would affect 36 acres of wetlands, ARRC's Fort Wainwright Rail Realignment Project would affect up to 20 acres of wetlands assuming a 100-foot construction corridor, and the BLM estimates that future proposed projects would affect approximately 8 acres of wetlands. In total, all the other projects would affect up to 64 acres of wetlands on the Main Post, and when added with the Proposed Action would total up to 126.5 acres of wetlands impacted. Of the 5,974 acres of wetlands located on the Main Post, this represents 2.1 percent of the wetlands, resulting in a minor cumulative impact.

4.0 MITIGATION MEASURES

As defined in CEQ Regulation 40 CFR 1508.20, "mitigation" includes:

- Avoiding the impact altogether;
- Minimizing impacts by limiting the degree or magnitude of the action;
- Rectifying the impact through repairing, rehabilitating, or restoring;
- Reducing or eliminating the impact over time by preservation and maintenance operations; or
- Compensating for the impact by replacing or providing substitute resources or environments.

This section presents mitigation measures that have been proposed as part of the Proposed Action to address impacts to the environment.

Water Resources

The following mitigation measures would be implemented to reduce or avoid impacts to EFH of the Chena River and Flood Channel B:

- All construction staging, fueling, and servicing operations would be kept at a minimum of 100 feet from Flood Channel B.
- A project construction sequence would be implemented to minimize the extent of exposed soil at any given time.
- Contaminant-free embankment and surface materials would be used in construction.
- Construction activities would be monitored to ensure that temporary impacts are minimized and all temporary disturbance areas would be restored to pre-construction conditions following construction.
- Temporary material storage piles would not be placed within the 100-year floodplain during the rainy season unless the following conditions are met: (1) storage does not occur when flooding is imminent; and (2) if storage piles consist of erosive material, they would be covered with plastic tarps (or something similar) and surrounded with compost berms or other erosion control devices. Material used within 12 hours of deposition is not considered a temporary material storage pile.
- Standard spill-prevention measures and a stormwater pollution prevention plan would be implemented during construction and operations to minimize and prevent spills or leakage of hazardous materials, including access to spill clean-up equipment (e.g., oil-absorbent pads).
- Use of BMPs during construction to prevent erosion and runoff from entering the creek (e.g., installing temporary erosion control measures such as wood excelsior mats, straw bales, and/or silt fencing, until vegetation can bind the soil or diversion dikes channel storm water away from the disturbed soils).

Wetlands

Prior to the potential construction of the deployment facilities, USAG Alaska would submit an individual CWA Section 404 permit application, detailing exact amounts of wetlands to be filled and acres affected, complying with all permitting conditions and potentially further mitigating impacts to wetlands. These measures could be implemented to reduce or avoid impacts to wetland resources:

- Fill area would be minimized for wetlands through site-specific design and limiting construction staging to upland areas.
- Where necessary, natural drainage patterns would be maintained by the installation of culverts of adequate number and size to prevent flooding or excessive drainage of adjacent wetlands.

- No fill or construction materials would be stockpiled in wetlands or waters of the U.S. All equipment operation would be confined to the project footprint to prevent unnecessary damage to adjacent wetlands and vegetation.
- Sufficient fill thickness and/or insulation would be utilized in all areas of permafrost to prevent detrimental thermal degradation.
- All cuts, fills, and disturbed areas resulting from project construction would be stabilized using native vegetation to minimize erosion and subsequent sedimentation of wetlands and streams.
- All additional mitigation would be conducted as required by terms and conditions contained within the USACE Section 404 permit.

Biology

The following mitigation measures would be implemented to reduce or avoid impacts to biological resources:

- Minimize exposure time of soils during construction and minimize the extent of vegetation disturbance;
- Develop sites to minimize clearing and grading, cut-and-fill, and new impervious surfaces; and
- Protect and restore the vegetative buffer areas around the Chena River and Flood Control Channel B, as well as Clear Creek, where practical.

5.0 LIST OF PREPARERS AND CONTRIBUTORS

The following individuals from the U.S. Army Garrison - Alaska, Potomac Hudson Engineering, ICF International, and New South Associates are responsible for the content of this EA.

U.S. Army Garrison, Alaska (USAG Alaska)

Marshall, Tim, Fort Wainwright Cultural Resources Specialist, CSU/CEMML
M.A. History and Archaeology
B.A. Anthropology
Years Experience: 12
EA: Cultural Resources and Historical Background

McEnteer, Carrie, NEPA Coordinator
B.S. Watershed Science
Years Experience: 9
EA: NEPA Coordination, Purpose and Need, and Document Review

Sayre, Roger, Fort Wainwright NEPA Coordinator
Ph.D. Biology
M.S. Range Science
B.A. Anthropology
Years Experience: 15
EA: NEPA Coordination and Document Review

Thornton, Meg, Fort Wainwright Cultural Resources Manager
M.A. Anthropology
B.A. Archaeology
Years Experience: 9
EA: Cultural Resources Coordination and Document Review

Potomac Hudson Engineering

Naumann, Robert
M.S. Environmental Science
B.S. Natural Resources
Years Experience: 9
EA: Water Resources and Wetlands

Walker, Debra A.
B.A. Biology
Years Experience: 30
EA: Program Manager

ICF International

Carr, Ed
M.S. Atmospheric Science
B.S. Meteorology
Years Experience: 21
EA: Air Quality

Healy, Erin
M.S. Marine Science
B.A. Biology/Geology
Years Experience: 17
EA: Hazardous Materials and Geology and Soils

Hoye, Jeffrey
B.S. Geography
Years Experience: 3
EA: GIS

Poole, Britt
B.S. Geography
Years Experience: 5
EA: GIS

Stribley, Todd
B.S. Biology
Years Experience: 14
EA: Project Manager

Summerville, Alan
M.A. City Planning
B.A. Economics and Political Science
Years Experience: 15
EA: NEPA Advisor

Woods, Hova
M.P.A. Environmental Management
B.S. Finance
Years Experience: 7
EA: Geology and Soils, Socioeconomics, Environmental Justice, and Hazardous Materials

Zelasko, Elizabeth
M.S.E.S. Water Resources
M.P.A. Environmental Policy and Natural Resources Management
B.S. Biology
Years Experience: 3
EA: Biological Resources, Noise, and Cumulative Impacts

New South Associates

Olson, Christina
M.A. Historic Preservation
B.A. Historic Preservation
Years Experience: 6
EA: Cultural Resources and Aesthetics

This Page Intentionally Left Blank

6.0 REFERENCES

Adams, Brian M. 2007. Personal Communications. USAG Alaska DPW, Water and Solid Waste Program Specialist.

Agency for Toxic Substances and Disease Registry (ATSDR). 2003. Public Health Assessment, Fort Wainwright, Fairbanks North Star Borough, Alaska. Prepared by the Federal Facilities Assessment Branch Division of Health Assessment and Consultation. September 30, 2003. Accessed at: http://www.atsdr.cdc.gov/hac/PHA/fortwainwright/wai_toc.html on March 15, 2007.

Alaska Department of Environmental Conservation (ADEC). 2003. Alaska's Final 2002/2003 Integrated Water Quality Monitoring and Assessment Report. December 2003. http://www.dec.state.ak.us/water/wqsar/pdfs/finali%20integrated%202002-2003%20report.pdf Site Accessed: February 6, 2007.

ADEC. 2007a. FY 07 Priority Waters and Identified Actions. http://www.dec.state.ak.us/water/acwa/acwa_index.htm. Site Accessed: January 19, 2007.

ADEC. 2007b. Total Maximum Daily Load. Scheduled TMDLs. http://www.dec.state.ak.us/water/tmdl/scheduled_tmdl.htm. Site Accessed: February 7, 2007.

Alaska Department of Transportation (ADOT). 2004a. *Fairbanks Traffic Map Showing Average Daily Traffic.* http://dot.alaska.gov/stwdplng/highwaydata/index.shtml.

ADOT. 2004b. *Fairbanks and Vicinity Traffic Map Showing Average Daily Traffic.* http://dot.alaska.gov/stwdplng/highwaydata/index.shtml.

Alaska Railroad Corporation (ARRC). 2006a. Wetlands Technical Report, Final, Eielson Branch Realignment Project, July.

ARRC. 2006b. Noise and Vibration Technical Report. Eielson Branch Realignment Project. October.

ARRC. 2007a. Fort Wainwright Realignment. Project Facts. http://www.akrr.com/pdf/2007%20Fort%20Wainwright%20Realignment1.pdf. Site Accessed: February 7, 2007.

ARRC. 2007b. *History of the Alaska Railroad*. www.akrr.com/. Accessed February 2007.

Bureau of Land Management (BLM). 2007. Draft Environmental Assessment for the Alaska Fire Service Master Plan, Fort Wainwright, AK. http://www.usarak.army.mil/conservation/AFS_EA/838201_DraftEA_011207.pdf Site Accessed: February 7, 2007.

Center for Environmental Management of Military Lands. 2005. National Wetlands Inventory at Fort Wainwright, AK. U.S. Army Sustainable Range Program GIS Program.

Council on Environmental Quality (CEQ). 1997. "Environmental Justice: Guidance Under the National Environmental Policy Act." December. Accessed January 24, 2007, at http://www.epa.gov/compliance/resources/policies/ej/.

Fairbanks North Star Borough (FNSB). 2000. Planning Commission Action on Richardson Highway 6 Mile Badger Interchange. Memo to the Fairbanks North Star Borough Planning Commission.

http://co.fairbanks.ak.us/meetings/PlanningCommission/2000meetings/plancomm020100/hp001-2000.pdf. Site Accessed: February 7, 2007.

FNSB. 2003. Carbon Monoxide Maintenance Plan. Public Review Draft. http://co.fairbanks.ak.us/Transportation/FnsbAqPlan/SEC10.pdf. Site Accessed: February 7, 2007.

FNSB. 2006. Joint Land Use Study with United States Army, Fort Wainwright and United States Air Force, Eielson Air Force Base. June 2006. projects.ascg.com/jlus/ Site Accessed: February 6, 2007.

FNSB. 2007. Fairbanks Stormwater Management Program. http://co.fairbanks.ak.us/PWorks/StormWaterManagementProgram/ Site Accessed: February 6, 2007/

Federal Emergency Management Agency (FEMA). 1992a. Flood Insurance Rate Map. Fairbanks North Star Borough, Alaska. Panel 203 of 400. Community-Panel Number 025009 0203G.

FEMA. 1992b. Flood Insurance Rate Map. Fairbanks North Star Borough, Alaska. Panel 182 of 400. Community-Panel Number 025009 0182G.

Johnson, J. and Ed Weiss. 2006. *Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes – Interior Region, Effective September 15, 2006.* Alaska Department of Natural Resources and Alaska Department of Fish and Game.

Malen, Joseph. 2007. Personal Communications. USAG Alaska DPW. February 2, 2007.

Montgomery, Watson, and Herza. 2001. Installation Environmental Noise Management Plan, Fort Wainwright, Alaska, October.

National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). 2005. *Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska*. www.fakr.noaa.gov/habitat/seis/efheis.htm.

Raymond-Yakoubian, Julie and Elsken, Jennifer. 2006. *Annual Report, Archaeological Survey and Evaluation: Fort Richardson and Fort Wainwright, 2005*. Center for Environmental Management of Military Lands, Colorado State University. Fort Collins, Colorado.

U.S. Army Alaska (USARAK). 2004. *Final Environmental Impact Statement for Transformation of U.S. Army Alaska*, Volumes 1 and 2. February.

U.S. Army Corps of Engineers (USACE). 1999. *An Ecological Land Survey for Fort Wainwright, Alaska*, September.

U. S. Army Environmental Center (USAEC). 2006. Second Five-year Review Report for Fort Wainwright, Alaska. September.

U.S. Army Garrison Alaska (USAG Alaska). 2007. Integrated Natural Resource Management Plan, 2007-2011. U.S. Army, Alaska – Fort Wainwright.

USAG Alaska. 2006a. Installation Scope of Work Planning Package (ISOWPP*): Environmental Assessment for Railhead facility and Truck Loading Complex, Fort Wainwright, Alaska*. Fort Wainwright, Alaska.

USAG Alaska. 2006b. Railhead facility, Fort Wainwright. AutoCAD drawings depicting alterations to facility from 1942 until 2006.

U.S. Census Bureau. 2007. "QuickFacts", Accessed at http://quickfacts.census.gov on January 24, 2007.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2007. Soil Data Mart, Accessed at: http://soildatamart.nrcs.usda.gov/ on January 24, 2007.

USDA NRCS. 2006. *Soil Survey of Fort Wainwright Area, Alaska,* December.

U.S. Environmental Protection Agency (EPA). 1997. EPA Superfund Record of Decision: Fort Wainwright EPA ID: AK6210022426; OU 02; Fort Wainwright, AK, 03/31/1997.

EPA. 2004. National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges for Fairbanks North Star Borough. http://yosemite.epa.gov/R10/WATER.NSF/840a5de5d0a8d1418825650f00715a27/dff2a6b6c1adebe28825687900599df3/$FILE/AKS053414FS.pdf. Site Accessed: February 6, 2007.

EPA. 2007. *National Priorities List Sites in Alaska*, Accessed at http://www.epa.gov/superfund/sites/npl/ak.htm on January 24, 2007.

U.S. Fish and Wildlife Service (USFWS). 2006. National Wetlands Inventory Wetlands Mapper (Map center coordinates: 64° 49' 2" N, 147° 34' 47" W) http://wetlandsfws.er.usgs.gov/wtlnds/launch.html Site visited December 6, 2006.

U.S. Geological Survey (USGS). 2002a. National Earthquake Information Center, Preliminary Earthquake Report. 2002. Available at: http://neic.usgs.gov/neis/eq_depot/2002/eq_021023/. Last modification March 30, 2004.

USGS. 2002b. National Earthquake Information Center, Preliminary Earthquake Report, 2002. Available at: http://neic.usgs.gov/neis/eq_depot/2002/eq_021103/neic_lbbl_l.html. Last modification November 13, 2003.

USGS. 2007. Earthquake Probability Mapping. Accessed at: http://eqint.cr.usgs.gov/eq-men/html/neweqprob-06.html on January 24, 2007.

This Page Intentionally Left Blank

7.0 LIST OF AGENCIES AND INDIVIDUALS CONTACTED

Alaska Department of Environmental Conservation

Alaska Department of Fish and Game

Alaska Department of Natural Resources

Alaska Department of Natural Resources

Alaska Department of Natural Resources, Office of History and Archeology

National Park Service

State Historic Preservation Office (Alaska)

U.S. Army Garrison Alaska, Directorate of Public Works

U.S. Fish and Wildlife Service

This Page Intentionally Left Blank

APPENDIX A
DESCRIPTION OF LAWS AND REGULATIONS

Table A-1. Laws, Regulations, and Associated Consultations and Permits

Law or Regulation	Description
Alaska Department of Natural Resources (ADNR) Alaska State Anadromous Fish Act AS 41.14.870	The Anadromous Fish Act requires that an individual or governmental agency provide prior notice and obtain approval from ADNR "to construct a hydraulic project or use, divert, obstruct, pollute, or change natural flow or bed" of a specified anadromous waterbody.
ADNR Fishway Act AS 41.14.840	The Fishway Act requires that an individual or government agency notify and obtain authorization from ADNR for activities within or across a stream used by fish if the department determines that such activities could represent an impediment to the efficient passage of fish.
Alaska Department of Environmental Conservation (ADEC) Air Quality Operating Permit No. 236TVP01	ADEC Air Quality Operating Permit sets operating and monitoring conditions for Fort Wainwright Main Post to maintain air quality standards as directed under the Clean Air Act (CAA).
American Antiquities Act [16 USC 431 et seq.]	Requires the agency to protect historic and prehistoric ruins, monuments, and objects of antiquity including vertebrate paleontological resources, on lands owned or controlled by the Federal government.
American Indian Religious Freedom Act [42 USC 1996]	Establishes Federal policy to protect and preserve the right of American Indians to believe, express, and exercise their religions. Requires Federal agencies to prepare a report evaluating how their actions might interfere with these beliefs, expressions, and actions.
Archeological and Historic Preservation Act [16 USC 469 et seq.]	Authorizes all Federal agencies to expand program or project funds to evaluate, protect, or recover archeological and historical data jeopardized by their projects; explicitly calls for analysis and publication of data.
Archaeological Resources Protection Act [16 USC 470aa et seq.]	Requires a permit for excavation or removal of archaeological resources from publicly held or Native American lands.
Bald and Golden Eagle Protection Act [16 USC 668 et seq.]	Consultations should be conducted to determine if any protected birds are found to inhabit the area. If so, the agency must obtain a permit that may be required because of construction and operation of project facilities before moving any nests.
Clean Air Act (CAA) [42 USC 7401 et seq.]	Requires sources to meet standards and obtain permits to satisfy National Ambient Air Quality Standards (NAAQS), State Implementation Plans (SIPs), New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants (NESHAPs), and New Source Review (NSR).

Table A-1. Laws, Regulations, and Associated Consultations and Permits

Law or Regulation	Description
CAA: NAAQS State Implementation Plan (SIP) [42 USC 7409 et seq.]	Requires compliance with primary and secondary ambient air quality standards governing sulfur dioxide (SO_2), nitrogen oxide (NO_x), carbon monoxide (CO), ozone (O_3), lead (Pb), and particulate matter, and emission limits/reduction measures as designated in each state's SIP.
Clean Water Act (CWA) [33 USC 1251 et seq. Sections 401 and 402]	Requires Environmental Protection Agency (EPA) or state-issued permits, National Pollutant Discharge Elimination System (NPDES) permits, and compliance with provisions of permits regarding discharge of effluents to surface waters and additional wetland protection requirements.
CWA [33 USC 1313 Section 404]	Requires permits for discharge or fill placed in jurisdictional waters, including wetlands. Requires alternatives analysis including practicable alternatives that avoid impacts (404b(1) guidelines).
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Superfund)	CERCLA provides Federal funds to clean uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. The Act gives EPA power to seek out those parties responsible for any release and assure their cooperation in the cleanup. In signing the Record of Decision (ROD), USARAK is responsible for the cleanup.
Endangered Species Act of 1973 [16 USC 1531 et seq.]	Requires consultation to identify endangered or threatened species and their habitats, assess impacts, obtain necessary biological opinion, and if necessary, develop mitigation measures to reduce or eliminate adverse effects of construction or operation.
Executive Order (EO) 11988: Floodplain Management EO 11990: Protection of Wetlands Management	Requires that where there is no practicable alternative to development in floodplains and wetlands, Federal agencies are required to prepare a floodplains and wetlands assessment, design mitigation measures, and provide public review. For floodplain involvement, Federal agencies must issue a Floodplain Statement of Findings.
EO 12088: Federal Compliance with Pollution Control Standards [43 FR 47707 October 17, 1978]	Requires Federal agencies to consult with EPA and State agencies regarding the best techniques and methods for the prevention, control, and abatement of environmental pollution.
EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations [59 FR 7629 February 16, 1994] and EO 13045: Protection of Children from Environmental Health Risks and Safety Risks	Requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations and disproportionately high and adverse environmental health risks of its programs, policies, and activities on children.

Table A-1. Laws, Regulations, and Associated Consultations and Permits

Law or Regulation	Description
EO 13112: Invasive Species [64 FR 6183 February 8, 1999]	Requires Federal agencies, to the extent practicable and permitted by law, to prevent the introduction of invasive species; to provide for their control; and to minimize the economic, ecological, and human health impacts that invasive species cause.
EO 13186: Responsibilities of Federal Agencies to Protect Migratory Birds [66 FR 63349 December 6, 2001]	Requires Federal agencies to avoid or minimize the negative impacts of their actions on migratory birds and to take active steps to protect birds and their habitats.
EO 13007: Indian Sacred Sites [61 FR 26771]	Directs Federal agencies to avoid adverse effects to sacred sites, provide access to those sites for religious practices, and to plan projects to provide protection for and access to sacred sites.
Farmland Protection Policy Act [7 USC 4201 et seq.]	Minimizes any adverse effects to prime and unique farmlands.
Fish and Wildlife Coordination Act [16 USC 661-667e March 10, 1934]	Provides the basic authority for U.S. Fish and Wildlife Service (USFWS) involvement in evaluating impacts to fish and wildlife from proposed water resource development projects.
Hazard Communication Standard [29 CFR 1910.1200]	Requires compliance to ensure that workers are informed of all chemical hazards in the workplace and are trained to handle them.
Hazardous Materials Transportation Law [49 USC 51015127 et seq.]	Requires compliance with the requirements governing hazardous materials and waste transportation; applies primarily to the construction phase.
Magnuson-Stevens Fishery Conservation and Management Act [16 USC 1801 et seq.]	Requires consultation with National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) and assessment of impacts from activities that may affect Essential Fish Habitat (EFH) and managed species.
Migratory Bird Treaty Act [16 USC 703 et seq.]	Requires consultation to determine whether construction or operation of project facilities has any impacts on migrating bird populations.
National Historic Preservation Act, as amended [16 USC 470 et seq.]	For a Federal undertaking, Section 106 requires consultation with State Historic Preservation Officers (SHPOs), federally-recognized tribes, and other consulting parties to evaluate effects on historic properties (properties eligible for listing in the National Register of Historic Places), and consider ways to avoid effects or reduce them to the level of no adverse effect.
Native American Graves Protection and Repatriation Act [25 USC 3001]	Requires the development of procedures to address unexpected discoveries of Native American graves or cultural items during activities on Federal or tribal land.
NEPA [42 USC 4321 et seq. 40 CFR 1500-1508] and Army Regulations 200-1; 200-4; 32 CFR Part 651	Follows 40 CFR 1500-1508, which directs all Federal agencies in the implementation of NEPA. U.S. Army regulations for implementing NEPA.

Table A-1. Laws, Regulations, and Associated Consultations and Permits

Law or Regulation	Description
Noise Control Act [42 USC 4901 et seq.]	Requires facilities to maintain noise levels that do not jeopardize the health and safety of the public. Applicable to construction noise.
Occupational Safety and Health Act [29 USC 651 et seq.]	Requires compliance with all applicable work safety and health legislation (including guidelines of 29 CFR 1960) and prepare, or have available, Material Safety Data Sheets.
Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities [40 CFR 112]	Establishes procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and contain such discharges. Requires Spill Prevention, Control, and Countermeasure Plans (SPCCPs), and Facility Response Plans. Regulations apply to non-transportation-related onshore facilities.
Protection of Historic Properties [36 CFR 800]	Lists implementing regulations that specify process for above-listed requirements of Section 106 of National Register of Historic Places.
Safe Drinking Water Act [42 USC 300j-9(i) December 12, 1974]	Establishes a Federal program to monitor and increase the safety of the nation's drinking water supply. The Act instructs EPA to establish a national program to prevent underground injections of contaminated fluids that would endanger drinking water sources.
Toxic Substances Control Act [42 USC 2601 et seq.]	Requires compliance with inventory reporting requirements and chemical control provisions of the Act to protect the public from the risks of exposure to chemicals. The Act imposes strict limitations on the use and disposal of equipment contaminated with polychlorinated biphenyls (PCBs). Applicable primarily to the construction phase.

APPENDIX B
GENERAL CONFORMITY – RECORD OF NON-APPLICABILITY

Project/ Action Name: Railhead Operations Facility and Truck Loading Complex – Phase I

Project/ Action Point of Contact: Carrie McEnteer

Begin Construction Date: Fall 2007
End Construction Date: Fall 2008

General Conformity under the Clean Air Act, Section 176 has been evaluated for the project described above according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this project/ action because:

____ The project/ action is an exempt action under 40 CFR 153(c) or (d), (Specify applicable exemption category and regulatory citation).

OR

_X_ Total direct and indirect emissions from this project/ action have been estimated for this project and are below the conformity threshold value established at 40 CFR 93.153(b) of 100 tons/year CO;

AND

The project/ action is not considered regionally significant under 40 CFR 93.153(i).

Supporting documentation and emission estimates if relevant are

( ) Attached
(X) Appear in the NEPA documentation
( ) Other

Eric Dick
Environmental Engineer
Fort Wainwright, Alaska

This Page Intentionally Left Blank

APPENDIX C
POLICY ON USE OF TIMBER AT FORT WAINWRIGHT

Army Regulation 200-3, *Natural Resources - Land, Forest, and Wildlife Management* (28 February 1995) Chapter 5 Forest Management, Section 5-2 Timber Management, b. Harvesting actions, (2) Disposal action, (d) states,

"Commercial forest products will not be given away, abandoned, carelessly destroyed, used to offset costs of contracts, or traded for products, supplies, or services. All forest products are to be accounted for and commercial harvests completed prior to the start of any construction that may impact forest resources. When forest products are removed from Army lands by any means other than a commercial timber sale, a dollar amount equal to the fair market value is to be deposited to Budget Clearing Account 21F3875.3960 20-C S99999 for products removed."

USARAK policy on forest products use, as stated in the Fort Wainwright Forest Management Plan, is as follows:

- All forest harvesting actions must be coordinated with the Environmental Resources Department/Installation Forester prior to action.
- Public use of forest products require a permit from the Environmental Resources Department/Installation Forester prior to removal of timber from the Installation.
- Mechanical clearing techniques must be coordinated with the Environmental Resources Department/Installation Forester prior to action.
- Hand clearing techniques should be used to preclude erosion or when conducting harvesting activities in wetlands, when possible.
- Timber harvest activity is not allowed within 50 feet immediately adjacent to an anadromous stream or high value resident fish water body. Within the next 50 feet, a 50 percent minimum retention of trees must occur.
- Permits are required for the vehicular crossing of anadromous and resident fish streams.
- Trees with a diameter-breast-height (dbh) of less than four inches may be cut without prior approval.
- Trees with a dbh of less than four inches; slash; and other debris may be distributed into adjacent upland areas, piled for burning, hauled away, or chipped and distributed into adjacent upland areas. Specific disposal methods will be determined by the Environmental Resources Department/Installation Forester prior to action.
- If spruce logs are not immediately removed from the site, the following special precaution must be taken. All spruce logs greater than four inch dbh must be scored the length of the log with a chainsaw to a half-inch depth so as to cause drying of the phloem to prevent bark and beetle infestations in nearby healthy trees.
- Trees with a dbh of more than four inches should be salvaged for public use up to a four inch top.
- Trees with a dbh of more than four inches should be stacked separately from smaller diameter trees.
- All stumps should be cut within six inches or less of the ground surface.
- Spruce boughs are only to be collected from trees sized less than four inches dbh for troop training.
- All large-scale harvest activities must be coordinated with the Natural Resources Office/Installation Forester to ensure other miscellaneous harvest requirements are met prior to action.

This Page Intentionally Left Blank

APPENDIX D
AGENCY AND OTHER CORRESPONDENCE

STATE OF ALASKA
SARAH PALIN, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS AND OUTDOOR RECREATION
OFFICE OF HISTORY AND ARCHAEOLOGY

550 W. 7TH AVENUE, SUITE 1310
ANCHORAGE, ALASKA 99501-3565
PHONE: (907) 269-8721
FAX: (907) 269-8908

April 5, 2007

File No.: 3130-1R Army Wainwright
3330-6 FAI-1756

Allan D. Lucht
Director, Directorate of Public Works
U.S. Army Garrison Alaska
724 Postal Service Loop #4500
Fort Richardson, AK 99505-4500

Subject: Partial Demolition of Rail Spur

Dear Mr. Lucht:

This office received your letter on March 29, 2007 in response to our request for more information concerning the demolition of rail operations at Fort Wainwright. We reviewed this undertaking for potential impacts to historic and archaeological resources pursuant to Section 106 of the National Historic Preservation Act.

We concur with your determination that the Army Railroad Spur (FAI-1756) is eligible for inclusion in the National Register of Historic Places. The Army Railroad Spur is eligible under Criterion A at the state level for its association with the construction of the railroad and the growth of Alaska. The period of significance is 1915-1957.

We also concur that the demolition and removal of track segments will result in No Historic Properties Adversely Affected. The Army has adequately minimized the effect by retaining the existing right-of-way.

Please contact Doug Gasek at 269-8726 if you have any questions or need further assistance.

Sincerely,

Judith E. Bittner
State Historic Preservation Officer

JEB:dfg

DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, U.S. ARMY GARRISON, ALASKA AND FORT RICHARDSON (PROV)
724 POSTAL SERVICE LOOP #6000
FORT RICHARDSON, ALASKA 99505-6000

FEB 5 2007

REPLY TO ATTENTION OF:

Office of the Garrison Commander

SUBJECT: Construction and Operation of a Railhead Operations Facility and Truck Loading Complex on Fort Wainwright, Alaska (FWA)

Ted Swem
Branch Chief, Endangered Species
U.S. Fish and Wildlife Service
101 12th Avenue Box 19, Room 110
Fairbanks, AK 99701-6237

Dear Mr. Swem:

The U.S. Army Garrison, Alaska (USAG-AK) proposes to construct a new railhead operations facility and truck loading complex at FWA. The Army in Alaska transformed from a light infantry brigade to a Stryker Brigade Combat Team (SBCT) in 2004, and an important component of this transformation was to develop the capability to deploy the entire SBCT within 96 hours. To meet the requirement for rapid deployment at FWA, the infrastructure to load and unload trains and trucks needs to be expanded and upgraded. This action requires environmental documentation that includes potential affects upon any species protected by the Endangered Species Act.

Numerous biological surveys conducted on FWA have never revealed the presence of any federally listed threatened or endangered species, and none of the land in question is designated as critical habitat for any species. It is therefore our determination that USAG-AK will not be required to conduct consultations under Section 7 of the Endangered Species Act with the U.S. Fish and Wildlife Service (USFWS) for the construction of new rail transportation facilities proposed at FWA. Please inform USAG-AK by letter within 30 days if USFWS is not in agreement with this determination.

USAG-AK is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts of the proposed facility in accordance with the National Environmental Policy Act (NEPA). USAG-AK will be sending a draft copy of the EA for USFWS's review in mid-March and requests that comments be submitted on the draft EA by mid-April. A letter outlining a specific timeframe for the review will accompany the draft EA.

The proposed new facility would be located in the southeastern corner of FWA near the Richardson Highway and Old Badger Road (as shown in the enclosed map). The Alaska Railroad Corporation is in the process of preparing a separate EA for new railway through FWA and the lines and the findings of that document will be

incorporated into USAG-AK's EA for the new railhead operations facility and truck loading complex. These facilities would be built on undeveloped land currently used for small unit training near existing SBCT maintenance facilities. Preliminary plans for the footprint of the facilities are currently being made and will be available by February 2007. The affected area contains mixed spruce-hardwood forested wetlands, and is also located adjacent to existing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) restoration units.

The expanded rail facilities would provide additional loading/unloading capabilities, reinforced loading docks, vehicle hardstands and end ramps to replace un-reinforced loading infrastructure. It would also involve construction of one shipping and receiving building, additional loading and unloading spurs, and a container transfer pad at the railhead facility. Construction at the truck loading complex would include ten multi-level loading positions, hardstands, an operational building, and lighting. The new railhead operations facility and truck loading complex would also include a rail spur to the existing Ammunition Supply Point, paving of Old Badger Road, and eventual demolition of existing railcar loading facilities.

If you have any questions, point of contact for this action is Ms. Carrie McEnteer, Environmental Planning Branch Chief for FWA at (907) 353-9507, or by email at carrie.mcenteer@us.army.mil.

Sincerely,

David L. Shutt
Colonel, U.S. Army
Commanding

Enclosure

Email from Nancy Ihlenfeldt, Alaska Department of Natural Resources, to Carrie L McEnteer, IMCOM FWA DPW

Sent: Wednesday, June 20, 2007 2:49 PM
To: McEnteer, Carrie L IMCOM FWA DPW
Subject: Construction & Operation of a Railhead Operations Facility &
Truck Loading Complex

Carrie:

The ADNR, Office of Habitat Management and Permitting (OHMP) has reviewed the information provided for the above referenced project on Fort Wainwright. The project includes the construction of a new consolidated railhead facility and truck loading complex and decommission of the existing railhead facility. The proposed new facility would be located in the southwestern corner of Fort Wainwright near the Richardson Highway and Old Badger Road and built on undeveloped land currently used for small unit training.

A Fish Habitat Permit from the OHMP would not be required for the proposed project as it does not appear to affect a stream that supports fish. The OHMP has no objection to the project.

Thank you for the opportunity to comment.

Nancy Ihlenfeldt
Habitat Biologist
AK Department of Natural Resources
Office of Habitat Management & Permitting
Fairbanks Office
907-459-7287

APPENDIX E
FINDING OF NO PRACTICABLE ALTERNATIVE RAILHEAD OPERATIONS FACILITY AND TRUCK LOADING COMPLEX, FORT WAINWRIGHT, AK

Pursuant to Executive Orders 11988 (*Floodplain Management)* and 11990 (*Protection of Wetlands)*, in order for the Army to construct the proposed railhead operations facility and truck loading complex in a floodplain or wetlands, it must find that there are no practicable alternatives to doing so and that all practicable measures have been taken to minimize harm to the floodplain and wetlands. The practicability of a given alternative or measure is evaluated by considering such pertinent factors as community welfare, cost, environmental impact, and technological feasibility in light of the overall project purposes. This Finding of No Practicable Alternative incorporates the *Environmental Assessment for the Construction and Operations the Railhead Facility and Truck Loading Complex* and its findings with respect to the Proposed Action.

All of Fort Wainwright's Main Post was considered for siting of the proposed railhead operations facility and truck loading complex. Potential construction sites were screened by evaluating the capability of each site to satisfy rapid deployment objectives. The Army's selection of the railhead facility and truck loading complex location within the southeast portion of Fort Wainwright's Main Post was determined to be the only on-Post location that was reasonably located near existing rail lines with sufficient available space to accommodate the additional rail loading structures as required to meet Stryker Brigade Combat Team (SBCT) rapid deployment needs that is also located near existing railroad alignments, SBCT supply warehouses, and ammunition supply points. Centralized consolidation of rail and truck loading and unloading facilities will ensure the SBCT will be able to meet its 96-hour rapid deployment goal. The proposed location of the railhead operations facility falls within the 100-year floodplain of Clear Creek, and the proposed location of both the railhead operations and truck loading complex is within a wetland area. Development of this area would require both a Fairbanks North Star Borough (FNSB) Floodplain Permit and a Clean Water Act Section 404 permit. Pursuant to Executive Orders 11988 and 11990, the Army would take all practicable measures to minimize potential harm to or within the floodplain and wetlands as further described below.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping (FIRM) indicates Clear Creek has a Flood Zone A width of up to 300 feet within the boundaries of the proposed railhead operations facility. Flood Zone A corresponds to a 1-percent annual chance of flooding determined in the Flood Insurance Rate Study by approximate methods of analysis. Over time, construction of Flood Control Channel B (which runs perpendicular to Clear Creek, and connects the Chena and Tanana rivers) and extensive ditching of Clear Creek as it flows through Fort Wainwright's Main Post, have altered Clear Creek's original floodplain by reducing its aerial extent. The proposed site design would ensure all finished elevations for the railhead operations facility would be at or above the Base Flood Elevation listed by the FNSB for this site. Additional features to facilitate drainage at the site (e.g., culverts and roadside ditches) may be required and would be incorporated during site design and layout. The cumulative effect of the proposed development would not create an obstruction to the floodplain, increase the water surface elevation of the base flood, or increase the flood heights or velocities associated with Clear Creek.

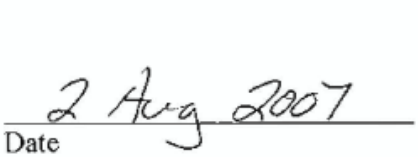
As both the railhead operations facility and truck loading complex sites contain extensive wetlands, other than the No Action Alternative, no practicable alternative exists to entirely avoid wetlands. The amount of permanent wetland loss due to the construction of these facilities would result in the loss of 1 percent of wetlands within the Main Post. Mitigation and best management practices including minimizing the

extent of fill and construction equipment through site-specific design, limiting construction staging to upland areas, and maintaining natural drainage patterns, would be used to minimize impacts to wetlands.

Based on the pertinent considerations discussed herein, the Army hereby finds that there are no practicable alternatives to constructing the railhead operations facility and truck loading complex at Fort Wainwright's Main Post. Furthermore, pursuant to Executive Orders 11988 and 11990, the Army will take all practicable measures to minimize potential harm to or within the floodplain and wetlands at the proposed railhead operations and truck loading facility location.

APPROVED BY:

DAVID L. SHUTT
COL, AR
Commander, US Army Garrison Alaska



Date