



**DEPARTMENT OF THE ARMY
UNITED STATES ARMY ALASKA**

ENVIRONMENTAL ASSESSMENT

**CONSTRUCTION FOR THE ALERT HOLDING AREA AND PALLET
PROCESSING FACILITY, FORT WAINWRIGHT, ALASKA**

July 2002

APPROVED BY:

A handwritten signature in black ink, appearing to read 'F. Lehman', written over the printed name and title.

Frederick Lehman
Colonel, U.S. Army
Garrison Commander

SEP 30 2002

TABLE OF CONTENTS

Summary	1
I Purpose and Need for the Proposed Action	3
II Proposed Actions and Alternatives	7
A. No Action Alternative	8
B. Alternatives Considered and Rejected	8
C. Reasonable Alternative Site Locations	8
III Description of the Affected Environment	9
A. Environmental Baseline Survey	9
B. Superfund (CERCLA) status of Fort Wainwright	9
C. Physical Factors	12
1. Air Quality	12
a. Refrigeration/Air Conditioning	13
b. Standby Stream	13
c. Standby Electrical	13
2. Water Quality	13
3. Geology/Topography	14
4. Meteorology	14
5. Special Concerns	14
a. Endangered species	14
b. Wetlands/Flood plain	15
c. Environmental Justice	15
d. Environmental health risks and safety risks for children	15
e. Noise	16
f. Roadway Traffic	16
C. Biological and Ecological Factors	16
1. The Aquatic Environment	16
2. Landuse	17
a. Vegetation	17
b. Fish and Wildlife	17
c. Recreation and Aesthetics	18
D. Aesthetic, Cultural, and Socioeconomic Factors	18
1. Cultural Resources	18
2. Building Demolition	18
a. National Historic Preservation Act	19
b. McKinney Homeless Assistance Act	19
c. Asbestos/Lead-Based Paint	19
IV Environmental Impacts from the Proposed Action and Alternatives	20
A. General Impacts	20
1. Air Quality	20
2. Surface/Ground Water Quality	25
a. Parking lots	25
b. Accidents/Spills	25
B. Preferred and Alternative Site Locations	26
V Cumulative Impacts	26

VI Mitigation	27
A. AHA/PPF Facilities	27
1. Architecture	27
2. Engineering	27
3. Snow Removal	27
4. Soils	27
5. Parking Lot	28
6. Air Quality	28
B. Building Demolition	28
VII Conclusion	29
VIII Notice of Public Availability and Public Comment Period	30
IX Contacts	31
A. Environmental Assessment Preparers/Editors	31
B. Persons contacted USARAK, Env/Engineering	31
C. List of Agencies and External Persons Contacted	32
X References	32
XI Common Abbreviations	33
XII Recommendation for a Finding of No Significant Impact	35
XIII Appendix A-Record of Non-Applicability	37
XIV Appendix B-Correspondence	45

LIST OF FIGURES

Figure 1- Project Location and Vicinity, Fort Wainwright, Alaska	5
Figure 2- Site Location, Hangars 4 and 5, Fort Wainwright, Alaska	6
Figure 3- Proposed Alert Holding and Pallet Processing Facilities, Fort Wainwright, Alaska	11

LIST OF TABLES

Table 1- Annual emission rates associated with the installation of a 500 kW diesel-fired emergency generators at the proposed Alert Holding Area (AHA).	21
Table 2- Annual emission rates associated with the installation of a 300 kW diesel-fired emergency generators at the proposed Pallet Processing Facility (PPF)	21
Table 3- SBCT Vehicle Fleet Characteristics	23
Table 4- Emission rates for the 1,660 diesel fueled tactical vehicles generated from EPA's MOBILE6 model	23
Table 5- Emission rates for the 1,660 diesel fueled tactical vehicles generated from AP42 Volume II Mobile Source Emission Factors	24

SUMMARY

The United States Army Alaska (USARAK) will construct Alert Holding and Pallet Processing facilities at Fort Wainwright in Fairbanks, Alaska. The proposed facilities will help improve deployment efficiencies.

Alert Holding. Hangar 4/5 will be demolished and a new 90,000-square-foot (ft²) structure will be constructed within its footprint. Material from building demolition will be disposed of at an approved landfill. Hazardous materials such as lead-based paint and asbestos will be removed and disposed of by approved methods. USARAK will coordinate with Army Airfield Operations for flight safety concerns and compliance with all airfield safety criteria during demolition, construction, and related activities.

The new Alert Holding facility will be designed to process about 1,300 to 1,660 tactical vehicles within 96 hours. The facility will include a tactical vehicle processing facility that will include indoor vehicle inspection and weighing areas, indoor vehicle staging area, outdoor vehicle assembly, and a fueling/defueling station. A 500-gallon aboveground fuel tank will be installed at the fuel/defueling station. Facilities will include a command and control area, a ventilation system, storm water drainage, fire protection, emergency power generation, handicap access, paved parking and access road, administrative area, break room, latrines, and antiterrorism protection.

Pallet Processing Area. A 60,000-ft² pallet processing facility will be constructed for building and processing palletized cargo in preparation for strategic and rapid deployment. There will be sufficient space in the new facility for pallet loading, weighing of cargo, and handling of deficient cargo. The new facility will provide handling and indoor storage of supplies and equipment on about 200 (463L) pallets. Facilities will include interior scales, two-tier pallet support system, administration area, latrines, break room, fire protection, ventilation system, truck ramp, access roads, emergency power generation, handicap access, and antiterrorism force protection.

Environmental and socioeconomic effects will be relatively minor. Wetlands and other special aquatic sites are not present and will not be affected by the action. Threatened and endangered species do not use the project area and will not be impacted. Noise levels at this facility would be compatible with existing land uses. Construction and use of the facilities will slightly increase the post's energy demands, air emissions, and traffic levels.

Preliminarily, the demolition of Hangar 4/5 will have an adverse affect on the Ladd Air Force Base Historic District but no adverse impact on the Ladd Field National Historic Landmark. Construction of the new structure will have an adverse impact on both the Ladd Air Force Base Historic District and the Ladd Field National Historic Landmark. A Memorandum of Agreement between USARAK and the State Historic Preservation Officer can be found in the Appendix A.

To mitigate potential adverse impacts, the contractor will be required to prepare a storm water pollution control plan and implement best management practices to stabilize

exposed soils and manage storm water runoff. Stabilization and re-vegetation measures will be coordinated with USARAK's Department of Public Works.

Hanger 4/5 is known to contain asbestos and lead-based paint. A hazard assessment survey will be conducted to more accurately assess the types and quantities of hazardous materials in the building to ensure worker safety. Since the potential to encounter soil contamination exists, geophysical borings will be taken and samples will be screened for likely contaminants. If contamination is encountered, appropriate measures will be taken to remediate the site.

To minimize potential impacts to swallows, which nest in the eaves of the building, the demolition of Hanger 4/5 would not start between June 1 and July 15, unless no swallows are nesting at the site. Any deviation from this timing window will be coordinated with the U.S. Fish and Wildlife Service, Ecological Services office in Fairbanks.

The environmental assessment supports the conclusion that the project does not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not required to demolish Hanger 4/5 and construct and maintain the proposed Alert Holding and Pallet Processing facilities at Fort Wainwright, Alaska.

I. PURPOSE AND NEED FOR THE PROPOSED ACTION

USARAK is preparing an environmental impact statement (EIS) to assess the effects of the force transformation of the 172nd Infantry Brigade into a Stryker Brigade Combat Team (SBCT). A notice of intent to prepare an EIS was published in the Federal Register on March 4, 2002 (Vol. 67, No. 42, pp. 9716-1917).

The need for the Alert Holding Area and Pallet Processing Facility is independent of the force transformation of the 172nd Infantry Brigade. The proposed facilities are considered separate and complete projects. Fort Wainwright will experience no increase in troop strengths as a result of this proposed action.

The proposed Alert Holding and Pallet Processing facilities are considered necessary to support the mission requirements of the United States Army Alaska (USARAK) at Fort Wainwright in Fairbanks, Alaska (Figures 1, 2). The planning and designing of the Alert Holding and Pallet Processing facilities will be accomplished through two separately funded projects. This Environmental Assessment (EA) analyzes the combined effects of these two projects.

The existing alert holding area and pallet processing facilities within Hanger 4/5 are inadequate because they result in inefficient deployment operations that do not adequately support the Army's mission for rapid deployment of the 172nd Infantry Brigade or SBCT within 96 hours.

Alert Holding Area. The Army's alert holding functions certify that army vehicles and equipment are properly prepared for deployment. However, the current holding area in Hangar 4/5 does not meet these functions for the following reasons:

- Space within Hangar 4/5 (building 2106) is inadequate causing vehicles to park outside.
- Holding vehicles and equipment kept outside during the winter months result in unwanted freezing of items that should remain warm for an efficient and rapid deployment operation.
- Vehicles that need repairs are brought to motor pool areas located throughout post, thereby, causing additional delays.
- Hangar 4/5 is also not equipped with adequate ventilation to ensure good air quality within each hangar while vehicles are being inspected.

Pallet Processing Area. The function of pallet processing is to load, inventory and store supplies and equipment that would be deployed for use during war. Currently, supplies are transported for initial pallet loading to motor pools located throughout the post. From these locations, the pallets are brought to Hangar 4/5 for additional loading. Cargo is then weighed using portable scales inside the hanger and organized using makeshift areas. The current facility at Hanger 4/5 is not suitable for the following reasons:

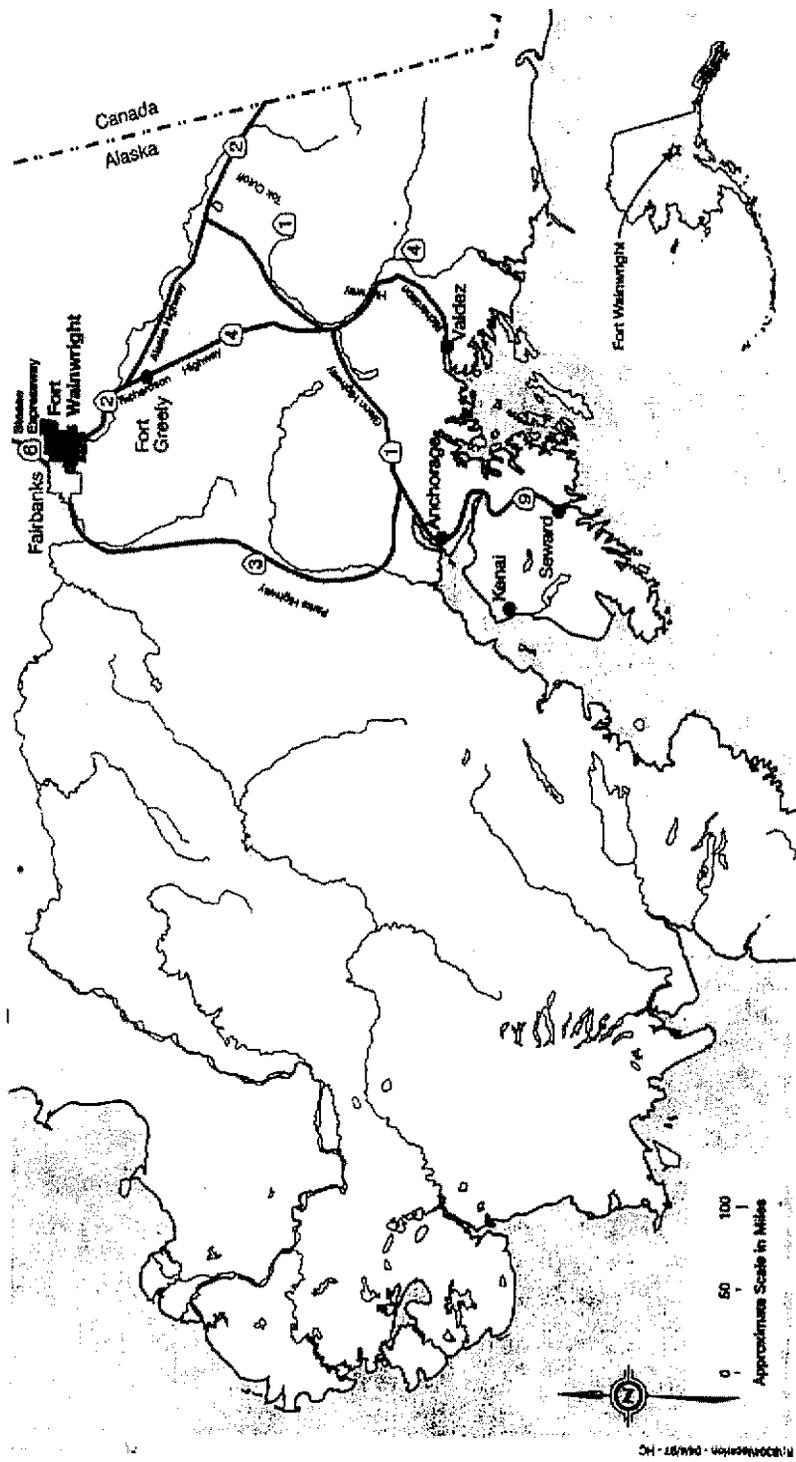
- It cannot deal with deficient cargo during pallet processing operations.
- Faulty cargo must be removed from the hangar and returned to the motor pool areas to

correct the deficiencies.

Objectives for the proposed action include the following:

- 1) Increase the efficiency of pallet processing operations, thereby, reducing delays.
- 2) Ensure army vehicles and equipment are properly prepared for deployment.

Decisions to be made that reflect the content of this EA include choosing an appropriate alternative that will meet the objectives of the proposed project and simultaneously satisfy CEQ regulations for NEPA documents as defined in 40 CFR § 1500.1.



Fort Wainwright is located in the Tanana Valley Basin of Interior Alaska.



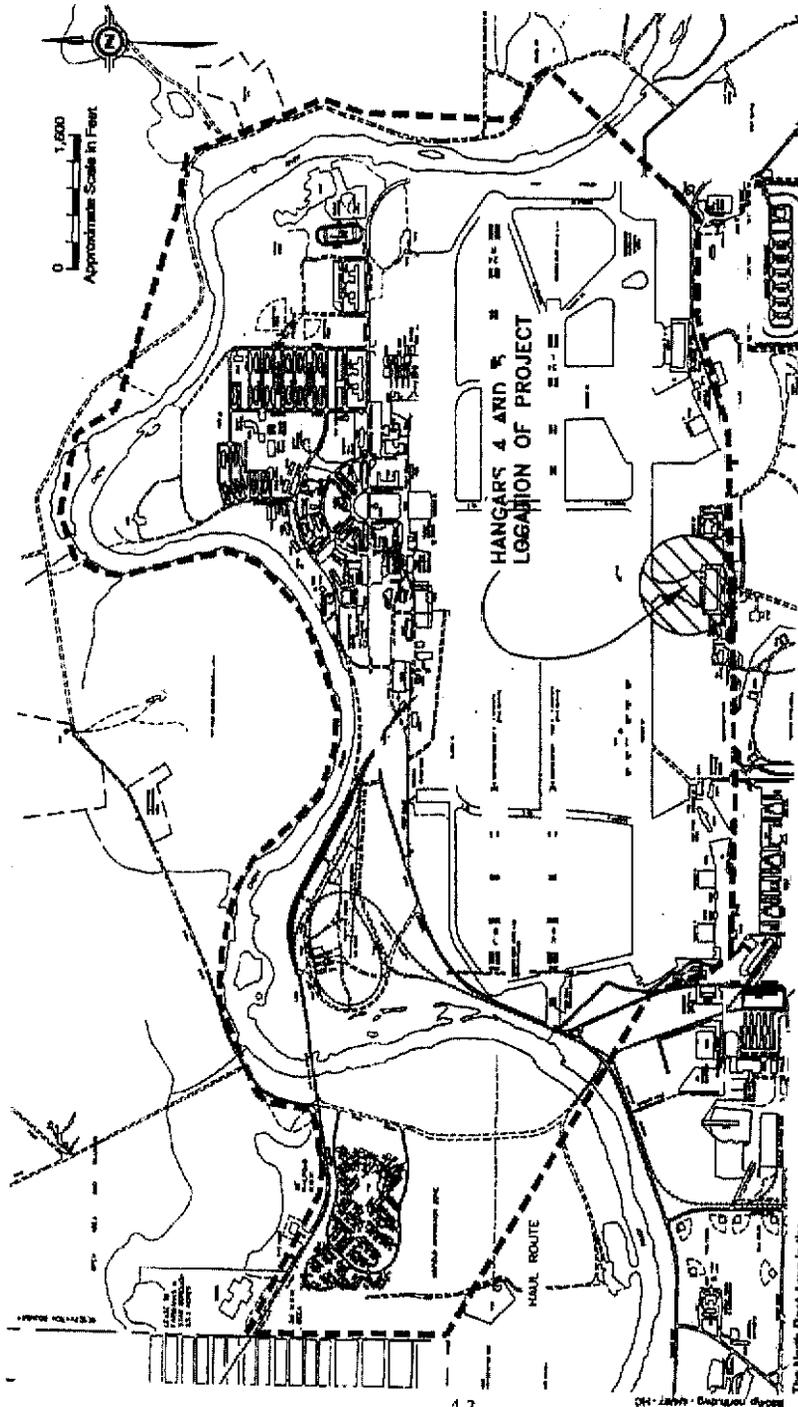
ALASKA DISTRICT
CORPS OF ENGINEERS
CIVIL WORKS BRANCH

PROJECT LOCATION AND VICINITY MAP
FORT WAINWRIGHT, ALASKA

Location Map

Fort Wainwright

Figure 1



ALASKA DISTRICT
CORPS OF ENGINEERS
CIVIL WORKS BRANCH



SITE LOCATION, HANGARS 4 AND 5
FORT WAINWRIGHT, ALASKA

Figure 2

II PROPOSED ACTIONS AND ALTERNATIVES

The planning and designing of the Alert Holding and Pallet Processing facilities will be accomplished through two separately funded projects. Downspouts from both proposed buildings will run onto the ground, emptying onto concrete pads, a parking lot, asphalt, or a sidewalk. Therefore, an underground injection permit is not required.

Alert Holding Area.

The project would consist of a 90,000 ft² new facility designed to process about 1,300 to 1,660 tactical vehicles within 96 hours. The new Alert Holding Area would include a tactical vehicle processing facility that would include indoor vehicle inspection and weighing areas, indoor vehicle staging area, and outdoor vehicle assembly and a fueling/defueling station that will allow for 24 hour-operations. The fueling/defueling station will have exterior lighting and the facilities will be 'all-weather' facilities to provide 24-hour supporting operations. Additionally, a 500-gallon aboveground fuel tank would be installed at the fueling/defueling station. Facilities would include a command and control area, a ventilation system, storm water drainage, fire protection connected to the post alarm system, mechanical ventilation, high/low truck ramp, scale house, paved parking and asphalt access roads, information systems, handicapped access, emergency power generation, and antiterrorism/force protection measures, administrative area, break room, and latrines. The emergency power generator for this facility will be a diesel-fired unitgenerator with a capacity of 500 kilowatts.

Supporting facilities would include: utilities; electric service; paving; parking and access roads; curbs and gutters; storm drainage; site improvements; site remediation; and antiterrorism/force protection.

Pallet Processing Facility.

A 60,000 ft² Pallet Processing Facility would be constructed for building and processing palletized cargo in preparation for strategic and rapid deployment (Figure 3). The new facility would have sufficient space for pallet loading, weighing of cargo, and handling of deficient cargo. The new facility would provide handling and indoor storage of supplies and equipment for about 200 (463L) pallets (8 by 8 feet). Facilities would include interior scales, a two-tier pallet support system, administration area (5 to 10 staff members), latrines, break room, fire protection, ventilation system, high/low truck ramp, asphalt access roads, emergency power generation, handicap access, and antiterrorism/force protection measures. The emergency power generator for this facility will be a diesel-fired unitgenerator with a capacity of 300 kilowatts.

Supporting facilities would include: utilities, electric service, exterior lighting, paving, parking and access roads, curbs and gutters, storm drainage, site improvements, site remediation and antiterrorism/force protection which includes perimeter fence security and building standoff landscaping.

A. No-Action Alternative

The no-action alternative would require no additional work to the current building and facilities. No new buildings would be constructed. Existing facilities do not adequately fulfill the project purpose and need. Mission goals and objectives would be difficult to accomplish and may be compromised under the No-action alternative.

Alert Holding Area. The no-action alternative would leave in place the current buildings and facilities at Hangar 4/5. If the new Alert Holding Area were not constructed, the Army would have severe difficulties in conducting pre-deployment operations within the necessary 96-hour timeline.

Pallet Processing Facility. Failure to provide the proposed facilities will have a detrimental impact on the Army's ability to conduct its mission. The existing facilities are not capable of supporting the Army's requirement to deploy within a 96-hour timeline. If this project is not provided, the coordination of equipment, supplies, and materials to the transport areas will require intensive handling and tracking at several locations across the post resulting in delays and inefficiencies.

B. Alternatives Considered and Rejected

Renovation of Existing Structures. Renovation is not considered a viable option. The building is in need of major repair. The roof needs to be repaired and the electrical system does not meet current codes. The structural integrity of walls and floors in many of the office spaces are questionable and the hangar doors are in need of replacement. The building does, however, contain a dry pipe deluge fire sprinkler system.

Alternate Locations Off-Post. Location of facilities off-post is not considered practicable, due to security concerns and logistical requirements, and would not improve deployment efficiencies. To improve deployment efficiencies, supplies and equipment need to be in close proximity to one another. Facilities also need to be close to the airfield.

Alternate Locations On Post. The proposed site was determined to be the most practicable area on Fort Wainwright. No other sites were identified that would support the project objectives. Using the existing apron would reduce the costs of constructing a new apron to access the runway.

C. Reasonable Alternative Site Locations

Given the proximity of the alternative site locations, the environmental baseline study, and analysis is similar for both sites, given the exceptions noted in the environmental impacts section.

1. **Alternative site A-Preferred Alternative-** The preferred alternative site location includes placement of the PPF facility north of buildings 2110 and 2107 and construction of the AHA facility in the footprint of building 2106 (hangar 4/5) after its demolition.

2. Alternative site B- This site location includes placement of the PPF facility east of building 2106 (hangar 4/5) and west of 2104. The AHA facility would be constructed in the footprint of building 2106 after its demolition.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Environmental Baseline Study (EBS)

An EBS was conducted by Andrea Hunter (Fort Wainwright Department of Public Works, Environmental Office) and John Sargent, (Environmental Resources Section, Alaska District, U.S. Army Corps of Engineers), for both alternative site locations to identify potential concerns for inclusion in this Environmental Assessment. Items investigated were:

- (1) Any property or structure whose known use was to be used to store, release, or otherwise dispose of hazardous substances. None were found with the exception of the runway radioactive waste site, underground storage tank, and Superfund status of the site and installation as discussed below.
- (2) Fort Wainwright Environmental Office records, including all applicable documents associated with the Installation Restoration Program.
- (3) Historical aerial photographs and maps of the project site dated from 1948-1990 were reviewed. Copies of the most recent aerial photographs are located at the USARAK Environmental Office at Fort Wainwright, AK.
- (4) Any visible features indicating potential contamination, as detected on a site inspection (site inspection occurred July 23, 2002).
- (5) Any permits, permit discontinuances or closure requirements that apply to the sites.
- (6) Other sources of information, such as interviews and historic records.

B. Superfund (CERCLA) status of Fort Wainwright

All of Fort Wainwright was listed on EPA's (Environmental Protection Agency) National Priorities List on August 30, 1990 under the auspices of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), also known as *Superfund* (et seq.). In the spring of 1992, the Army, EPA, and Alaska Department of Environmental Conservation (ADEC) signed a Federal Facility Agreement (FFA), which requires a thorough investigation of suspected historical hazardous waste source areas and appropriate remediation actions taken to protect public health. Fort Wainwright is currently in the process of clean-up activities under the Army's Installation Restoration Program (IRP). Any discovery of hazardous material contamination as outlined above will require appropriate regulatory coordination and compliance. For more information concerning the

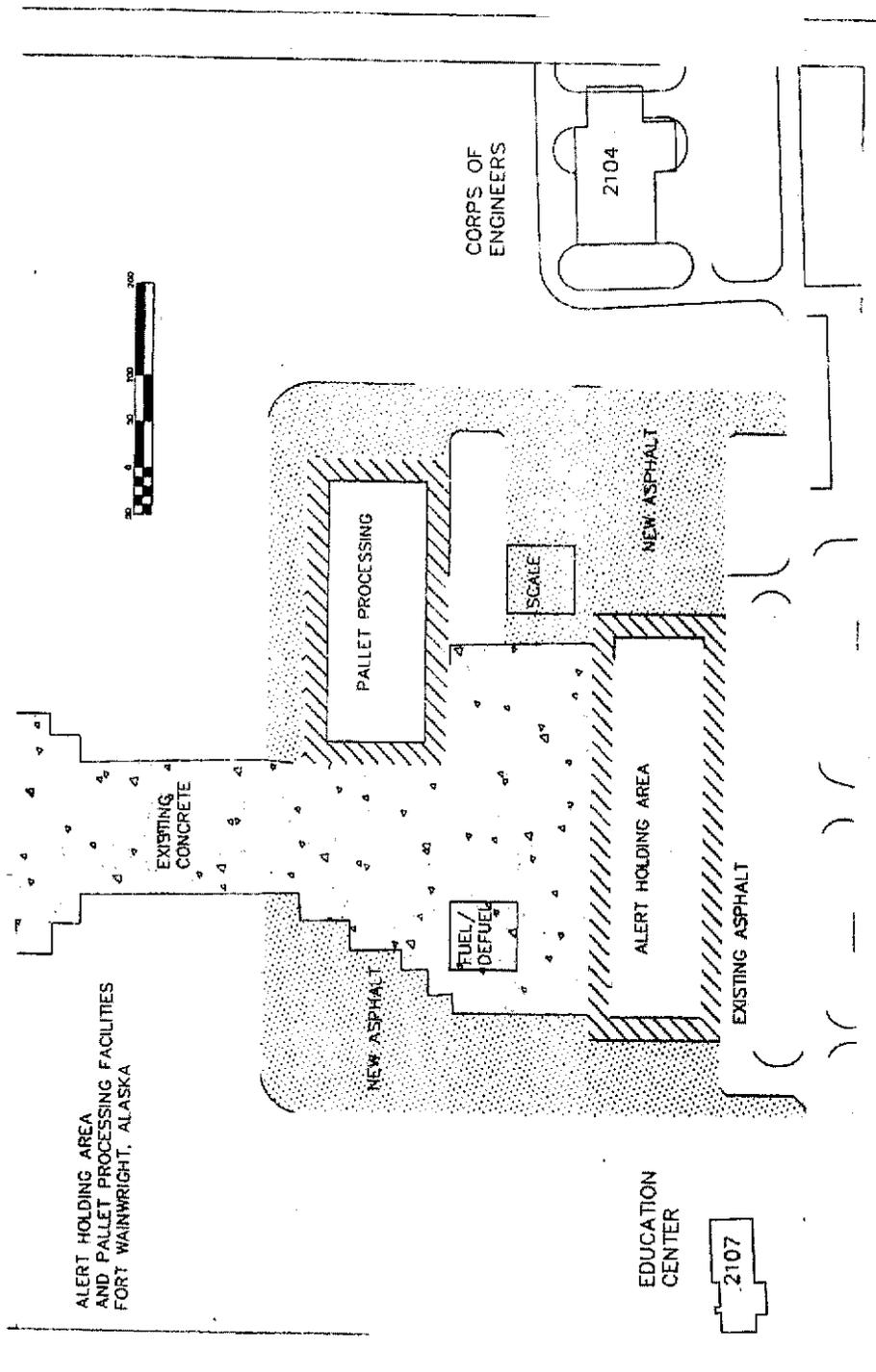
Superfund status of Fort Wainwright see the *Administrative Record* (DPW Environmental Office 1994).

A more lengthy, detailed description of the environmental setting for this and adjacent military land comprising Fort Wainwright may be found in the *Working Draft Environmental Impact Statement for Installation Utilization at Fort Wainwright, Alaska* (Pratt et al. 1977). Specific site characteristics are listed below.

No underground storage tanks are associated with building 2106 (Hanger 4/5).

During construction if possible contamination becomes evident, such as soil staining, then the incident would be documented and soil from borings would be screened and analyzed, if determined appropriate. USARAK would then coordinate the remediation of the site, if determined necessary, with EPA and ADEC.

1. Alternative Site A- Preferred Alternative: The extent of contamination at the preferred alternative site A location is not known. Possible contamination includes aviation fuel, oil, gasoline, lead batteries, antifreeze, and cleaning solvents.
2. Alternative site B- The extent of contamination at the preferred alternative site A location is not known. Possible contamination includes aviation fuel, oil, gasoline, lead batteries, antifreeze, and cleaning solvents. This location also potentially borders a runway radioactive waste site containing low-level radioactive material such as radio-tubes, solvents, airplane instruments and watch dials. The site has been declared a 'No Further Action' site for the following reasons:
 - a) "There is little likelihood that the location identified for this contaminant source is accurate, or the location of this potential source is known."
 - b) "An evaluation of this source and the ultimate risk to human health or the environment that exists has been considered. The evaluation has been based on a conceptual site model including consideration of the potential exposure pathway, (i.e., source, release, pathway, target (receptor), and exposure. Ultimate risk to human health and the environment does not warrant further action; USARAK, 1994).



ALASKA DISTRICT CORPS OF ENGINEERS CIVIL WORKS BRANCH

PROPOSED ALERT HOLDING & PALLET PROCESSING FACILITIES FORT WAINWRIGHT, ALASKA

Figure 3

C. Physical Factors:

1. Air Quality:

Fort Wainwright is classified as a Prevention of Significant Deterioration (PSD) major facility as defined in:

- (1) 18 AAC 50.300(c)(1) because it has the potential to emit more than 250 tons per year of a regulated air contaminant in an area classified as attainment or unclassifiable;
- (2) 18 AAC 50.300(c)(2)(A) because it has the potential to emit more than 100 tons per year of a regulated air contaminant in an area designated attainment or unclassifiable and is a fossil-fuel-fired steam electric plant of more than 250 MMBtu/hr; and
- (3) 18 AAC 50.300(c)(2)(V) because it has the potential to emit more than 100 tons per year of a regulated air contaminant in an area designated attainment or unclassifiable and is a fossil-fuel-fired boiler or combination of boilers totaling more than 250 MMBtu/hr.

Fort Wainwright is also classified as a nonattainment area major facility as defined in 18 AAC 50.300(d) because it has the potential to emit more than 100 tons per year of a regulated air contaminant, carbon monoxide (CO), in an area classified as nonattainment for that pollutant.

Currently, Fort Wainwright has to comply with permit conditions outlined in the state issued Air Quality Control Permit to Operate #9331-AA003 and permit conditions identified in the Title V Operating Permit Application, and Air Quality Construction Permit #0031-AC059, which were consolidated into a revised Title V Operating Permit Application and submitted to the ADEC for review in October 2001. The Title V Operating Permit Program as outlined in the 1990 Clean Air Act Amendments (CAA) requires source owners with air pollutant emissions exceeding major source threshold to obtain a Title V Operating Permit. The Title V major source threshold for all criteria pollutants (CAPS) is a calculated potential to emit of 100 Tons per Year (TPY). The major source threshold for an individual Hazardous Air Pollutants (HAP) is 10 TPY; or a combined limit for multiple HAPs of 25 TPY. Under this set of regulations, Fort Wainwright has been determined to be a major source for (CAPS) and (HAPS) and must comply with these requirements. In December 1997, Fort Wainwright submitted a Title V Operating Permit.

Air quality standards were developed from the CAA. The National Ambient Air Quality Standards (NAAQS) are health-based standards, and were established by the EPA to protect human health and the environment. Major source thresholds can vary depending upon the type of pollutant, as well as the local NAAQS attainment status. Fort Wainwright is located in an area that is in non-attainment for CO, but in attainment for all remaining NAAQS.

The proposed AHA/PPF sites fall within the boundary of the CO non-attainment area of the Northern Alaska Intrastate Air Quality Control Region. Periodic non-attainment episodes are typically experienced during the winter months during

periods of strong inversions, which usually occur during the winter and spring months.

Arctic haze is another factor that impacts the air quality in Fairbanks. Industrial pollutants from Europe and Asia are transported across the Arctic Ocean and produce an effect known as 'arctic haze'. During this event, pollutant sulfate may be boosted by 0.68 micrograms per cubic meter (Rahn 1982). During these episodes, the concentration of vanadium, a combustion product of fossil fuels that averages up to 20 times the background levels may be found in the air and snow pack (AKDOT 1992). Recent analysis of the Canadian Arctic snow pack chemistry also indicates the long-range transfer of small concentrations of organochlorine pesticides (Gregor and Gummer, 1989). It can be expected that this 'arctic haze' condition has a minor contribution to the overall contamination of the air in the Fairbanks vicinity; however, local air emission standards still need to be closely monitored.

a. Air Conditioning

The Alert Holding Area or Pallet Processing Facilities will not contain air conditioning or refrigeration systems.

b. Standby Steam: There will be no steam boilers at the new AHA/PPF facility. The complex will use steam from the existing utilidor connected to the Central Heat and Power Plant (CHPP), Fort Wainwright. No provisions have been made for any back-up heating system at this facility.

c. Standby Electricity: Electricity will come from the CHPP, with emergency standby electricity provided by back-up batteries. Direct emission sources include combustion units in the form of back-up generators that will be added to the Fort Wainwright inventory. Emergency back-up generators will need to be limited in their operating hours to ensure emissions will not exceed PSD thresholds. Preliminary limits of 250 and 500 hours were examined for the purpose of this EA. If additional direct sources, other than those mentioned in the current EA, become incorporated into the design at a later stage, then a general conformity analysis will need to be re-examined prior to construction commencement. Battery powered emergency egress lighting will be applied, however, no additional back-up lighting will be provided.

2. Water Quality:

The Fort Wainwright cantonment area lies entirely within the Tanana River drainage basin. Depending on specific location, drainage may flow into several different rivers and creeks that feed the Tanana River system. A list of these rivers and creeks includes: Tanana River, Chena River, Flood Channel B, and the much altered and channelized Clear Creek. The most likely rivers to be affected by the construction of the alert holding area/pallet processing facilities are the Chena River and the Tanana River. All of the rivers have been classified as anadromous, (e.g., containing one or more species of salmon or arctic char). These systems have been classified as having good water quality.

Generally, streams, creeks, ponds, lakes and rivers have pH values within ADEC standards. The Tanana River contains sediment loadings that will average between 300 mg/l during periods of high stream flow and 5 mg/l during quieter periods. Concerns for groundwater quality are contained in the *Administrative Record* of the Defense Environmental Restoration Activity (DERA) clean-up program being administered by the U. S. Army, the EPA and the ADEC for Fort Wainwright (USARAK 1994). Ground water depth at the preferred alternative site A location is approximately 12 feet.

3. Geology, Topography:

The topography of both alternative project sites consists of a wide, flat plain of the historical Chena River floodplain. The area lies within the Tanana-Kuskokwim Lowland of the Western Alaska province. This province is characterized by alluvial depositions of both the Tanana and Chena rivers. 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 tributaries have been classified by the U. S. Natural Resources Conservation Service as Salchaket Association.

All of Fort Wainwright, including the training lands, comprises approximately 915,714.34 acres. The preferred alternative site is characterized by prior disturbances associated with construction and use that date back to World War II.

4. Meteorology:

The Fairbanks area lies within a sub-arctic continental climatic zone. It is characterized by extreme diurnal shifts in available daylight, with extremes ranging from slightly more than 3 1/2 hours to more than 22 hours. Consequently, extreme temperature shifts are encountered, with extremes ranging from -70°F to +95°F. This area experiences low precipitation and low relative humidity. Average annual precipitation, including snowfall, is equivalent to approximately 11 inches, (equated to inches of rainfall). Average snowfall approximates 70 inches with a large loss due to sublimation. The wettest month is August with average rainfall of 1.68 inches and the driest is April with an average of 0.27 inches. Precipitation will average slightly higher at the higher elevations. Generally, the frost-free period runs from the third week in May until the end of August. The prevailing winds at Fort Wainwright characteristically come from the north during the winter months. During the summer, however, the winds originate from the southwest. Fairbanks has very mild wind conditions with average speeds around five knots. The greatest wind speeds are encountered during thunderstorm activity in the summer and blizzard conditions are rare. Interior Alaska weather is dominated by high-pressure weather systems 7 to 8 months of the year and by low-pressure systems during summer months. Construction of the new Alert Holding Area and Pallet Processing Facility should not have any significant effect on the Fairbanks meteorology.

5. Special Concerns

a. Endangered species: Threatened and endangered species are protected under the Federal Endangered Species Act. USARAK has coordinated this project with the U.S.

Fish and Wildlife Service (USFWS) (see Appendices for correspondence). Formal coordination with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act of 1973 is not required. Endangered and threatened species do not use the project site or surrounding areas. However, delisted species that occupy habitat outside the project area include the Arctic peregrine falcon (*Falco peregrinus tundrius*), and American peregrine falcon (*Falco peregrinus anatum*). There are three known American peregrine falcon nests in the vicinity of the Salcha River that lies east of the Yukon Maneuver Area near Eielson AFB. Arctic peregrine falcons migrate throughout the area. The bald eagle also occurs in suitable habitat in the surrounding area and is protected by the Bald and Golden Eagle Protection Act. Additionally, swallows (protected by the Federal Migratory Bird Protection Act) tend to nest in the roofs of buildings at Fort Wainwright during the summer months.

b. Wetlands and Floodplain: The USFWS National Wetlands Inventory Program has classified a small percentage of the Fort Wainwright cantonment area as wetlands. The U. S. Army Corps of Engineers (USACE) Regulatory Branch has confirmed this classification. Wetlands are most commonly found in the alluvial valley floors that are underlain by permafrost. The Federal Clean Water Act protects wetlands and other aquatic ecosystems from adverse impacts. No wetlands or other special aquatic sites are located at either alternative site location. This has been coordinated with the USACE, Regulatory Branch (see Appendix A). A storm water drainage channel is located along Montgomery Road just south of the project area.

Fort Wainwright is in the floodplain of the Chena and Tanana Rivers. Therefore, compliance with Executive Order (E.O.) 11988, 1977, Floodplain Management is required stating that structures cannot impede or channelize flow. Riverine and wetland habitats in the region are abundant and permafrost occurs in much of the undeveloped areas. The Chena River Lakes Flood Control Project was completed in 1979 by the USACE to protect human settlements in the floodplain. An earthen dam on the Chena River and a levee on the Tanana River reduce the likelihood of flooding onto the project site and adjacent lands.

Fort Wainwright last flooded in September of 1967. The alternative site locations do not impede or channelize flow from the flood plain, therefore mitigation measures does not need to be addressed. Moreover, no practicable alternatives to placement of an Alert Holding Area or Pallet Processing Facility outside the floodplain exist.

c. Environmental Justice: The purpose of EO 12898, Federal Actions to Address Environmental Justice in Minority and Low-income Populations dated 11 February 1994, is to avoid disproportionate placement of adverse environmental, economic, social or health effects from federal actions and policies on minority and low-income populations. The process requires identification of minority and low-income populations that may be effected by implementation of the proposed action or alternatives. The proposed project area is in an industrial area of Fort Wainwright adjacent to the runway and will not affect compliance with EO 12898.

d. Environmental Health Risks and Safety Risks for Children: The purpose of EO 13045, Protection of Children From Environmental Health Risks and Safety Risks, dated

21 April 1997, is to identify and assess environmental health risks and safety risks that may disproportionately affect children. Under the EO, federal agencies are required to ensure that policies, programs, activities, and standards address disproportionate risks to children resulting from environmental health or safety risks. The Army has analyzed the proposed action and alternatives and found that there will be minimal environmental health risks or safety risks associated with the action that disproportionately affect children. The nearest school is about 1 mile north of the project area across the airfield, and the nearest residential area is nearly 2 miles to the southwest.

e. Noise: Average noise exposure over a 24-hour period is often presented as a community noise equivalent level (CNEL). CNEL values are calculated from hourly equivalent noise level (Leq) values, with the Leq values for the evening period (7 p.m. to 10 p.m.) increased by 5 decibels (dB) and Leq values for the nighttime period (10 p.m. to 7 a.m.) increased by 10 dB.

The Department of Defense evaluates the acceptability of noise levels at military installations according to three noise level zones – CNEL levels below 65 dB (Zone I), CNEL levels of 65 to 75 dB (Zone II), and CNEL levels above 75 dB (Zone III). All types of land uses are considered compatible with Zone I noise levels. Educational and residential land uses generally are not compatible with Zone II noise levels unless special acoustic designs and features are used to ensure acceptable interior noise levels. Residential and educational land uses are not compatible with Zone III noise levels. Industrial and manufacturing land uses may be acceptable in Zone III areas if special building designs and other features are implemented.

f. Roadway Traffic: Fairbanks is a transportation center for much of central and northern Alaska, providing trucking services, rail facilities, highways, and commercial and private air services. The Richardson Highway, Parks Highway, and the Steese Expressway are major routes serving the region. Fort Wainwright contains 28 miles of paved roads (with widths of 12 to 16 feet). Besides the Richardson Highway, the primary paved roads servicing Fort Wainwright are Gaffney, Montgomery, Ketcham, Neely, River, Meridian, and Santiago. Paved and gravel roads, and bridges at Fort Wainwright are generally in good condition.

Fort Wainwright traffic is generated by residents, visitors, and by more than 9,600 military, civilian, and vendor personnel. Normal weekday work hours begin at 0600 hours and peak hours are 0700 to 0900, 1200 to 1400, and 1600 to 1800 hours. Intersections within the main fort area generally operate at acceptable levels even during the weekday morning and evening peak hours. However, traffic can become congested during peak hours on Gaffney Road from the main gate to Montgomery Road.

D. Biological and Ecological Factors:

1. **The Aquatic Environment:** The Chena River is an important fishery for salmon and has additional populations of northern pike, grayling, various whitefish, and burbot, along with numerous prey species.

2. Landuse: The alternative site locations are classified as permanent withdrawn land or fee simple land. Adjacent land is designated as Fort Wainwright withdrawn lands. The adjoining military lands are designated in master plans as a military maneuver area. Other adjoining lands are federal, state, ANILCA native land withdrawals, and private lands.

a. *Vegetation*: Fort Wainwright generally has been characterized by heavy vegetation of high brush, bottomland spruce/poplar forest consisting of black spruce, tamarack, birch, quaking aspen, poplar, willow, low bush cranberry, mosses and sedges; and lowland spruce/poplar forest. Under story vegetation consists of moss, brush and grasses on the lower slopes with willow and alder found in the uplands.

When Fort Wainwright was initially developed, all soils were removed from the proposed site. Regrowth at the preferred alternative site location consists of primary succession plants (those that do well in a gravelly or heavily disturbed substrate), and invasive species. Primary succession vegetation includes fireweed, strawberries, dandelions, pussytoes and some willow shoots. A complete listing of plant species is located in Fort Wainwright's Integrated Natural Resources Management Plan (USARAK 1999). The preferred alternative site contains no timber that is of commercial quality and/or quantity.

b. *Fish and Wildlife*: Vegetation at the preferred alternative site has been managed under the Bird Air Strike Hazards Program (BASH), to minimize bird use. As a result, the preferred alternative site provides minimal habitat to species, but may include small mammals, ground nesting birds, mewgulls and grasshoppers. Berries and insects may draw heavier bird use depending on the time of year.

USARAK has consulted with Alaska Department of Fish and Game, and the USFWSU regarding fish and wildlife considerations (see Appendix A). Wildlife occupying the proposed site and the immediate area is typical of those tolerant of urban settings. Swallows in the Fairbanks region are migratory species and, therefore, are regulated under the Federal Migratory Bird Treaty Act. Project construction may temporarily impact species tolerant of urban settings such as swallows that are known to nest within Hangar 4/5 from about June 1 to July 15. Swallows are a migratory bird species and protected under the Migratory Bird Treaty Act. If swallows are nesting at the building, the initiation of the demolition of Hangar 4/5 would not occur during the nesting season (June 1 to July 15). No other significant populations of fish and wildlife would be impacted by the project because the project is in a highly developed area.

Significant fish and wildlife populations and habitats occur at Fort Wainwright outside the project area. The Chena River drainage supports anadromous and resident fishes important to recreational and subsistence fisheries. These include king salmon, chum salmon, sheelfish, grayling, burbot, and whitefish. Spruce forests, muskeg, and tundra habitats support a variety of mammals including moose, wolf, grizzly and black bear, lynx, snowshoe hare, and beaver. Migratory waterfowl use the Tanana Flats Training Area for breeding, feeding, and resting habitats. Other common birds include willow ptarmigan, common snipe, sandhill crane, and spruce and ruffed grouse. Hunting of moose, bear, and waterfowl occurs in the larger tracts of land, such as the 259,000-acre

Yukon Training Area, and the 642,000-acre Tanana Flats Training Area. Furbearers are also trapped.

c. *Recreation/Aesthetics*: Recreation is not authorized in the airfield zone. Aesthetically, the preferred alternative site is a prior disturbed area in a heavily developed zone. Specific land use in the vicinity of the proposed project consists of warehouses, a power plant, offices, barracks, parking areas, and runways.

E. Aesthetic, Cultural, and Socioeconomic Factors:

1. *Cultural/Historic Resources*: There are two historic districts on Fort Wainwright that have a listing in or are determined eligible for listing in the National Register of Historic Places (NRHP). In addition, there are two buildings that have been determined eligible for listing in the NRHP on their own merit. No archaeological sites have been found in the project area. The project area has a low probability for containing such sites.

Fort Wainwright was initially established in 1939 as a cold weather test facility under the name of Ladd Field. With the outbreak of World War II, Ladd Field became a significant facility not only in the cold weather testing but also in support of the Aleutian Campaign and the Lend-Lease program. In recognition of Ladd Field's nationally significant role it played in World War II, it was designated as Ladd Field National Historic Landmark (NHL) in 1984. This NHL is centered on the runways and has 37 contributing buildings and structures.

Following World War II and the formation of the U.S. Air Force in 1947, Ladd Field became Ladd Air Force Base. From 1947 to 1961 exceptionally significant missions were directed and flown out of Ladd Air Force Base during the Cold War. In recognition of this exceptional significance a historic district has been determined eligible for listing in the NRHP. Ladd Air Force Base Historic District contains 71 buildings and structures that contribute to it. In addition to this historic district, Buildings 4069 and 4070 have been determined eligible for listing in the NRHP for their association with the Arctic Aeromedical Laboratory.

In 1961 the Air Force moved to Eielson Air Force Base 26 miles east of Fairbanks. Ladd Air Force Base was transferred to the U.S. Army and renamed Fort Jonathan Wainwright.

There are known archaeological and historical resources in the adjoining lands of Fort Wainwright as previously evaluated and reported in, *Archeological Survey and Inventory of Cultural Resources at Fort Wainwright, Alaska* and the *Sixth Infantry Division (Light) Historic Preservation Plan for U. S. Army Lands in Alaska* (AHRG 1986, Dixon et al 1980). In the event that artifacts are discovered, all activities at the site shall be halted and the Public Works Environmental Office notified at 353-6249.

2. *Building Demolition*: If Hangar 4/5 (Building 2106) were demolished given the objectives for the preferred alternative, then a new 90,000-ft² structure would be constructed within its footprint and material from building demolition would be disposed

of at an approved landfill (Figure 3). Additionally, hazardous materials such as lead-based paint and asbestos would be removed and disposed of by approved methods. For all demolition, construction, or related activities, USARAK would coordinate with Army Airfield Operations for flight safety concerns and compliance with all airfield safety criteria.

a. *National Historic Preservation Act*: The preferred alternative location site contains Hangar 4/5 (Building 2106), which is a contributing cultural resource to the Ladd Air Force Base Historic District because of its contribution to the history of the Cold War Era. Hangar 4/5 is also within the Ladd Field National Historic Landmark (World War II). Demolition procedures for building 2106 (Hangers 4/5) have been put into place using the four-step process described in the 36 CFR 800 regulations and section 106 of the National Historic Preservation Act. A letter from the State Historic Preservation Office, as required in Section 106, confirming the site as having a 'No Undertaking' or 'No Potential to Cause Effects' status, has been completed and can be found in the administrative file for this EA at the Fort Wainwright Natural Resource Office administrative file (see Appendix A). USARAK has also prepared a Memorandum of Agreement for the proposed action (see Appendix A).

b. *McKinney Homeless Assistance Act (McKinney Act)*: Public Law 100-77, the Stewart B. McKinney Homeless Assistance Act was the first, and remains the only major federal legislative action addressing the needs of homeless people. Title V of the McKinney Act requires that Federal agencies identify and make available surplus federal property, such as buildings and land, for use by states, local governments, and nonprofit agencies to assist homeless people.

USARAK's Real Property department is currently completing Title V coordination. Demolition cannot commence prior to 60 days after initial publication in the Federal Register of Title V documentation. Publication is tentatively scheduled to appear in Register August 15th, 2002. This will start the 60-day waiting period. Eligible homeless assistance providers may extend this 60-day period to 90 days depending on inspection of the facility.

A detailed description of the McKinney Act can be found at the following web address (www.usacpw.belvoir.army.mil/librarie/rp/guidance.htm). Under this Act, a building must be in excess or surplus, unutilized or underutilized in property surveys performed by The Department of Housing and Urban Development (HUD) in order to qualify for the McKinney Act.

c. *Asbestos/Lead-Based Paint*: Information on asbestos, lead-based paint (LBP), and why they are important considerations prior to building demolition can be found in Fort Wainwright's Asbestos and Lead-Based Paint Management Plan (Tolliver 1999). Asbestos is present on some of the insulation in mechanical rooms/old storage rooms, pipe runs, and possibly in tile size 9X9 in building 2106. Lead Based Paint is present most commonly around windows and doorframes in Building 2106. Asbestos/LBP reports for building 2106 can be found in USARAK Environmental administrative file at Fort Wainwright.

3. Roadway Traffic: The proposed action would be consistent with existing land use and traffic conditions in the area. The new Alert Holding and Pallet Processing facilities would replace older and inefficient facilities at the same general location off Montgomery Road, one of the main roadways. Unlike the existing Alert Holding Area and Pallet Processing Facility, the new facilities would minimize traffic by reducing the need to transport vehicles in need of repair and equipment to motorpool sites located throughout post. The number of vehicles expected to use the new facilities (up to 1,660 vehicles within 96 hours) is well within the range of daily vehicular use of roadways in the area. Military Transportation Management Command (MTMC) has been involved in the evaluation of these projects. MTMC determined that a traffic analysis is not necessary for these projects.

IV. ENVIRONMENTAL IMPACTS FROM THE PROPOSED ACTION AND ALTERNATIVES

Section A is a list of general environmental impacts related to all proposed actions and alternatives. Site-specific impacts are listed in section B below.

A. General Impacts

1. Air Quality: There will be variety of impacts to the overall ambient air quality at Fort Wainwright as a result of this proposed action. Since the proposed action will occur within the CO non-attainment boundary, a general conformity analysis has been performed to determine if the proposed action conforms to the Alaska State Implementation Plan (SIP). No mitigation measures will need to be implemented as the proposed action does not interfere with the implementation of the SIP. One of the primary impacts associated with the proposed action is the indirect impact associated with the processing of 1,660 tactical vehicles through the facility within a 72-hour time frame. Stationary, emergency back up generators and heat exchangers will be installed as part of the proposed action. Two generators will be installed as a result of the proposed action. A generator with a capacity of 500 kW will be installed at the AHA facility; while a 300 kW capacity generator will be installed at the PPF. Since these sources have been proposed for use only during emergency power outages, pre-approved limits (PAIS) will be requested from the ADEC to prevent emission increases above threshold levels that would warrant obtaining a construction permit. For the purpose of this EA, an operating limit of 250 and 500 hours were examined. Emission rates from the generators, given the two proposed operating hour limits were calculated and are presented in Table 4.2a and Table 4.2b. Heat exchangers will not emit pollutants and were therefore excluded from further discussion in the EA. Two 500-gallon fuel storage tanks will be installed as part of this action. The emissions from the storage of diesel fuel would be negligible.

Table 1. Annual emission rates associated with the installation of a 500 kW diesel-fired emergency generators at the proposed Alert Holding Area (AHA).

Annual Operating Limit (hrs)	NO _x ¹ (TPY)	SO _x (TPY)	CO (TPY)	VOC (TPY)	PM ₁₀ (TPY)
Limit Option 1: 250	2.60	0.17	0.56	0.21	0.18
Limit Option 2: 500	5.20	0.34	1.12	0.42	0.37

¹NO_x refers to Nitrous oxide compounds; SO_x refers to Sulfur oxide compounds; CO refers to carbon monoxide; VOC are volatile organic compounds and PM₁₀ refers to particulate matter 10 microns or less in diameter.

Table 2. Annual emission rates associated with the installation of a 300 kW diesel-fired emergency generators at the proposed Pallet Processing Facility (PPF).

Annual Operating Limit (hrs)	NO _x ¹ (TPY)	SO _x (TPY)	CO (TPY)	VOC (TPY)	PM ₁₀ (TPY)
Limit Option 1: 250	1.56	0.10	0.34	0.13	0.11
Limit Option 2: 500	3.12	0.21	0.67	0.25	0.22

¹NO_x refers to Nitrous oxide compounds; SO_x refers to Sulfur oxide compounds; CO refers to carbon monoxide; VOC are volatile organic compounds and PM₁₀ refers to particulate matter 10 microns or less in diameter.

The operation of construction equipment would be temporary for the proposed action and emissions from this activity does not exceed PSD thresholds. There is no significant air quality impact associated with these temporary construction operations.

The primary air quality concern associated with the proposed action is the potential for periodic peak concentrations of CO due to vehicle exhaust, particularly during deployment exercises and actual deployments. Any use of motorized vehicles has a detrimental effect on air quality. Common motorized vehicle pollutants arise from the partial combustion of incompletely oxidized fuel and carbon monoxide and hydrocarbons. During periods of extreme cold temperatures, vehicle exhaust produces small, particle-size ice crystals that are a significant contributor to the presence of ice fog. Ice fog degrades the atmosphere since it obscures visibility, thus affecting air quality. During temperature inversions, which occur primarily during the winter months, vehicle exhaust can become trapped low to the ground and persist in areas for an extended time period. This phenomenon would be of particular concern during winter deployment exercises.

The additional vehicles associated with construction would result in an increase in some pollutant emissions, but would be temporary in nature and would predominately occur during the summer months when temperature inversions are unlikely to occur. Periodic, temporary increases in vehicular emission rates associated with tactical vehicles are also of concern.

It is assumed that the potential worst case scenario resulting in high pollutant emissions would occur during winter, particularly in mid December and mid February when temperature inversions are most likely to occur (per email conversation with Pat Driscoll,

Utility Supervisor, 8/5/2002). Increased CO concentrations during a winter deployment were modeled to ensure that such actions would not cause a deterioration of ambient air quality within the non-attainment area and to ensure that the NAAQS for CO would not be violated. The EPA MOBILE 6 model was used to determine emission rates associated with processing as many as 1,660 tactical vehicles through the proposed facilities in a 72-hour period. The model output has been generated and summarized and a general conformity analysis was completed.

The Environmental Protection Agency (EPA) has several tools available to quantify emissions from mobile sources. These tools include the MOBILE6 model AP 42 Volume II Emission Rates for Vehicles, and EPA 420-F-98-014 titled Emission Facts for Idling Vehicle Emissions. MOBILE6 represents the latest EPA model designed to generate emission rates from a variety of different vehicle classes. MOBILE6 uses FORTRAN input files with customized; user specified executable commands to generate emission rates. Emission rates are reported in grams per vehicle mile traveled. AP 42 Volume II provides the same emissions information in grams per mile; however, emission rates are provided in a series of tables allowing the user to apply a series of formulas to generate emission rates for specified vehicles. AP 42 tends to be more conservative and was used to develop MOBILE5a, the precursor to MOBILE6. Emission rates for vehicles have been refined over time as EPA's MOBILE source model evolved and model input data became more readily available thus generating more realistic emission rates. All 3 tools were used to generate total annual emission rates for the 1,660 tactical vehicles to ensure that short duration heavy traffic flows of tactical vehicles would not negatively impact the Fairbanks Borough Non-Attainment Area. Idling emission rates were input into EPA's SCREEN3 model to determine the maximum one hour ambient air concentration predicted for CO. The model also takes into account the operation of the stationary generators and forklifts in the calculated flow rate.

Table 3 identifies the SBCT fleet of vehicles. 974 vehicles have been identified specifically by USARAK staff; however, since the EA indicates a maximum of 1,660 tactical vehicles would be processed through the AHA and PPF during a deployment, or deployment exercise, the total fleet size had to be increased to reflect the inventory identified in the EA. Vehicles were added to each class in proportion to their representation in the identified fleet. For example, the light duty diesel truck class represented approximately 38% of the 974 vehicle fleet. The relative frequency for this class (38%) was multiplied by the total number of vehicles required to bring the fleet up to the total number of 1,660 vehicles (686) generating a total of 263 additional vehicles. This calculation was repeated for each class represented.

The total number in each of the vehicle classes identified during the MOBILE6 modeling exercise were condensed into two classes in order to calculate emission rates using AP 42 Volume II. Vehicles were reclassified as light duty diesel vehicles or heavy-duty vehicles since there were less class types in use for the AP 42 method. Table 4 identifies the emission rates generated using MOBILE6; while, Table 5 identifies emission rates generated using AP 42. AP 42 emission rates reflect a more conservative estimate of emission rates. Several assumptions were made to complete the emissions modeling and calculations. These assumptions include:

1. Total vehicle miles traveled on and off post is 50 miles

2. Total number of expected annual deployments or mock deployment exercises is 4
3. A mid-winter deployment/exercise would represent the worst-case scenario for CO emissions accumulation

Table 3. SBCT Vehicle Fleet Characteristics

Vehicle Class Type	Abbreviation	Class No.	Identified	Deficit	Total
Light Duty Diesel 1 & 2 (0-6,600 lbs GVWR)	LDDT12	15	373		636
Class 2b Heavy Duty Diesel Vehicles (8,501-10,000 lbs GVWR)	HDDV2b	16	178		303
Class 6 Heavy Duty Diesel Vehicles (19,501-26,000 lbs GVWR)	HDDV6	20	57		97
Class 8a Heavy Duty Diesel Vehicles (33,000-60,000 lbs GVWR)	HDDV8a	22	348		593
Class 8b Heavy Duty Diesel Vehicles (> 60,000 lbs GVWR)	HDDV8b	23	18		31
				686	
Total Number of Vehicles			974		1,660

Table 4. Emission rates for the 1,660 diesel fueled tactical vehicles generated from EPA's MOBILE6 model.

Vehicle Class	VOC (TPY)	CO (TPY)	NOX (TPY)
Light Duty Diesel 1 & 2 (0-6,600 lbs GVWR)	0.41	0.70	0.44
Class 2b Heavy Duty Diesel Vehicles (8,501-10,000 lbs GVWR)	0.02	0.07	0.28
Class 6 Heavy Duty Diesel Vehicles (19,501-26,000 lbs GVWR)	0.01	0.04	0.19
Class 8a Heavy Duty Diesel Vehicles (33,000-60,000 lbs GVWR)	0.09	0.47	2.25
Class 8b Heavy Duty Diesel Vehicles (> 60,000 lbs GVWR)	0.01	0.03	0.14
Total Emissions	0.53	1.30	3.31

Table 5. Emission rates for the 1,660 diesel fueled tactical vehicles generated from AP 42 Volume II Mobile Source Emission Factors

Pollutants	Emissions (Tons/Yr)
Hydrocarbons	0.68
Carbon Monoxide	2.57
Nitrogen Oxides	2.10

EPA idling emission rates were used to determine ambient air concentrations. These values were compared to the 1-hr CO standard of 2 milligrams per cubic meter to ensure that the NAAQS were not violated. The maximum-modeled concentration was 0.656 milligrams per cubic meter. EPA SCREEN3 air dispersion model was used to generate CO concentrations. The assumptions used for this modeling exercise are as follows:

1. A mid-winter deployment/exercise would represent the worst case scenario for CO emissions accumulation.
2. The minimum number of vehicles processed per hour to meet the 96- hour deadline would be 24 vehicles.
3. An internal 72-hour deadline was assumed since the 96-hour deadline reflects the SBCT's final arrival time at their deployed location. This would allow for 24 hours of air travel to any given destination world-wide.
4. In any given hour, the ratio of light duty diesel vehicles to heavy-duty diesel vehicles would be proportional to that vehicle class' representation within the fleet. Therefore, for modeling purposes it was assumed that 15 of 24 vehicles processed in any given hour would be heavy duty vehicles, while 9 would be light duty vehicles.

The indoor temperature was assumed to be approximately 55 degrees Fahrenheit (286 Kelvin), while the ambient air temperature was assumed to be -10 degrees Fahrenheit (249 Kelvin).

5. An ultra conservative CO emission rate of 0.523914 g/s was input into the SCREEN3 model. This value reflects the total CO idling emission rate for 24 vehicles in g/s where the base emission rate is 125% of the emission rate reported in the EPA Emissions Fact Sheet for Idling Vehicle Emissions (EPA-420-F-98-014, April 1998). This emission rate was used since actual emission rates for tactical vehicles are not currently available. It is assumed that the actual emission rates from the newer SBCT vehicles would be much lower than the emission rates input into the screening model, since these values reflect averaged values across the United States.
6. Building dimensions for the Alert Holding Area is 165 meters by 61 meters with a total building height of 10 meters and a functional stack height of 13 meters.
7. Building dimensions for Pallet Processing Facility is 109 meters X 50 meters with height of 10 meters.
8. The vehicular emissions were modeled as a point source.

9. The calculated exit velocity (m/s) used in the model was 0.2471. Stack exit velocity was calculated from a conservative flow rate provided by Ed Ambrose (AKCOE). The volume flow rate used in the model was 153 ACFM.
10. A stack gas exit temperature (K) of 286 was used. An ambient air temperature (K) of 249 was used.
11. A receptor height (in meters) of 0.00 was used.
12. Urban option was used.
13. The default, regulatory mixing height option and the regulatory anemometer height of 10.0 meters were used.

In summary, the mobile and stationary source emissions from these projects will not exceed the NAAQS for the non-attainment pollutant CO. In addition, deployment exercises or actual deployments of SBCT fleet vehicles within a 72-hour window (with 24 hours allowed for additional travel outside of the installation) will not result in any significant impact to the CO non-attainment area in Fairbanks. The conformity analysis conducted for this project resulted in a Record of Non-Applicability (RONA) being prepared as supporting documentation to this EA (Appendix A).

Buildings scheduled for demolition would require asbestos surveillance prior to demolition. Asbestos surveys and subsequent demolition activities would be performed in accordance with 40 CFR 61, Subpart M.

2. Surface and Ground Water Quality: Vehicular traffic and parking has a detrimental effect on water quality. This degradation occurs in two methods:

a. *Parking Lots*: Vehicle parking lots are contributors to surface and groundwater pollution. This is caused by three methods:

- (1) Leaks, drips and seeps of petroleum products from vehicles collect on parking lot surfaces and are then washed into watersheds by subsequent snowmelt or rainfall.
- (2) The impervious nature of parking lots create mini-flood episodes during snowmelt and rainfall. These episodes increase turbidity in adjacent water bodies and degrade water quality.
- (3) Petroleum hydrocarbons from either spills or vehicle exhaust will dissolve in water or accumulate in snow and thereby degrade water quality.

The significance of these parking lot discharges is compounded by the nature of spring breakup in the sub arctic. Generally, parking lots will thaw due to low albedo (high solar absorption) and begin producing water weeks before the ground thaws. With the ground still frozen and unable to absorb water, runoff is significantly enhanced and therefore problematic.

b. *Accidents/Spills*: All USARAK units are required to comply with USARAK Regulation 200-1 and USARAK Pamphlet (PAM) 200-1 (USARAK 2000). All

units are required to possess and have available appropriate spill response materials for the types and quantities of hazardous materials they may transport. All spills/releases are required to be reported to the Fort Wainwright's Fire Department. All spills/releases in USARAK are reported to the ADEC, Spill Prevention and Response (SPAR) who then follow through with appropriate mitigative measures.

B. Preferred and Alternative Site Location- Given the proximity of the site location alternatives, the preferred alternative site A location has no environmental impacts distinguishable from other alternatives considered. Alternative Site B, however, does pose potential contamination given that part of the site has a 'No Further Action' CERCLA site status as mentioned above.

V. CUMULATIVE IMPACTS

Cumulative impacts are defined (under Army Regulation 200-2, 651.16) as impacts on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place locally or regionally over a period of time. Fort Wainwright's training lands, in combination with neighboring lands, can be viewed as a generally stable, well-managed natural system surrounded by areas of varying levels of growth and development. If Alaska is chosen as an Army transformation site during 2002-2006, USARAK could encounter a significant change in military mission.

Numerous projects are planned in the vicinity of the Fort Wainwright cantonment area. While these projects are independent of the proposed action described in this EA, it is nevertheless appropriate to consider impacts associated with the preferred and other alternatives in light of these independent projects. Other projects include upgrades to the power plant, on-post housing renovation projects, ammunition supply point, motor pool, assembly building, and range upgrades.

Although the addition of the AHA/PPF in the Ladd Field National Historic Landmark (NHL) in itself does not adversely effect the NHL designation and the qualities Ladd Field possesses making it eligible for designation, the proposed action in conjunction with the other activities that have occurred and are planned to occur could potentially lead to loss of the NHL. Ladd Field Nation Historic Landmark is now at the point where it cannot loose another contributing building and remain a viable NHL. There is, however, the ability to add buildings to the NHL in a sympathetic way and meeting the Secretary of the Interior's Standards for Rehabilitation where it will not threaten the designation of the NHL. This is especially true for the south side of the runways along Montgomery Street. North Post area of the NHL is less flexible to change at this time.

Although growth and development can be expected to continue outside of Fort Wainwright and the surrounding natural areas, its environmental effects, although possibly somewhat adversely affecting natural resources within the ecoregion, would not be expected to result in cumulatively adverse effects to these resources when added to the effects of the proposed action.

VI. MITIGATION

As defined in CEQ Regulation 1508.20, “Mitigation” includes the following: 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; Compensating for the impact by replacing or providing substitute resources or environments. To provide further environmental protection, specific mitigation measures will be strictly enforced.

AHA/PPF mitigation (shown below in section A) will need to be addressed regardless of the chosen alternative. Mitigation measures listed below in section B-D are specific to that alternative or action.

A. AHA/PPF Facilities

1. **Architecture:** Comply with the scope and design criteria of DOD 4270.1-M, “Construction Criteria,” that were in effect 1 January 1987, as implemented by the Army’s Architectural and Engineering Instructions (AEI), “Design Criteria,” dated 3 July 1994.
2. **Engineering:** Ensure that arctic engineering concepts are incorporated into facility design that will preclude vapor barrier, warm roof, and other common problems unique to this environment. Insure that adequate insulation is incorporated into the facility design to reduce excessive use of fossil fuels for facility heat. Ascertain that appropriate engineering safeguards are incorporated to ensure Clean Water Act compliance. Due to the harsh winter conditions typical of the region, it is essential that certain functions of the Alert Holding Area be performed within a well-heated and ventilated area.
3. **Snow Removal:** Incorporate snow removal operations into the facility design. Ascertain that snow avalanches from roofs will not occur in the area of entryways, parking lots, or emergency service areas. Set aside areas in the immediate vicinity of parking lots as temporary snow removal repositories.
4. **Soils:** Stabilize exposed soils and manage storm water runoff using seeding, hay bale placement, siltation fence techniques and other appropriate engineering controls. Reseed all grassy areas disturbed during construction. Develop a storm water pollution control plan and implement best management practices in effort to control erosion and stabilize exposed soils. Soil will be screened during geophysical investigations for contamination. If contaminated soil is discovered, proper containment and remediation would occur, in coordination with the ADEC and EPA.

Soil and groundwater will not be removed from any part of Fort Wainwright without written authorization from an authorized USARAK representative. All operations involving hazardous waste will be accomplished in accordance with USARAK PAM

200-1, Hazardous Materials and Regulated Waste Management (USARAK 2000).
Environmental Quality: Hazardous Waste, Used Oil, and Hazardous Materials
Management.

5. Parking lot: Parking lot design shall provide adequate clear space on the margins for snow deposition during snow removal operations. These sites shall not be within 50 feet of any wetland, water body, creek, slough, or river. As an alternative, appropriate settling basins, diversion dikes or other engineering practices shall be incorporated into the design to insure compliance with the National Pollutant Discharge Elimination System (NPDES) criteria for both rainfall run-off and snowmelt. Parking lot design shall minimize obstructions, as the design process permits, to facilitate the orderly and efficient snow removal and transport by DPW typical equipment.

6. Air Quality: Currently the ADEC prohibits vehicles from idling more than three minutes in the Fairbanks non-attainment area. This prohibition will be enforced post-wide. If necessary, additional vehicle head bolt outlets will be provided for non-tactical vehicles to minimize the number of cold starts during periods of extreme cold weather and thereby reduce the amount of exhaust discharges from vehicles. EPA's MOBILE 6 model will be run to determine the ambient air impacts associated with processing 1,660 vehicles through the proposed facilities within a 96-hour time frame during the winter months. This scenario is assumed to represent the worse case scenario for vehicular processing and resultant pollutant emissions.

B. Building Demolition

1. The demolition cannot occur while there are swallows (or any other migratory birds) nesting in or on the hangars. This is easily mitigated by doing the following:

- a) begin demolition of buildings before nests are occupied in the spring or before new nests are constructed, or
- b) knock nests down before eggs are laid and diligently continue to keep nests from being constructed, or
- c) begin demo of buildings after birds have vacated nests.

In the event that the nests are built and eggs are laid, no further action to disturb the nests may be taken until the swallows vacate the nests (probably mid to late August).

2. Contact the Environmental Department at Fort Wainwright, tel 907-353-7724 before demolition begins to address any asbestos containing materials (ACM) and/or lead-based paint issues. Only authorized personnel may abate asbestos. In accordance with all applicable regulation, remove or repair any damaged, friable ACM immediately, before it can become airborne and present a health hazard. Call the Emergency Trouble Call if exposed friable ACM is discovered (907-353-7069). A written "Notification of Demolition and Renovation" shall be submitted to the EPA 10 working days prior to any work on an asbestos project, including a finding of "no asbestos present" (40 CFR 61.146). These notification forms can be found in

Fort Wainwright's Environmental Office. RCRA, Housing and Urban Development (HUD) and 29 CFR 1926.62 guidelines will be followed for projects disturbing painted surfaces containing lead-based paint.

C. Alternative Site B-

1. Coordinate with the ADEC Solid Waste Program regarding potential excavation in areas of concern and solid waste disposal procedures.

VII CONCLUSION

Construction of a new alert holding area/pallet processing facility and demolition of the old facilities as described in the preferred and other alternatives do not pose any significant environmental impacts that are not otherwise adequately addressed in the mitigation section of this EA. The No Action Alternative would not address the increasing need for new alert holding area and pallet processing facilities. The military member population in the interior of Alaska needs more efficient deployment operations to meet the Army's mission. After a comprehensive evaluation of all potential impacts, it has been determined that the proposed action will not result in significant impacts; therefore a Finding of No Significant Impact (FNSI) will be prepared to accompany this EA. Mitigation measures contained herein shall be incorporated in their entirety into any Work Plan, Operations Plan or similar document that anticipates the construction of new, and demolition of the old alert holding area and pallet processing facilities at Fort Wainwright as outlined in this Environmental Assessment.

VIII NOTICE OF PUBLIC AVAILABILITY AND PUBLIC COMMENT PERIOD

Army Regulation (AR) 200-2, Environmental Effects of Army Actions, March 2002 implement the National Environmental Policy Act of 1969. Chapter 5 of AR 200-2 authorizes the preparation of a Finding of No Significant Impact (FNSI) after an EA review indicates that an EIS is not required.

ACTION: Construct a new Alert Holding Area and Pallet Processing Facility at Fort Wainwright and demolish building 2106-Hangar 4/5.

ENVIRONMENTAL DOCUMENTS: An EA and FNSI have been prepared for the proposed project. Copies of these documents are available upon request. Interested parties are invited to submit, in writing, any comments or objections they may have concerning the proposed action. Comments received will be reviewed and relevant issues will be addressed and incorporated into a revised EA. If no comments are received during the Public Comment Period, the original EA will become the final EA. The Public Comment Period begins on the first day upon publication of this notice and extends for 30 days. **For further information, please contact Gale Skaugstad, Environmental Resources Department, USARAK, Directorate of Public Works, Fort Wainwright, Alaska 99703-6500, telephone: (907) 353-3001.**

SUPPLEMENTAL INFORMATION: An EA is prepared to determine the extent of environmental impacts of a proposed action and decide whether or not these impacts are significant. If the proposed action may or will result in significant impacts, an EIS is prepared to provide additional information on the context, duration, and intensity of the impacts. If an EA shows that the proposed action will not result in significant impacts, a FNSI is prepared and the NEPA compliance is satisfied. A FNSI is a document, which briefly presents the reasons why a proposed action will not have a significant effect on the quality of the human environment.

The FNSI documents the decision that an EIS is not required for NEPA compliance. A FNSI is complete when no comment period is necessary, a comment period was held but evidenced no significant public concern, or public concern resulted in reconsideration of the FNSI, which was still appropriate upon re-examination.

Frederick J. Lehman
Colonel, U.S. Army
Garrison Commander

IX CONTACTS

A. Environmental Assessment Preparers/Editors

The United States Army Alaska, Directorate of Public Works, Environmental/Natural Resource Division and The U.S. Army Corps of Engineers, Alaska District prepared this environmental assessment. Below is a list of contact personnel who either prepared or edited this assessment.

Preparers:

Andrea Hunter
USARAK-NEPA Coordinator
Contact phone: 907-353-9507

John Sargent
USACE-Biologist
Contact phone: 907-753-2893

Address:

Directorate of Public Works
ATTN: APVR-WRW-EV
1060 Gaffney Rd #6500
Fort Wainwright, AK
99703-6500

Content Contributors:

Bill Abadie
USACE-Biologist
Contact phone: 907-753-2736

Debra Breindel, Chief
USACHPPM Field Office Alaska
Contact phone: 907-384-6930

Amy Kearns
Environmental Protection Specialist
USACHPPM Field Office Alaska
907-384-0505

Russ Sackett
Cultural Resource Manager
Contact phone: 907-384-3041

Editors

Kate Siftar: 907-353-6249
Kevin Gardner: 907-384-3331
Suzie Wuorinen: 513-469-2340
Lee Griffin: 907-353-6489
Deb Lipyanic: 907-353-6702
Bill Quirk: 907-384-3010
Sue Alden:
Gale Skaugstad: 907-353-3001

B. Persons Contacted – USARAK, Environmental/Engineering

Adams, Brian-353-6623
Deardorff, Therese- 384-2716
Driscoll, Pat- 353-7055
Fosbrook, Cristal- 384-2713
Mitchell, Mike- 353-7766
Marsh, Melody-384-0249
Milewski, Chris- 353-6160
Pecde, Monica- 353-6403
Rees, Dan- 353-9518
Reidsma, Steve- 353-9685
Seibel, Cliff- 907-353-6220
Tolliver, Wayne- 353-7724

C. List of agencies and external persons contacted

Bitner, Judith -- AK Dept. of Natural Resources (Russ Sackett), USARAK-Env.
Farris, Ann - ADEC Solid Waste Program - 451-2156
Ihlenfeldt, Nancy- AK Dept. of Fish and Game, Fairbanks
Monroe, Kent - ADEC Solid Waste Program - 451-2134
Ott, Al- AK Dept. Fish and Wildlife Service
Phillips, Leroy- USACE, Regulatory Branch
Sousa, Patrick -- U.S. Fish/Wildlife, Fairbanks-- 456-0203
Taylor, Eric- U.S. Fish and Wildlife Service
Wright, John -- Wildlife Biologist, Alaska Fish and Game - 459-7292

X REFERENCES

- AHRG, 1986. Sixth Infantry Division (Light) Historic Preservation Plan for U. S. Army Lands in Alaska. Alaska Heritage Research Group, Inc., for The Alaska District Corps of Engineers.
- AKDOT, 1992. Location and Environmental Assessment Richardson and Old Richardson Highway Interchange I-0A2-4(14). State of Alaska, Department of Transportation and Public Facilities, Northern Region.
- Department of the Army, 1992. Chemical quality assurance report- Fort Wainwright tar pit. Memorandum for: Commander, Alaska District, Attn: CENPA-EN-G-MI (TeVrucht). Reference chain of records. 39 pages.
- Department of the Army, USARAK, 2002. Army Regulation 200-2, Environmental Analysis of Army Actions; Final Rule, dated 29 March, 2002, Headquarters, Department of the Army (32 CFR Part 651).
- Dixon, E. J. Jr., Smith, G. S. and Plaskett, D.C., 1980. Archeological Survey and Inventory of Cultural Resources at Fort Wainwright, Alaska. June 1980, (DACA85-78-C-0047).
- DOD 1996. Military handbook (MIL-IIDBK-1191). Department of Defense, Medical Military Construction Program Facilities Design and Construction Criteria, May 1996.
- DPW Environmental Office, 1994. The administrative record for Fort Wainwright Alaska prepared by the U.S. Army, Alaska, dated 1 January 1994 and updated quarterly. On file at the Department of Public Works Environmental Office, Fort Wainwright and at the Noel Wein Library in Fairbanks, Alaska.
- Executive Order 12898, 1994. "Federal Actions to Address Environmental Justice in Minority and Low-income Populations dated 11 February 1994."
- Executive Order 13045, 1997. "Protection of Children from Environmental Health Risks and Safety Risks."
- Gregor, D.J., Gummer, W.D., 1989. Evidence of Atmospheric Transport and Deposition of Organochlorine Pesticides and Polychlorinated Biphenyls in Canadian Arctic Snow. Environmental Science and Technology 23 (5): pp. 561-565.
- Higginbotham/Briggs & Associates, 1991. Installation design guide, 6th infantry division (light). U.S. Army Garrison Alaska under the direction of Department of the Army, Alaska District, Corps of Engineers, Anchorage, Alaska, October, 1991.
- Pratt, J., Preston, E., Strickler, R., 1977. Working draft environmental impact statement for installation utilization at Fort Wainwright for the Alaska District Corps of Engineers, October 1977.

Rahn, 1982. On the causes, characteristics and potential environmental effects of aerosols in the arctic atmosphere. Arctic Ocean: The hydrographic environment and the fate of pollutants. New York: John Wiley and Sons, pp. 163-195.

Tolliver, 1999. Lead-Based Paint/ Asbestos Management Plan, March 1999. Fort Wainwright,

USARAK 1994. The administrative record for Fort Wainwright. U.S. Army Alaska. Dated January 1994, updated quarterly. Found at DPW Environmental Office, FWA and at the Noel Wein Library in Fairbanks, Alaska.

USARAK 1995. United States Army Alaska Regulation 200-4. Hazardous Waste, Used Oil and Hazardous Materials Management. August 1, 1995.

USARAK 1999. Integrated natural resources management plan 1998-2002. U.S. Army Alaska Volume 3-Fort Wainwright.

USARAK 2000. Environmental Protection and Enhancement-Army Regulation 200-1. May 2000.

XI COMMON ABBREVIATIONS:

ACM	Asbestos Containing Material
ADEC	Alaska Department of Environmental Conservation
AQCR	Air Quality Control Region
ANILCA	Alaska Native and Indian Land Claims Settlement Act
AK	Alaska
BASH	Bird Aircraft Strike Hazard. A program to minimize potential of bird/aircraft conflicts in the vicinity of airfields and landing zones.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as <i>Superfund</i> (PL 96-510 et seq.)
CRREL	Cold Regions Research and Engineering Laboratory, headquartered in Hanover, NH.
DoD	Department of Defense
DOTPF	State of Alaska, Department of Transportation and Public Facilities
DMA	Defense Mapping Agency
DPW	Directorate of Public Works
DERA	Defense Environmental Restoration Act. The DOD equivalent to
CERCLA	(see above)
EA	Environmental Assessment, See Army Regulation 200-2 (32 CFR-Part 651)
EMF	Electromagnetic Flux.
E.O.	Executive Order. A binding order issued y the President of the United States.
EPA	Environmental Protection Agency, Region X, headquartered in Seattle, WA
F	(Fahrenheit), a temperature measurement scale wherein water freezes at 32 degrees and boils at 212 degrees.
FAA	Federal Aviation Administration
FFA	Federal Facilities Agreement. A legally binding agreement administered by the EPA that specifies <i>Superfund</i> (see CERCLA above) clean-up activities, schedules and specifies levels of 'clean'.
FWA	Fort Wainwright, Alaska
IRP	Installation Restoration Plan. The required actions for the long term clean up of <i>Superfund</i> known contamination throughout Fort Wainwright, Alaska
NPDES	National Pollution Discharge Elimination System
MIM	Military Installation Map
mg/l	Milligram per liter (approximates one part per million)

pH	A symbol for the acidity or alkalinity of a solution.
RCRA	Resource Conservation and Recovery Act
Superfund	See CERCLA above.
US	United States
USA	United States Army
USARAK	United States Army, Alaska
USFWS	United States Fish and Wildlife Service

FINDING OF NO SIGNIFICANT IMPACT
CONSTRUCT NEW ALERT HOLDING AREA/PALLET PROCESSING
FACILITIES AT FORT WAINWRIGHT

August 2002

DESCRIPTION OF ACTION: Site selection, replacement construction and demolition for the Alert Holding Area/Pallet Processing Facilities, Fort Wainwright, AK.

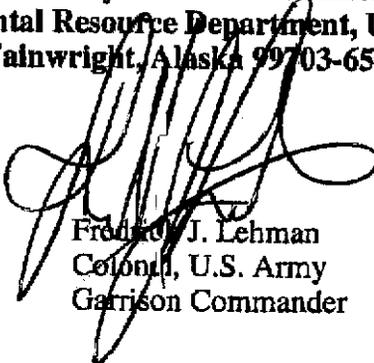
ANTICIPATED ENVIRONMENTAL EFFECTS:

- 1) There are no anticipated adverse effects (from the proposed alternatives) due to the proposed project on water quality, fish and wildlife or their habitats including threatened and endangered species.
- 2) The Air Quality Conformity Analysis for this project is still underway. This analysis will evaluate both stationary and mobile source emissions and their impact, if any, to the carbon monoxide nonattainment area that includes parts of Fort Wainwright proper. This finding of no significant impact to air quality is contingent on the stationary and mobile source emission contributions associated with this project. If impacts are identified, then additional mitigation measures will be incorporated into this EA.
- 3) Alternative Site A- 'Preferred Alternative' -No additional environmental effects not mentioned in the EA.
- 4) Alternative site B- poses potential contamination issues.
- 5) Demolition- 'Hangar 4/5' - involves demolition of building 2106, SHPO concurrence has been obtained for this action. Asbestos abatement, and swallow nesting mitigation has been included in the EA.

MITIGATION AND CONCLUSION: Mitigation actions, as defined in CEQ Regulation 1508.20, have been incorporated into this Environmental Assessment (EA). Alert Holding Area/Pallet Processing Facilities mitigation will need to be addressed regardless of the chosen alternative. Additional site-specific mitigation measures are incorporated and compliance is mandatory. These mitigative measures shall be reviewed and incorporated in their entirety into any Work Plan, Operations Plan, or similar document that anticipates the construction of an alert holding/pallet processing facility and demolition of hangar 4/5 at Fort Wainwright as outlined in this Environmental Assessment, with adoption of the mitigative measures included therein, has been determined to not have significant effects on the environment. Therefore, an EIS is not required.

DEADLINE FOR COMMENTS AND POINTS OF CONTACT FOR INFORMATION: Interested parties are invited to submit any written comments or

objections they may have concerning the proposed action. Comments will be reviewed, and relevant issues will be addressed and incorporated into a revised EA. If no comments are received during the public comment period, the original EA will become the final EA. The Public Comment Period begins on the first day upon publication of this notice and extends for 30 days. **For further information, please contact Gale Skaugstad, Environmental Resource Department, USARAK, Directorate of Public Works, Fort Wainwright, Alaska 99703-6500, telephone: (907) 353-3001.**



Frederick J. Lehman
Colonel, U.S. Army
Garrison Commander

SEP 30 2002

XIII APPENDIX A

RECORD OF NON-APPLICABILITY

GENERAL CONFORMITY – RECORD OF NON-APPLICABILITY

Project/Action Name: Construction for the Alert Holding Area and Pallet Processing Facility, Fort Wainwright, Alaska

Project/Action Identification Number: FWA56951 (Alert Holding Area); FWA56921 (Pallet Processing Facility)

Project/Action Point of Contact: Kate Siftar, Chief, Environmental Compliance Division, Fort Wainwright, Alaska, telephone: 907.353.6249

Begin Construction Date: March 2004

Midpoint Construction Date: September 2004

End Construction Date: March 2005

* Construction Schedule is the same for both projects (FWA56951 & FWA56921).

General Conformity under the Clean Air Act, Section 176 has been evaluated for the projects 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 (No additional carbon monoxide (CO) emissions are associated with the construction projects and mobile source emission contributions), 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).

Support document and emission estimates if relevant are

(X) ATTACHED

(X) APPEAR IN THE NEPA DOCUMENTATION

() OTHER


Kate D. Siftar,
Chief, Environmental Compliance Division

Fort Wainwright, Alaska

Supporting Documentation:

Stationary and Mobile Source Emissions Summary
Alert Holding Area and the Pallet Processing Facility

Emission Source Type	Unit Description	Number of Units	Carbon Monoxide (TPY)
Stationary ¹	300 kW Diesel Generator	1	0.34
	500 kW Diesel Generator	1	0.56
Mobile ²	Diesel/JP8 Tactical Vehicles	1660 (Maximum)	1.30 ^a -2.57 ^b
Temporary ³	Construction Equipment		17.62
Total Annual Emissions ⁴		Construction Period	17.62
		Post Construction	2.20-3.47

1. Stationary source emissions were calculated using emission factors identified in Chapter 3, Table X for generators < 447 kW. Both generators have an estimated annual operating limit of 250 hours
2. Mobile source emissions were calculated using (a) EPA Model MOBILE6 and (b) AP42 Volume II. Vehicle miles traveled was assumed to be 50 miles and it was also assumed that the maximum number of deployment exercises or actual deployments would not exceed 4 in one calendar year
3. Temporary, construction emissions (equipment) were quantified using the South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993
4. Annual emissions are reported as a range of values since a range of values was reported for mobile sources

The ambient air concentration of CO was modeled using idling emission rates and EPA's SCREEN3 model. The maximum predicted concentration occurs 38 meters from the facility with a concentration of 0.656 milligrams/m³ which is below the 2.0 milligram/m³ 1-hour CO ambient air quality standard. The output from the SCREEN3 model run is included as an attachment.

The Record of Non-applicability supports the general conformity review and an analysis of the CO emissions from this project is provided in the above table. Other emissions of criteria air pollutants relevant to this project are also provided for informational purposes in the attachments.

ACTUAL EMISSIONS (Criteria Pollutants)

Attachment 1d. Emission Rates for PPF with operating limit of 500 hours

PPF 500hrs

A. BACKGROUND INFORMATION

Emission Year: 2005
 Fuel Type: Diesel
 Calculation Method: AP-42 emission factors
 Heat Value (Btu/gal): 137,000
 Sulfur Content (%S): 0.12

B. SCC:

Internal Combustion Engines | SCC
 Internal Combustion Engines < 447 kW (600 hp) | 2-02-001-02, 2-03-001-01

References: AP-42, 5th Edition, Supplements A-F, Section 3.3 and 3.4

Notes:

Sulfur content for the diesel fuel is from Diesel emission factors were used to estimate emissions from the proposed back-up generator.

B. EMISSION CALCULATION METHOD

Diesel Internal Combustion Engine Emission Factors¹

Power Output (lbs/hp-hr)	NO _x	SO ₂	CO	VOC	PM-10
Internal Combustion Engines < 447 kW (600 hp)	0.031	0.00205	0.00668	0.0025141	0.0022
Internal Combustion Engines < 447 kW (600 hp)	4.41	0.29	0.95	0.36	0.31

¹ AP-42, 5th Ed, Table 3.3-1, 3.4-1 & 3.4-2

Conversion Factor to convert kW to hp = 1.341

ACTUAL EMISSIONS (Criteria Pollutants) PPF 500hrs

Actual Emission Calculation:
capacity (kW) x 1.341 (hp/kW) x operating hrs/yr x emission factor (lbs/hp-hr)

C. EMISSION SUMMARY

2005 Internal Combustion Engines Actual Emissions

Bldg	Unit Type	Capacity (kW)	2002 Operating Hours (hrs/yr)*	Criteria Pollutants - Actual Emission Rates (lbs/yr)				
				NO _x	SO ₂	CO	VOC	PM-10
	Generator	300	500.0	6,235.7	412.4	1,343.7	505.7	442.5
TOTAL (lbs/yr)				6,235.65	412.36	1,343.68	505.71	442.53
TOTAL (TPY)				3.12	0.21	0.67	0.25	0.22

Actual hours represents the proposed limitation Pat Driscoll is willing to take for the back up generator.

Attachment 2 f. MOBILE SOURCE EPA

MOBILE6 Vehicle Classification: IBCT Fleet Distribution

Abbreviation	LDDT12	HDDV2b	HDDV6	HDDV8a	HDDV8b	Total Fleet:
Class No.	15	16	20	22	23	1660
Count	373	178	57	348	18	974
	262.7084	125.3676	40.14579	245.1006	12.67762	686
	636	303	97	593	31	

Vehicles highlighted in red reflect new IAV vehicles

Attachment 3. Construction Emissions

Final Report - US 101 East

Alert Holding Area (AHA) and Pallet Processing Facility (PPF)

Construction Equipment Description	Carbon Monoxide (CO)	Nitrogen Oxides (NOx)	Sulfur Oxides (SOx)	Particulate Matter 10 (PM10)
Aerial Lifts Gas	1.68	0.03	0.00	0.00
Asphalt Pavers Diesel	0.00	0.00	0.00	0.00
Concrete Saws Diesel	0.00	0.00	0.00	0.00
Cranes Diesel	0.01	0.02	0.00	0.00
Excavators Diesel	0.01	0.02	0.00	0.00
Fork Lift 175 Hp Diesel	1.49	4.40	0.00	0.27
Generator Sets < 50 Hp Diesel	0.01	0.01	0.00	0.00
Grader Diesel	0.00	0.01	0.00	0.00
Other Construction Equipment Diesel	0.30	0.36	0.03	0.02
Other Construction Equipment Gas	8.48	0.16	0.01	0.00
Paving Equipment 2 Stroke Diesel	0.01	0.01	0.00	0.00
Plate Compactor 2 Stroke Diesel	0.01	0.01	0.00	0.00
Plate Compactor 4 Stroke Gas	0.62	0.00	0.00	0.00
Roller Diesel	0.13	0.39	0.03	0.02
Rubber Tired Loaders Diesel	0.01	0.01	0.00	0.00

Construction Equipment Description	Carbon Monoxide (CO)	Nitrogen Oxides (NOx)	Sulfur Oxides (SOx)	Particulate Matter 10 (PM10)
Scraper Diesel	0.70	2.15	0.26	0.23
Sweeper/Scrubbers Diesel	0.00	0.01	0.00	0.00
Tracked Tractor Diesel	0.12	0.44	0.05	0.04
Tractor/Loader/Backhoe Diesel	0.01	0.02	0.00	0.00
Trenchers Diesel	0.01	0.01	0.00	0.00
Welders < 50 Hp Diesel	0.03	0.05	0.01	0.00
Wheeled Tractor Diesel	4.01	1.42	0.10	0.16
Grand Total	17.62	9.54	0.49	0.75

XIV. APPENDIX B
CORRESPONDENCE

Sargent, John C POA02

From: Nancy Ihlenfeldt [nancy_ihlenfeldt-mcnay@fishgame.state.ak.us]
Sent: Wednesday, January 02, 2002 1:42 PM
To: Sargent, John C
Subject: New facility on Ft. Wainwright

John:

The Alaska Department of Fish and Game (ADF&G) has reviewed the DOA letter dated December 27, 2001 from Guy McConnell regarding the construction of a new alert holding and pallet processing facility at Fort Wainwright, AK. The ADF&G has no comments or concerns for this proposed project.

Thank you for the opportunity to review.

Sincerely,

Nancy Ihlenfeldt
Habitat Biologist
907-459-7287

JANUARY 04 2002

CEPOA-CO-R-N (1145b)

MEMORANDUM FOR: CEPOA-EN-CW-ER (Guy McConnell)

SUBJECT: Wetland Jurisdictional Determination for demolition of Hangar 4/5 and construction of new alert holding and pallet processing facilities at Fort Wainwright, Alaska. Regulatory File 8-2001-1397

1. This is in response to your 12/27/01 memorandum on behalf of the U.S. Army, requesting a Department of the Army (DA) jurisdictional determination for the above referenced project. Project is located within section 17, T. 1 S., R. 1 E., Fairbanks Meridian, on Fort Wainwright, Alaska.
2. Based on our review of the information you furnished and our on site field inspection on 11/28/01, we have determined that your proposed project would not involve work in or the placement of dredged and/or fill material into waters of the U.S. under our regulatory jurisdiction. Therefore, a DA permit is not required.
3. However, should you decide to alter the method, scope, or location of your proposed activity, please contact this office for a determination of DA jurisdiction and, if applicable, the required DA authorization.
4. Your proposed project was reviewed pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Section 10 of the Rivers and Harbors Act requires that a DA permit be obtained for certain structures or work in or affecting navigable waters of the United States (U.S.), prior to conducting the work (33 U.S.C. 403). Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including wetlands, prior to conducting the work (33 U.S.C. 1344).
5. For regulatory purposes, the Corps of Engineers defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Navigable waters of the U.S. are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or other waters identified as navigable by the Alaska District. The Chena River is a navigable water of the U.S.
6. Please be advised that land clearing operations involving vegetation removal with mechanized equipment such as front-end loaders, backhoes, or bulldozers with shear blades, rakes, or discs in wetlands; or windrowing of vegetation, land leveling or other soil disturbances are considered placement of fill material under our jurisdiction. Wetland Jurisdictional Determination for demolition of Hangar 4/5 and construction of new alert holding and pallet processing facilities at Fort Wainwright, Alaska. Regulatory File 8-2001-1397

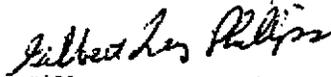
CEPOA-CO-R-N (1145b)

SUBJECT: Wetland Jurisdictional Determination for demolition of Hangar 4/5 and construction of new alert holding and pallet processing facilities at Fort Wainwright, Alaska. Regulatory File 8-2001-1397

7. This approved jurisdictional determination is valid for a period of five (5) years from the date of this letter, unless new information supporting a revision is provided to this office before the expiration date. Should you desire to appeal this approved jurisdictional determination, please contact this office to request additional information on the Administrative Appeals Process.

8. Nothing in this letter shall be construed as excusing you from compliance with other Federal, State, or local statutes, ordinances, or regulations that may affect this work. For informational purposes, a copy of this letter is being sent to the agencies and individuals on the enclosed list.

9. We appreciate your cooperation with the Corps of Engineers' Regulatory Program. Please refer to file number 8-2001-1397 in future correspondence or if you have any questions concerning this determination. You may contact me at (907) 753-2716, toll free in Alaska at (800) 478-2712, or by mail at the letterhead address, ATTN: CEPOA-CO-R-N.



Gilbert Leroy Phillips
Project Manager

Copies Furnished:

Dr. Al Ott
Regional Supervisor, Region III
Habitat Protection Section
Alaska Department of Fish and Game
1300 College Road
Fairbanks, Alaska 99701-1599

Project Coordinator
Office of Management and Budget
Division of Governmental Coordination
550 West 7th Avenue, Suite 1660
Anchorage, Alaska 99501-3568

Alaska Operations Office
Environmental Protection Agency
222 West Seventh Avenue, # 19
Anchorage, Alaska 99513-7588

Mr. Patrick J. Sousa
Field Supervisor
U.S. Fish and Wildlife Service
Ecological Service/Fairbanks
101 12th Avenue, Box 19, Room 110
Fairbanks, Alaska 99701-6267

Western Alaska Ecological Supervisor
National Marine Fisheries Service
222 West Seventh Avenue, # 43
Anchorage, Alaska 99513-7577

Regional Manager
Alaska Department of Natural Resources
Division of Land
Northern Regional Office
3700 Airport Way
Fairbanks, Alaska 99709-4699

Ms. Judith Bittner
Alaska Department of Natural
Resources
State Historic Preservation Office
555 W. 7th Avenue, Suite 1315
Anchorage, Alaska 99501-3565



**United States Department of the Interior
Fish and Wildlife Service
NORTHERN ALASKA ECOLOGICAL SERVICES**

101 12th Ave., Box 19, Room 110
Fairbanks, Alaska 99701

4 January 2002



Mr. Guy McConnell
U. S. Army Corps of Engineers
P. O. Box 898
Anchorage, AK 99506-0898

Re: New Alert Holding Facility
Ft. Wainwright, AK

Dear Mr. Sargent:

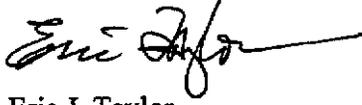
This letter is in response to your request for a review of the proposed new alert holding and pallet processing facility with regard to potential impacts to endangered and threatened species and critical habitats pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). The purpose of the project is to remove Hanger 4/5 and construct a 90,000 sq. ft. alert holding facility and a 60,000 sq. ft. pallet processing facility to rapidly and effectively deploy army equipment and personnel. This information is being provided for the proposed facilities depicted on maps provided in your correspondence of 27 December 2001.

This project is located in an area of existing, semi-industrial facilities and does not impact any wetland habitats. Based on Figure 3 of your attachment, the site encompasses approximately 9.2 acres. Per our conversation on 3 January 2002, approximately half of the proposed project area (currently grass habitat with small areas of secondary vegetation) will be paved with asphalt.

No listed species, designated critical habitat, or proposed critical habitat occur in the project area. Therefore, the Service concludes that this project is not likely to adversely impact listed species. No Biological Assessment or further consultation under section 7 of the Act regarding this project is necessary at this time. This letter applies only to endangered and threatened species under our jurisdiction. It does not preclude the need to comply with other environmental legislation or regulations such as the Clean Water Act.

These comments are submitted in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 844) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661 et seq.) and constitute the report of the Department of the Interior. We appreciate this opportunity to comment. Please contact Tara Wertz at 907-456-0444 should you have any questions concerning these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric J. Taylor", with a long horizontal flourish extending to the right.

Eric J. Taylor
Acting Field Supervisor

TLW/tlw

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS AND OUTDOOR RECREATION OFFICE OF HISTORY AND ARCHAEOLOGY

TONY KNOWLES, GOVERNOR

550 W. 7TH AVENUE, SUITE 1910
ANCHORAGE, ALASKA 99501-3565
PHONE: (907) 269-8721
FAX: (907) 269-8908

File No.: 3130-1R Department of the Army

July 3, 2002

David B. Snodgrass, Colonel U.S. Army, Director Public Works
Department of the Army, Headquarters U.S. Army Alaska
600 Richardson Drive #5000
Fort Richardson, Alaska 99505-5000

Subject: Construction of Alert Holding Area and Pallet Processing Facility - Ladd Air Force Base Cold War Historic District, Fort Wainwright, Alaska

Dear Col. Snodgrass:

The Alaska State Historic Preservation Office reviewed Department of the Army correspondence and attachments - *Project Drawings: Location Map, Site Plan, Floor Plan Sheet A-2, Floor Plan Sheet A-3, and Elevations Sheet A-6; and Site Photographs (Three)* - received June 10, 2002 regarding the undertaking referenced above.

The Alaska State Historic Preservation Office concurs with Department of the Army finding the undertaking to construct the Alert Holding Area and Pallet Processing Facility in the Ladd Air Force Base Cold War Historic District will have no adverse effect on Fort Wainwright historic properties.

Thank you for your assistance in this matter. If you have questions or require further information, please contact James J. Malanaphy III, AIA (907) 269-8726.

Sincerely,



Judith E. Bittner
State Historic Preservation Officer

JEB:jjm

C: Russell Sackett, Cultural Resource Manager (APVR-RPW-EV)
Fairbanks North Star Borough - City of Fairbanks Historical Commission



DEPARTMENT OF THE ARMY
 HEADQUARTERS, U.S. ARMY GARRISON, ALASKA
 800 RICHARDSON DRIVE #5000
 FORT RICHARDSON, ALASKA 99505-5000



06 JUN 2002

Reply To:
 APVR-RPW-EV

Judith E. Bittner
 State Historic Preservation Officer
 550 W. 7th Avenue, Suite 1310
 Anchorage, AK 99501-3565

Dear Ms Bittner:

This is to request your concurrence with U.S. Army Alaska's (USARAK) finding of No Historic Properties Adversely Affected by the proposed construction of an Alert Holding Area and Pallet Processing facility on Fort Wainwright, Alaska. The Alert Holding Area is a proposed building that will measure 163'-0" by 552'-3 1/2". It is a one story steel frame building with metal siding. Its overall height will be 25'-0". The Pallet Processing building will be 163'-0 5/8" by 367'-4." It is also a one story steel frame building with metal siding with an overall height of 25'-0." See enclosed architectural drawings A-2, A-3 and A-6. This facility will be constructed where Building 2106 - Hangar 4/5 is now (see Map 1 for project location). Building 2106 is a contributing building to the Ladd Air Force Base Historic District. Its proposed demolition has been addressed earlier with your office and is included in a Memorandum of Agreement at your officer for signature. The proposed construction of this facility was removed from earlier Section 106 consultation on the proposed demolition of Building 2106 by the request of your Architectural Historian, James Malanaphy (see letter dated March 26, 2002 from Judith Bittner, SHPO to David Snodgrass, Colonel). This project is also in the Ladd Field National Historic Landmark (NHL).

USARAK's finding of No Historic Properties Affected by the proposed project is based on the diminished visual impact the facility will have on the NHL. The closest contributing properties to the NHL are the South Runway (550 meters to the north), Building 2085-Hangar 6 (620 meters to the east), and Building 3005-Hangar (950 meters to the west). Building 2105 has a roof ridge line height of 38' - 0" and side walls 18'-6" in height. The proposed facility will have flat roofs with wall heights of 25'-0" or approximately 2/3rds the present building's height. The visual impact that this facility will have on the NHL will be less than the present building (see Photographs 1-3).

Buildings 2107 and 2104 on either side of the proposed project location are contributing buildings to the Ladd Air Force Base Historic District. The proposed facilities will have a No Adverse Affect on this historic district. Its scale and materials are sympathetic to the general characteristic of the Cold War era buildings.

If you require additional information, contact Russell Sackett at 384-3041.

Sincerely,

David B. Snodgrass
 Colonel, U.S. Army
 Director, Public Works

Cc: Janet Clemens, NPS