APPENDIX D

CONSTRUCTION

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A. ALTERNATIVE 1

Several mission-essential projects on USARAK lands are ongoing or are planned in support of the current mission. Mission-essential projects include revitalization or modernization of existing USARAK facilities and ranges for the purpose of supporting the Current Force. Appendix Table 2.2.ff lists the construction projects that will occur as part of the No Action Alternative. A brief description of the construction projects is provided following the table.

Appendix Table 2.2.ff Description of Current USARAK Mission-Essential Construction Projects under the No Action Alternative.

Year	Projects			
	Fort Wainwright Main Post	**Yukon Training Area**	**Donnelly Training Area**	**Fort Richardson**
2002	None	None	None	Modified MOUT and Range Upgrade (Infantry Platoon Battle Course, Infantry Squad Battle Course, Urban Assault Course, Breach Facility, Shoot House)
2003	Modified MOUT and Range Upgrade (Breach Facility, Urban Assault Course, and Shoot House) Modified Record Fire Range Sniper Field Fire Range Mission Support Training Facility Whole Barracks Renewal Family Housing New Construction Vehicle Maintenance Facility Pallet Processing Facility Alert Holding Area (AHA) Facility Ammo Supply Point (ASP) Upgrade	Multipurpose Training Range Infantry Squad Battle Course	None	Multi-Purpose Training Range Sniper Field Fire Range Whole Barracks Renewal
2004	Whole Barracks Renewal Installation Boundary Fencing	None	Battle Area Complex Combined Arms Collective Training Facility	Rapid Deployment Facility Ammo Supply Point Upgrade Upgrade Hardstands 20 & 21 and Hot Cargo Pad Whole Barracks Renewal Installation Boundary Fencing
2005	Family Housing Replacement Whole Barracks Renewal	None	None	Community Center Whole Barracks Renewal

Appendix Table 2.2.ff cont. Description of Current USARAK Mission-Essential Construction Projects under the No Action Alternative.

Year	Projects			
	Fort Wainwright Main Post	**Yukon Training Area**	**Donnelly Training Area**	**Fort Richardson**
2006	Library/MOS/Education Center Family Housing Replacement Whole Barracks Renewal	None	None	Vehicle Maintenance Shop
2007	Family Housing Replacement	None	None	Replace Ship Creek Bridge

A.1 Description of Current Construction Projects Under the No Action Alternative (Mission-Essential Construction)

Fort Wainwright Main Post Construction

Modified MOUT & Range Upgrade – The Modified Military Operations in Urban Terrain (MOUT) facility is a live-fire facility that provides venues for the training and practice of tactics and techniques for urban/suburban operations under simulated combat conditions. The ranges included in the Modified MOUT facility include the Urban Assault Course (UAC), Shoot House and a Breach Facility (located in the Small Arms Complex of Fort Wainwright). Construction on the Modified MOUT and Range Upgrade project will start in 2002.

Modified Record Fire Range – A standard modified record fire range with automated target system will upgrade the existing record fire range in the Fort Wainwright small arms complex in 2003. The standard range has 16 lanes so that two squads can use it at the same time.

Sniper Field Fire Range – The Sniper Field Fire Range project is an upgrade of an existing range in the Small Arms Complex of Fort Wainwright for day and night time sniper training, as well as advanced rifle marksmanship training. The Sniper Field Fire range is to be constructed in 2003.

Mission Support Training Facility – A Mission Support Training Facility (MSTF) will be constructed in the cantonment area of Fort Wainwright in 2003. The MSTF will serve as a digital training facility linking live, virtual, and constructive training environments and will provide individual and collective training support through battlefield visualization utilizing appropriate simulations and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) stimulations to support training events and mission execution.

Pallet Processing Facility – A Pallet Processing Facility will be constructed in the Fort Wainwright cantonment area in 2003 for building and processing palletized cargo in preparation for strategic deployment within rapid deployment timelines. This project will provide handling and appropriate storage from adverse weather conditions of contingency supplies and equipment on 463L pallets to be deployed with the 172nd Brigade.

Alert Holding Area (AHA) Facility – An Alert Holding Area will be constructed in the Fort Wainwright cantonment area in 2003. This project will provide a facility for conducting pre-deployment functions to include vehicle processing functions.

Vehicle Maintenance Facilities – Standard-design vehicle maintenance facilities will be constructed on Fort Wainwright in 2003. The project will be located in the area of post that currently supports other tactical maintenance facilities. These facilities include hardstands; administrative and shop control areas; storage areas; and arms rooms and vaults.

Ammo Supply Point (ASP) Upgrade – The Ammo Supply Point on Fort Wainwright will be constructed in 2003. This project will provide a facility for conducting pre-deployment functions. This project is required to process military munitions (Class 1.1 and 1.2) loaded onto 600-700 tactical vehicles in preparation for strategic air deployment of the 172nd Infantry Brigade within a 96 hour deployment timeline.

Installation Boundary Fencing – Construction of new security fencing along the eastern boundary, the Richardson/Steese Highway Corridor, and the south side of the Chena River is proposed on the Fort Wainwright Military Reservation. Perimeter security is important to protect the viability of training, integrity of improvements and facilities, to promote safety and to provide boundary demarcation.

Army Lodging Facility – A 90 unit official lodging facility will be constructed on Fort Wainwright in 2003 to support business and family guests. The lodging facility will consist of 45 extended-stay studio suites, 45 extended-stay family suites, main entrance/ reception area, front desk area, administrative offices, conference/training room, guest laundry room, on-premises staff laundry operation, supply/central storage room, fitness room, custodial room, employee break room, and vending machine.

New and Replacement Family Housing – New family housing will be constructed in 2003. Existing family housing will be upgraded. This project will provide adequate family housing for Fort Wainwright soldiers and their families.

Whole Barracks Renewal – The Whole Barracks Renewal program will construct one three-story 144-PN barracks building; one soldier community building, and two medium sized two-story Battalion Headquarters buildings on Fort Wainwright.

Library/MOS/Education Center – A combined library/education center will be constructed on Fort Wainwright in 2002. The education center will provide facilities for battalion classrooms, Military Occupational Specialty (MOS) study section, and main library functions on Fort Wainwright. The facility will include classrooms, scientific laboratory, vocational-technical and automotive training repair shops, library reference rooms, audio-visual areas, book collection shelving areas, computer areas and related space and capabilities.

Fort Wainwright Yukon Training Area Construction

Multipurpose Training Range – A standard Multi Purpose Training Range (MPTR) will be constructed in 2003 in the Yukon Training Area. This range will provide qualification and training scenarios for the two battalions stationed on Fort Wainwright This range will also serve as the Infantry Platoon Battle Course for Fort Wainwright.

Infantry Squad Battle Course – A live-fire Infantry Squad Battle Course will be constructed in Yukon Training Area in 2003. The ISBC will provide a venue for the training and practice of tactics and techniques for infantry operations under simulated combat conditions.

Donnelly Training Area Construction

Battle Area Complex (BAX) – A Battle Area Complex (BAX) will be constructed on Donnelly Training Area in 2004. This project will provide a range to train and test dismounted infantry platoons on the skills necessary to detect, identify, engage and defeat stationary and moving targets in a tactical array. It is also required to support training with sub-caliber and/or laser training devices.

Combined Arms Collective Training Facility (CACTF) – A 24 structure Combined Arms Collective Training Facility will be constructed in the Donnelly Training Area in 2004. The facility will provide venues for the training and practice of tactics and techniques for MOUT operations under simulated combat conditions. The range will be laid out in a 1.5 KM by 1.5 KM square, allowing for future expansion/addition.

Fort Richardson Construction

Modified MOUT and Range Upgrade – The Modified Military Operations in Urban Terrain (MOUT) facility is a live-fire facility that provides venues for the training and practice of tactics and techniques for urban/suburban operations under simulated combat conditions. The ranges included in the Modified MOUT facility include the Infantry Platoon Battle Course (located on north post Fort Richardson), Infantry Squad Battle Course (ISBC), Urban Assault Course (UAC), Shoot House and a Breach Facility (located on south post of Fort Richardson). Construction on the Modified MOUT and Range Upgrade project started in 2002.

Sniper Field Fire Range – The Sniper Field Fire Range project is an upgrade of the existing Grezelka Range on south post of Fort Richardson for day and night time sniper training, as well as advanced rifle marksmanship training. The Sniper Field Fire range is to be constructed in 2003.

Multi Purpose Training Range (MPTR) – The Multi Purpose Training Range (MPTR) is a live fire range to be constructed in 2003 on north post of Fort Richardson. The MPTR will provide crew qualification for direct fire small arms weapons and will allow dismounted platoons or the opportunity to conduct fire and maneuver exercises in offense, defense, and retrograde operations. The MPTR will provide the trainer with state-of-the-art feedback that allows unbiased analysis of the unit's readiness.

Whole Barracks Renewal – The Whole Barracks Renewal project replaces aging substandard living and community facilities and provides housing and associated support facilities for the unaccompanied personnel assigned to Fort Richardson. The project includes demolition of five buildings and construction of one barracks building, one dining facility, three large-sized company operations facilities, and five medium-sized company operations facilities, upgraded utility infrastructure and other site improvements.

Installation Boundary Fencing – Construction of new security fencing along the northeast boundary, the Glenn Highway Corridor, and the south and southwest boundary is proposed on the Fort Richardson Military Reservation. Perimeter security is important to protect the viability of training, integrity of improvements and facilities, to promote safety and to provide boundary demarcation.

Rapid Deployment Facility – The Rapid Deployment Facility, located in the cantonment area of Fort Richardson, is a facility for conducting consolidated pre-deployment functions. This project, scheduled for 2003, will renovate existing warehouse building 806 to house the rapid

pre-deployment facility that consolidates the alert holding area and contingency pallet processing/ storage operations.

Ammo Supply Point (ASP) Upgrade – The Ammunition Supply Point (ASP), located next to the Ready Building on Fort Richardson, accommodates munitions requirements prior to deployment. The Ammunition Supply Point will be upgraded in 2003 to process approximately 150 short tons (2000 lbs) of munitions (Class 1.5) packaged from the ammunition depot to be uploaded onto 600-700 tactical vehicles in preparation for strategic air deployment.

Upgrade Hardstands 20 & 21 and Hot Cargo Pad – The Hot Cargo Pad, located on Elmendorf Air Force Base, will be upgraded in 2003 to support C-5 aircraft parking and inter-modal transfer operations associated with those 1.1 and 1.2 class munitions necessary for operation of USARAK maneuver assets stationed on Fort Richardson and deploying from and recovering through Elmendorf AFB. The project will provide for the reconfiguration of C130 Aircraft Hard Stands 20 and 21 into a single, large sized aircraft parking area through construction of additional aircraft parking pavement between the existing hardstands and the reconfiguration of the hardstand throat taxiways, as well as associated taxiway lighting.

Community Center – A Community Center, to be located next to building 5 on Fort Richardson, will be constructed in 2003. The Community Center will be a multi-story building to accommodate multiple community service venues, including the Post Library, the USARAK Wildlife Museum, the Army Distance Learning Program, the Post Learning Resource Center, the Post Education Office/Center, the YMAC, and a venue for a Cyber Cafe. The facility will be capable of supporting temporary AAFES concessions, including the AAFES Cafeteria, Shoppette, Class VI Store, Barber, Beauty Pallor, and Clothing Sales Store.

Vehicle Maintenance Shop – A Vehicle Maintenance Shop for 164th MP Battalion, located in the cantonment area on Fort Richardson, will be constructed in 2003.

Ship Creek Bridge – The Ship Creek Bridge, located south of the water plant on Fort Richardson, will be repaired in 2003. This project will include construction of the new bridge aligned to the west or the downstream side of the existing span. The new bridge will require a span length of approximately 80 feet to place the substructure units on good soils in the stream embankments rather than at the stream edges.

A.2 Status and Location of Environmental Analysis Documents for Mission-Essential Construction Projects Under the No Action Alternative

Appendix Table 2.2.gg lists the mission-essential construction projects with its corresponding environmental document. These documents can be obtained from the indicated location.

Appendix Table 2.2.gg Status and Location of Environmental Analysis Documents for Mission-Essential Construction Projects under the No Action Alternative.

Project	Environmental Document	Source Location
Fort Richardson		
Modified MOUT and Range Upgrade	Range Upgrade/Expansion Projects, FRA Environmental Assessment	USARAK Strategic Planning Administrative Record, FRA
Sniper Field Fire Range	Sniper Range, FRA Record of Environmental Consideration	USARAK Strategic Planning Administrative Record, FRA

Appendix Table 2.2.gg cont. Status and Location of Environmental Analysis Documents for Mission-Essential Construction Projects under the No Action Alternative.

Project	Environmental Document	Source Location
Fort Richardson		
Multi-Purpose Training Range	Range Upgrade/Expansion Projects, FRA Environmental Assessment	USARAK Strategic Planning Administrative Record, FRA
Whole Barracks Renewal	Environmental Analysis Not Yet Underway	
Rapid Deployment Facility	Environmental Analysis Not Yet Underway	
Ammo Supply Point Upgrade	Environmental Analysis Not Yet Underway	
Upgrade Hardstands 20 & 21 and Hot Cargo Pad	Environmental Analysis Not Yet Underway	
Community Center	Environmental Analysis Not Yet Underway	
Vehicle Maintenance Shop	Environmental Analysis Not Yet Underway	
Ship Creek Bridge	Replace Ship Creek Bridge, FRA Record of Environmental Consideration	USARAK Strategic Planning Administrative Record, FRA
Fort Wainwright Main Post		
Modified MOUT and Range Upgrade	Range Upgrade/Expansion Projects, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Modified Record Fire Range	Range Upgrade/Expansion Projects, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Sniper Field Fire Range	Range Upgrade/Expansion Projects, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Mission Support Training Facility	Assembly Building, Barracks, and Mission Support Training Facility, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Pallet Processing Facility	Alert Holding and Pallet Processing Facilities, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Alert Holding Area Facility	Alert Holding and Pallet Processing Facilities, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Vehicle Maintenance Facilities	New Vehicle Maintenance Facility, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm

Appendix Table 2.2.gg cont. Status and Location of Environmental Analysis Documents for Mission Essential Construction Projects under the No Action Alternative.

Project	Environmental Document	Source Location
Fort Wainwright Main Post		
Ammo Supply Point Upgrades	Ammunition Supply Point, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Army Lodging Facility	Site Selection, Replacement, Construction, and Demolition for DCA Lodging Hotel, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Family Housing	Family Housing Projects, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Whole Barracks Renewal	Battalion Operations Facility and Two Company Operations Facilities, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Library/MOS/ Education Center	Environmental Analysis Not Yet Underway	
Fort Wainwright Yukon Training Area		
Multipurpose Training Range	Range Upgrade/Expansion Projects, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Infantry Squad Battle Course	Range Upgrade/Expansion Projects, FWA Environmental Assessment	http://www.usarak.army.mil/conservation/env_assessments.htm
Donnelly Training Area		
Battle Area Complex	Range Upgrade/Expansion Projects, DTA Environmental Assessment	http://www.usarak.army.mil/conservation/DTA_Eddie_EA.htm
Combined Arms Collective Training Facility	Range Upgrade/Expansion Projects, DTA Environmental Assessment	http://www.usarak.army.mil/conservation/DTA_Eddie_EA.htm

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B. ALTERNATIVES 3 AND 4: ENVIRONMENTAL ANALYSIS OF PROPOSED SBCT CONSTRUCTION PROJECTS

General construction project descriptions and their alternative analyses are detailed in this Appendix. In addition, a discussion of direct, indirect, and cumulative impacts resulting from the proposed projects is presented. Locations for Fort Wainwright, Donnelly Training Area and Fort Richardson projects are shown in Figures D-3, D-4, and D-5.

B.1 Purpose and Need for SBCT Construction Projects

This section summarizes the purpose and need of the five construction projects that would be required for transformation. These include the two company operations facilities at FWA; the unmanned aerial vehicle maintenance (UAV) support facility at DTA; and the new barracks facility, mission support training facility, and the port of Anchorage deployment staging area at FRA.

Fort Wainwright

Two Company Operations Facilities (COFs)

- Purpose: This project is necessary to support the new stationing requirements of units to be reconfigured to FWA as a result of transformation. This action would require additional company operational facilities beyond those currently available at FWA. The requirement for this new mission is not currently being met at FWA.
- Need: Up to 1,000 additional troops are projected as part of transformation. Sufficient space does not exist to support all of the proposed elements of the SBCT to be stationed at FWA. New company operations facilities are not available at FWA and existing facilities are fully utilized. Company operational facilities serve as the administrative offices for the headquarters section of each subordinate company in a battalion. The new facilities support the company commander and staff in their planning, operational reporting, and other command and control activities as required.

Donnelly Training Area

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

- Purpose: This project would provide facilities for transformation of the 172nd Brigade, according to Training and Doctrine Command's Combat Doctrine and Training Strategy, and the SBCT Force Structure. A UAV maintenance facility is needed to support training exercises at DTA. This project is a climate-controlled facility for maintenance and inspection of UAVs. This project would provide the adequate space necessary to achieve mission requirements in a timely and cost effective manner.
- Need: No existing facilities on DTA meet the necessary space requirements to perform maintenance on UAV engines, airframes, and/or electronic/optical systems and other support equipment. UAV electronic and optical systems are extremely sensitive to adverse conditions and require a climate-controlled facility for maintenance. If these facilities are not constructed, aircraft and all support equipment would require transportation to FWA for repair and maintenance. This would disrupt mission support activity, interrupt training, and cause hardship for support personnel, thus decreasing wartime readiness capability.

Fort Richardson

New Barracks Facility (Barracks)

- Purpose: The project would provide new and substantially improved living quarters for approximately 60 enlisted personnel with a maximum utilization of 72 soldiers. New housing facilities would meet USARAK and Army requirements for improved quality of life for military personnel, enhance the capability to perform military activities in military operations and be compatible with current standards and criteria.
- Need: This project is required to help fill a housing shortage due to the proposed transformation of the 172nd Brigade to a SBCT. Stationing requirements of SBCT would increase soldier populations at FRA. Adequate housing is not currently available. Inadequate, substandard and crowded military housing increase maintenance and operational costs, energy use and decrease quality of life for military personnel, which results in low retention rates for highly trained and skilled soldiers.

Mission Support Training Facility (MSTF)

- Purpose: This project would support the new digital training mission requirements of the SBCT at FRA. The construction would contain selected components of the FWA mission support training facility in order to provide concurrent individual and collective training of the entire 172nd Brigade. This facility would support the Training and Doctrine Command's digital training strategy.
- Need: Currently there are no facilities available to house the virtual leader effects, the engagement skills or the fire effects training equipment at FRA. The electrical, mechanical and functional demands of the training equipment are not met at existing facilities. Transformation would require the use of the multiple training scenarios available in a virtual training environment to improve their situational training effectiveness. New mission requirements rely on leveraging technology to reinforce and sustain skills, knowledge, and abilities in a more compressed time frame. Simulation training facilities would replace some field exercise training events, which are more expensive, create environmental impacts, use more fuel, and unnecessarily create wear and tear on combat equipment. The Training and Doctrine Command's digital training strategy cannot be implemented without facilities to support those programs.

Port of Anchorage Deployment Staging Area (POA)

- Purpose: This project would establish a strategic port of deployment for USARAK at the port of Anchorage. The port would serve as a staging area to import or export materials and equipment in support of military and crisis operations in the Pacific area of operations by the proposed SBCT. The project would provide basic services for access to the Alaska Railroad and the capability to load and unload 80 rail cars per day.
- Need: The proposed SBCT needs the ability to deploy or receive materials or equipment in a timely manner from a strategic port location. The existing site has only two loading racks and other minimal support features. Renovation of the existing port facility is required to support the SBCT's strategic operations. Requirements include four parallel berthing lanes (rail spurs) for off/on loading; a hardened pad for heavy equipment loading and unloading; a maneuver, staging, and maintenance yard; plowed snow holding area; security fencing and lighting; and an administrative access control facility with utilities and paved parking.

B.2 Detailed Description of SBCT Construction Projects

The construction period, size of facility and purpose of the project are summarized in Appendix Table 2.2.gg.

Appendix Table 2.2.gg SBCT Construction Projects.

Installation and Project	Construction Period	Size of Facility (sq. feet)	Purpose
Fort Wainwright			
CO Ops Facilities	2004 -2006	34,956	To support SBCT requirements and upgrade facilities to new design criteria standards
Donnelly Training Area			
UAV Maintenance Support Facility	2004 -2006	3,000	To support SBCT requirements
Fort Richardson			
Mission Support Training Facility	2004-2006	22,750	To provide better training facilities and areas for soldier training
60 PN Barracks	2004 -2005	23,250	To house soldiers
Anchorage Port Staging Area	2004 -2006	11,000	To provide for rapid maritime deployment

Fort Wainwright

Two Company Operations Facilities (COFs)

Facilities include energy monitoring and control systems, local area network connections, and anti-terrorism/force protection measures such as structural reinforcements, increased standoff distances and mylar film reinforced windows/glass. Supporting facilities include utilities; electric service; exterior lighting; fire protection and alarm systems; paving, walks, curbs and gutters; parking; erosion control and storm drainage; site grading and contouring; information systems; site improvements; and power distribution extension service. Supporting facility costs are high due to extensive earthwork and the requirement for underground utilidors to protect the utilities in subzero climate.

Donnelly Training Area

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

Proposed facilities to include vehicle maintenance bay, insulated roll-up doors, floor drainage with oil-water separators, and interior lighting. Primary facility costs include special foundation work to address seismic and permafrost engineering design requirements. Comprehensive interior and furnishing related design services are not required. Supporting facilities include electric service; information systems; site grading and contouring; security lighting; security fencing; parking; paving, walks, curbs and gutters; storm drainage and erosion control measures; landscaping and site improvements. Heating would be provided by a fuel oil-fired self-contained system.

Fort Richardson

New Barracks Facility (Barracks)

The existing barracks and dining facilities do not meet the standards of the Whole Barracks Renewal program criteria. Barracks would include living and sleeping rooms, semi-private baths, walk-in closets, and bulk storage for soldiers' personal belongings. Common use areas would include day/television room, exercise room, mail room, laundry facility, storage rooms. Primary facility costs include special foundation work to address seismic and permafrost engineering design requirements. Supporting facilities include: utilities, electric service, relocate and/or extend water distribution, relocate and/or extend sanitary and storm water sewerage, fire protection and alarm systems, information systems, site grading and contouring, exterior lighting, parking, heater block outlets, recreational areas, paving, walks, curbs and gutters, storm drainage and erosion control measures, landscaping and site improvements. Supporting facility costs include construction of underground utilidors necessary to protect the utilities in subzero climate. Anti-terrorism/force protection (AT/FP) measures, handicapped access, heating and hot water would also be included with the installation of a small boiler.

Mission Support Training Facility (MSTF)

Primary MSTF facilities are to include a 12,500 square foot virtual leader effects trainer, a 1,200 square foot engagement skills trainer, a 1,700 square foot fire effects trainer (Guardfist), administration area, latrines, break room, fire protection, 2,000 square foot mechanical/ HVAC, plumbing, communications and information systems, emergency power generation and antiterrorism/force protection. Special electrical systems would allow for the ability to link computer equipment in flexible arrangements that allow the layouts to be reconfigured in response to evolving technology and training program equipment support demands. Gas-fired boilers with perimeter hydronic baseboard and heating coils in central air handlers would provide heating. Split system direct expansion units would provide cooling. The cooling load would be approximately 60 tons. Supporting facilities would include: utilities, electric service, exterior lighting, concrete walkways, an exterior 10,000 square foot paved area for location of reconfigurable Tactical Operations Centers in association with training functions, parking and access roads, head bolt heater outlets for parking, curbs and gutters, storm drainage, landscaping, and antiterrorism/force protection site perimeter fencing.

Port of Anchorage Deployment Staging Area (POA)

The single railroad spur from the Alaska Railroad would be split into five lanes for off-on loading. A hardened pad (processed gravels) for heavy equipment would be constructed for loading and unloading activity and temporary yard storage. A holding area for plowed snow within the fence line would minimize annual maintenance. Security lighting for the yard would be required for the portable (wheeled) equipments. An access control facility (administrative type) for six personnel would require water, electric and heating systems. Paved parking and roadways would be required for the control facility occupants. Fencing and site security would require upgrades.

The entire project site falls within the developed area covered under USARAK-owned land of approximately 58-60 acres in the POA. The area was used as a berthing area for fuels from other than pipeline sources (the pipeline source was from Whittier, Alaska). The site of the rail berthing area is fairly level with minimal obstructions to future developments. The exiting railroad spur to the Alaska railroad remains active and increasing the site's strategic importance would have minimal impact on other port activities.

B.3 Alternatives for SBCT Construction Projects: Considered and Eliminated

Cost estimates and economic analyses were done comparing alternatives for some construction projects. The cost for alternatives is not available for all projects. These estimates can be found in the DD Form 1391 (Project Authorization Document) available in the strategic planning administrative file, Fort Wainwright, Alaska.

- **Renovation, Expansion, or Conversion of Existing Structures**

The option of renovation, expansion or conversion of similar existing on-post facilities was evaluated and eliminated for each of the five SBCT-required construction projects as explained in Appendix Table 2.2.hh. The costs provided in the renovation alternative do not reflect the additional costs that would result from relocating the current users of existing facilities.

Appendix Table 2.2.hh Elimination Justification for Renovation, Expansion, or Conversion of Existing Structures.

Project	Elimination Justification
COFS	Purpose and need for COFS are site specific requiring proximity to work area and barracks. Currently there are no other buildings at this site to renovate or expand.
UAV	Currently, there are no existing facilities at DTA that could be used for expansion, renovation or conversion.
Barracks	Currently, existing barracks are at full capacity. Renovation would require multi-phases, therefore time deadlines would not be met. There would be a shortage of relocation spaces during renovation.
MSTF	Purpose and need for MSTF are site specific requiring proximity to barracks. Currently there are no other buildings at this site to renovate or expand.
POA	Currently there are no port facilities to upgrade.

- **Lease or Purchase of Available Off-Post Facilities**

The option to lease or purchase available off-post facilities was eliminated from further consideration for all projects as explained in Appendix Table 2.2.ii.

Appendix Table 2.2.ii Elimination Justification for Lease or Purchase of Available Off-Post Facilities.

Project	Elimination Justification
COFS	No known off-post locations feasible to meet the SBCT need.
UAV	Facility is required to support training activities. Location outside of DTA would not support SBCT need.
Barracks	Soldiers need to live on base to maintain their integrity. Off-post housing would pose a transportation problem. In addition, soldiers living off-post would lose convenience of facilities.
MSTF	No known off-post locations with simulation training facilities exist.
POA	Other ports are located further away and create accessibility issues. The use of other ports creates federal facilities issues.

- **Contract Service or Product from the Civilian Sector**

The option to contract services or product from the civilian sector was eliminated from further consideration for all projects. The reasons for elimination are shown in Appendix Table 2.2.jj.

Appendix Table 2.2.jj Elimination Justification for Contract Service or Product from the Civilian Sector.

Project	Elimination Justification
COFS	No known civilian sector provides company operations facility services.
UAV	Facility involves sensitive equipment/data specific to the Department of the Army.
Barracks	Not applicable – no service to contract.
MSTF	No known civilian sector offers simulation training facilities.
POA	Facility is currently owned by USARAK and no other ports are available.

- **Port of Anchorage Specific Alternative Considered and Eliminated (New Construction at an Existing Port)**

This document does not evaluate specific environmental needs for general locations outside the preferred alternative footprint because this is the only existing and reasonable port facility for the following reasons:

1) There are no other adequate port facilities within the immediate vicinity of Fort Richardson.

2) POA has the most accessible infrastructure to include rail and ground deployment and already has available DOD land.

3) Alternative ports evaluated include: Whittier, Seward, and Valdez. Valdez was eliminated due to lack of rail access to the interior. Whittier and Seward were eliminated due to limited port infrastructure facilities and lack of available DOD land.

4) The Matanuska Borough Port facilities were eliminated from further evaluation due to lack of viable infrastructure and limited access.

B.4 Reasonable Alternatives for SBCT Construction Projects

The following alternatives unique to each proposed SBCT-required construction project were determined reasonable and are evaluated for their environmental consequences on the 17 resource categories in Chapter 4. Each project has three alternatives associated with it, the no action alternative (status quo), the new construction alternative (implement project at described location), and new construction at a different site alternative (implement project within a broader site boundary with mitigation measures).

Fort Wainwright

Two Company Operations Facilities (COFs)

- Alternative A – 'No Action Alternative'

No vacant facilities at FWA for company operation engagements. Because existing assets for company headquarter facilities are fully utilized at FWA, additional users of existing COFs

would have to be relocated to other facilities. Use of other facilities may require renovation and unexpected costs. Additionally, there are a significant number of changes occurring at this station and relocating unaffected users would induce further changes, increasing the impact.

- Alternative B – 'New Construction'

Alternative B, the preferred alternative, proposes the construction of two medium-sized, standard-design company operations buildings. The preferred alternative site location for the two COFs would be located east of Santiago Road, west of Luzon Avenue, northwest of Building 3416, and directly south of a dirt road bisecting Santiago Road and Luzon Avenue on FWA, Alaska (Figure D-3).

- Alternative C – 'New Construction within the FWA Cantonment Area'

This alternative presents specific environmental needs for general locations outside the preferred alternative footprint. Specific boundary maps, including air quality non-attainment zones, institutional control areas, Ladd Air Force Base Historic District boundaries and generalized wetland areas for the cantonment area are represented in Figures D-1, D-6, D-2, and D-3. If the project footprint deviates from the preferred Alternative B site location, but remains within the FWA cantonment area, then mitigation measures (described in the mitigation section below) will need to be instated (in addition to those evaluated for the preferred Alternative B above).

This alternative would not require a supplemental NEPA document so long as there are no wetlands present, no operable units/institutional controls, the general and site-specific mitigation factors are evaluated, and there are no significant impacts discovered.

Donnelly Training Area

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

- Alternative A – 'No Action Alternative'

Currently, under the Alternative A, the USARAK force structure is maintained by transporting aircraft and support equipment to FWA for routine maintenance.

- Alternative B – 'New construction within Training Areas 49 and 50'

Alternative B proposes to construct a 3,000 square-foot UAV Maintenance Support Facility on DTA in 2004. Alternative B evaluates specific environmental needs for locations anywhere in training areas 49 and 50 on Meadows Road, Donnelly East Training Area, north of Bolio Lake, Alaska (Figure D-4). A wetland boundary map, specific for these DTA training areas has been included in Figure D-4. This alternative allows for flexibility on exact project location placement so long as the project remains within Training Areas 49 and 50.

This alternative would not require a supplemental NEPA analysis so long as the project does not extend beyond training areas 49 or 50, there are no wetlands present, no historic properties are adversely affected, the general and site-specific mitigation factors are evaluated, and there are no significant impacts discovered.

- Alternative C – 'New construction within Training Area 57'

Alternative C, the preferred alternative, proposes to construct a 3,000 square foot UAV Maintenance Facility on DTA in 2004. Alternative B evaluates specific environmental needs for a specific location within Training Area 57, near Meadows Road and south of Bolio Lake within

the, Donnelly East Training Area (Figure D-4). Wetlands are delineated on Figure D-4. This alternative allows for flexibility on exact project location placement so long as the project remains within Training Area 57.

This alternative would not require a supplemental NEPA analysis so long as the project does not extend beyond Training Area 57, there are no wetlands present, no historic properties are adversely affected, the general and site-specific mitigation factors are evaluated, and no significant impacts are discovered.

Fort Richardson

New Barracks Facility (Barracks)

- Alternative A – 'No Action Alternative'

This alternative would continue to utilize existing Unaccompanied Enlisted Personnel Housing (UEPH) and would not construct a new barracks. The majority of existing barracks do not provide minimum quality of life standards or adequate square footage as required by AR 210-50, *Housing Management*. The existing barracks are currently at maximum occupancy levels. A shortage of barracks space creates the need for this project.

- Alternative B – 'New Construction'

Alternative B, also the preferred alternative, proposes new barracks facilities to be constructed on FRA in 2003. The preferred alternative site location for the Barracks facility would be located south of C Street, north of B Street, northeast of the Dental Clinic (Building 634), bounded by 5th and 2nd streets, FRA, Alaska (Figure D-5).

- Alternative C – 'New Construction within the FRA Cantonment Area'

This alternative presents specific environmental needs for general locations outside the preferred alternative footprint (Figure D-5). Specific FRA boundary maps indicating institutional control/ operable unit areas and generalized wetland locations within the cantonment area have been included in Figures D-7 and D-5. If the project footprint deviates from the preferred Alternative B site location, but remains within the FRA cantonment area, then mitigation measures (described in the mitigation section below) would need to be instated (in addition to those evaluated for the preferred Alternative B above).

This alternative would not require a supplemental NEPA document so long as there are no wetlands present, no conflicts with operable units or institutional controls, no historic properties are adversely affected, the general and site-specific mitigation factors are evaluated, and no significant impacts are discovered.

Mission Support Training Facility (MSTF)

- Alternative A – 'No Action Alternative'

Currently, there are no facilities at FRA for automation-aided instruction. Therefore, there is a deficit of training buildings, classrooms and buildings used for SBCT instructional and training purposes. The proposed SBCT would not have facilities to perform simulated mission support training activities under the No Action Alternative, and would not support the SBCT mission.

- Alternative B – 'New Construction'

Alternative B, the preferred alternative, proposes construction of an MSTF during 2004 consisting of a building to house self paced training, war gaming, and battle lab-type facilities. The preferred alternative site location for the Mission Support Training Facility would be located northwest of the Buckner Physical Fitness Center (Building 690), west of 6th Street, and north of D Street on FRA, Alaska (Figure D-5).

- Alternative C – 'New Construction within the FRA Cantonment Area'

This alternative presents specific environmental needs for general locations outside the preferred alternative footprint (Figure D-5). Specific FRA boundary maps indicating institutional control areas and generalized wetland locations within the cantonment area have been included in Figures D-7 and D-5. If the project footprint deviates from the preferred Alternative B site location, but remains within the FRA cantonment area, then mitigation measures (described in the mitigation section below) would need to be instated (in addition to those evaluated for the preferred Alternative B above.)

This alternative would not require a supplemental NEPA document so long as there are no wetlands present, no conflicts with operable units or institutional controls, no historic properties are adversely affected, the general and site-specific mitigation factors are evaluated, and no significant impacts are discovered.

Port of Anchorage Deployment Staging Area (POA)

- Alternative A – 'No Action Alternative'

Currently the USARAK POA site is not maintained and developed for a strategic port in support of the SBCT. The existing site has two loading racks and other support features, whose current status is in need of general rebuilding in the event of strategic operations.

- Alternative B – 'New Construction at Port of Anchorage'

Alternative B, the preferred alternative, proposes reconstruction of the railroad loading area at the Port of Anchorage (POA) to provide four parallel berthing lanes (rail spurs), approximately eight acres of maneuver, staging, and maintenance area and an access control facility. The proposed site for the POA is located on existing federally owned property adjacent to Elmendorf Air Force Base within the Port of Anchorage Complex, Alaska (Figure D-5). Existing fuel terminals such as Chevron, Signature, Texaco, Williams, and Tesoro surround the site.

B.5 Affected Environment

Refer to Chapter 3 for existing, baseline conditions for each affected resource prior to construction.

B.6 Environmental Consequences of SBCT Construction Projects

Alternative A 'No Action' and Alternative B 'New Construction'

The following is a description of environmental consequences of the five construction projects listed by resource. Reasonable construction project alternatives (Alternative A 'No Action Alternative' and Alternative B 'New Construction') for the five construction projects have been evaluated in Appendix Table 2.2.kk. Alternative C 'New Construction in the Cantonment Area'

has not been evaluated in Appendix Table 2.2.kk due to the broad range of sites that could be selected. Environmental consequences for Alternative C are listed in a separate section below.

Appendix Table 2.2.kk Environmental Consequences of the Two Site-Specific Alternatives for the SBCT Construction Projects.

Resource	COFs		UAV		Barracks		MSTF		POA	
	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B
Infrastructure	1	1	1	1	1	1	1	1	1	1
Geology	1	1	1	1	1	1	1	1	1	1
Surface Water	1	1	1	1	1	1	1	1	2	1
Ground Water	1	1	1	1	1	1	1	1	1	1
Wetlands	1	1	1	1	1	1	1	1	3	1
Vegetation	1	1	1	1	1	1	1	1	3	3
Wildlife/Fisheries	1	1	1	1	1	1	1	1	3	3
Threatened/ Endangered	1	1	1	1	1	1	1	1	1	1
Fire Management	1	1	1	1	1	1	1	1	2	1
Cultural Resources	1	1	1	1	1	2	1	1	2	2
Socioeconomic	1	1	1	1	1	5	5	5	5	5
Public Access/ Recreation	1	1	1	1	1	1	1	1	1	3
Subsistence	1	1	1	1	1	1	1	1	1	1
Noise	1	1	1	1	1	1	1	1	2	2
Human Health/ Safety	1	1	1	1	1	1	2	1	1	1
Environmental Justice	1	1	1	1	1	1	1	1	1	1
Air Quality	1	1	1	1	1	1	1	1	1	2

Resources given a '1' status have little to no environmental consequences and will not be further discussed.

1=No environmental consequences
2=Minor environmental consequences
3=Moderate environmental consequences
4=Severe environmental consequences
5=Beneficial environmental consequences

If the resource is not included below, then there were no foreseeable consequences specific to that discipline.

Fort Wainwright

Two Company Operations Facilities (COFs)

Socioeconomics – See Section 4.13

Vegetation – Fort Wainwright falls within the Northern Boreal Forest. The cantonment area, south of the Chena River, is mostly human modified. Landscaped lawns, overgrown lots (including

native and invasive species), and second growth woodlands (Balsam poplar, Aspen, Alders) are the dominant vegetative types found in the area. Specifically, the alternative sites contain *Picea glauca* (white spruce), *Picea mariana* (black spruce), *Populus balsamifera* (balsam poplar), and *Betula papyrifera* (Alaska paper birch). Understory consists of wild rose, willow, fireweed and grasses. Alternative sites may contain timber that is of commercial quality and/or quantity. Less than one acre of vegetation would be affected if the proposed Company Operations facility is constructed.

Wildlife/Fisheries – A number of wildlife species are found within the cantonment area on Fort Wainwright. A current list of species within the Fort Wainwright area can be found in Appendix E. Species that may be found on the proposed construction sites include woodchucks, a variety of small mammals, ground-nesting birds and other species that are attracted to human modified vegetative landscapes. The sites and much of the area around them are human modified, grass/herb vegetative cover and/or native grass that provide minimal wildlife values. Although some species may benefit from the berry producing plants and spruce cones, it is less than three acres of continuous woods, fragmented by trails and ditches and surrounded by development. Smaller mammals (squirrels, snowshoe hares, red backed voles) and some birds (pine grosbeak, chickadees) may be able to utilize some or all of this small area. Larger, continuous sections of forest and wetlands exist in the training areas surrounding the cantonment area. The impacts to wildlife would be minor and localized.

Post streams and ponds would not be affected by this project.

There are no threatened and endangered species on sites proposed. The habitat available would not support them, because of the fragmented urban surroundings. The American peregrine falcon (*Falco peregrinus anatum*), a species that is endangered, and the Arctic peregrine falcon (*Falco peregrinus tundrius*), a recently delisted species, are known to subsist within the Fairbanks area. There are three known American peregrine falcon nests in the vicinity of the Salcha River that lies east of the Yukon Training Area near Eielson AFB. Arctic peregrine falcons migrate throughout the area.

Cultural Resources – See Section 4.12.

Public Access/Recreation – The open spaces remaining in the Fort Wainwright cantonment area are important contributors to the recreation opportunities for the Post inhabitants. The core area of the cantonment consists of landscaped yards, office buildings, ball fields and open fields. Surrounding the cantonment area, and across the Chena River, the post remains in a natural state. Recreation opportunities consist of hunting, fishing, ORV use, bird watching, dog walking, skiing etc.

The proposed alternative sites are in the vicinity of a baseball field, but do not contain any developed recreational sites. The sites consist of second growth cottonwoods and some large White Spruce. Some bird watching, berry picking and other natural style recreation may occur on this site by soldiers, due to its proximity to barracks and other facilities. Most recreation is directed into the Training Areas north of the Chena River on Main Post. There is probably little to no civilian use of the area. Hunting and off-road vehicle use are not allowed south of the Chena River on Fort Wainwright.

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 levels (Leq) values, with the Leq values for the evening period (7 PM to 10 PM) increased by 5 decibels (dB) and Leq values for nighttime period (10 PM to 7 AM) 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 – 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. The proposed project site is located within an area identified as within the 55 Ldn noise contour (Zone I).

Air Quality – Fort Wainwright is classified as a Prevention of Significant Deterioration (PSD) major facility as defined in the following regulatory citations:

(1) 18 AAC 50.300(c)(1) due to the potential to emit more than 250 tons per year (tpy) of a regulated air contaminant in an area classified as attainment or unclassifiable;

(2) 18 AAC 50.300(c)(2)(A) due to the potential to emit more than 100 tpy 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) due to the potential to emit more than 100 tpy 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 classified as a non-attainment area major facility as defined in 18 AAC 50.300(d) because it has the potential to emit more than 100 tpy of a regulated air pollutant, carbon monoxide (CO), in an area classified as non-attainment for this pollutant.

Currently, Fort Wainwright must comply with permit conditions outlined in the state issued Air Quality Control Permit to Operate #9331-AA003, the Title V Operating Permit Application, and Air Quality Construction Permit #0031-AC059. The latter two documents 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 identified in the 1990 Clean Air Act Amendments (CAAA) requires source owners with air pollutant emissions exceeding major source thresholds to obtain a Title V Operating Permit. The Title V major source threshold for all criteria air pollutants (CAPs) is 100 tpy. The major source threshold for individual hazardous air pollutants (HAPs) is 10 tpy; or a combined threshold for multiple HAPs of 25 tpy. Under this set of regulations, Fort Wainwright is a major source for CAPs and HAPs and must comply with these requirements. In December 1997, Fort Wainwright submitted a Title V Operating Permit Application to the ADEC (revised in October 2001).

National Ambient Air Quality Standards (NAAQS) were developed as part of the CAAA. The NAAQS are health-based standards, and were established by the EPA to protect human health and the environment. Major source thresholds will vary depending upon the local attainment status for a pollutant with an established NAAQS. Most of Fort Wainwright's cantonment area is located within an area that is in attainment with the NAAQS, with the exception of CO.

The proposed COFs project is in the boundary of the CO non-attainment area of the Northern Alaska Intrastate Air Quality Control Region, EPA Region 10 (Figure D-1). Since the proposed location of the facilities are located in the CO non-attainment area, the General Conformity Rule as described in 40 CFR Part 93 Subpart B will apply. Periodic non-attainment episodes are

typically experienced during the winter months during periods of strong inversions, but may occur during the spring months.

Arctic haze is another factor that impacts the ambient air quality in the Fairbanks region. Industrial pollutants from Europe and Asia are transported across the Arctic Ocean and produce an effect known as arctic haze. During an arctic haze episode, sulfate pollutants in the ambient air may be boosted by 0.68 micrograms per cubic meter (Rahn 1982). During these episodes, the ambient air concentration of vanadium, a byproduct of fossil fuel combustion, may average up to 20 times the normal background level and may also be found in the 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 is a minor contributor to the overall contamination of the air in the Fairbanks region.

The General Conformity Rule (40 CFR Part 93 Subpart B) applies to Fort Wainwright because it is located in an area designated as a CO non-attainment area. Any Federal action within a non-attainment area or maintenance area must not hinder attainment of the NAAQS or impede local efforts to control air pollution. The intent of compliance with this regulation is to make a demonstration that Federal action "conform with" the approved State Implementation Plan for the geographical area. As part of the air quality impact analysis for this project, Fort Wainwright must evaluate this action to ensure compliance with the regulatory provisions of the General Conformity Rule. If impacts are identified, mitigation measures must be identified and included in the conformity documentation for the project. There would be no new combustion units added to the Fort Wainwright inventory from this construction project, either in the form of boiler or generator units. Increased vehicle emissions associated with construction equipment would be of a temporary nature.

This project would have little or no impact on existing air quality in the Fort Wainwright area. A Record of Non-Applicability (RONA) has been completed for this project to demonstrate compliance with the General Conformity Rule. In addition, a comprehensive RONA covering stationary and mobile source vehicle emissions can be found in the EA entitled "Construction for the Alert Holding Area and Pallet Processing Facility, Fort Wainwright, Alaska, " August 2002 (USARAK 1994).

Donnelly Training Area

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

Surface Water – See Section 4.5

Wetlands – The proposed site for the UAV facility is within TA 49 and/or 50 on DTA. Because there are some wetlands within these training areas, a wetland determination would be done before any ground disturbance begins. If wetlands are present, consultation with the U.S. Army Corps of Engineers would occur and any necessary permits obtained. No high function wetland impacts are anticipated with the building of the UAV site within TA 49 or 50. The more likely locations for this facility are near current roads and utilities. Emergent wetlands in TA 49 and 50 are more likely associated with the kettle lakes in the hilly terrain to the southeast.

Vegetation – Vegetation in TA 49 and 50 consists of spruce, birch and aspen mixed forest, mostly charred from the 1999 Donnelly Flats fire. New growth has started, with aspen shoots, willow, fireweed, and even more mushrooms carpeting the forest floor. No rare plant surveys have been conducted in this area.

The proposed construction would result in the loss of approximately 100 acres of vegetation within Training Area 49 and 50. This area is dominated by small diameter aspen and white spruce in the north which grades to larger diameter white spruce, aspen and paper birch toward the southwest. Most of this area has not been mechanically disturbed. The 1999 Donnelly Flats fire charred roughly 80% of the forest in these areas. Other disturbances include roads, observation points, and maneuver trails. Considering the size of the post, the damage would be localized and minor.

Wildlife/Fisheries – Much of the wildlife associated with DTA uses TA 49 and 50, either as breeding habitat for birds, part of the home range of large mammals, or as habitat for snowshoe hares, small mammals, and invertebrates. After the 1999 Donnelly Flats fire charred much of the area, new growth provided forage for moose and bison. The burned trees also provide habitat for insects that are prey for woodpeckers and other insectivores.

The exact location of the UAV Maintenance Facility within Training Areas 49 and 50 has not been selected but would comprise approximately 100 acres of potential habitat. The proposed area is representative of the majority of animal habitat of DTA. This habitat is considered lower function. However, the 1999 Donnelly Flats fire did create habitat for insects and woodpeckers. New growth of aspen will provide forage for moose, bison, snowshoe hares, small mammals, and predators. Construction of the facility could result in minor impacts to these species. Activity patterns could be disrupted and portions of habitat could be adversely impacted. However, this is a relatively small portion of the post and would adversely affect wildlife at the population level.

Fire Management – See Section 4.11.

Cultural Resources – See Section 4.12.

Socioeconomics – See Section 4.13.

Noise – See Section 4.16.

Fort Richardson

New Barracks Facility (Barracks)

Vegetation – The proposed construction would be developed on previously disturbed habitats. Current vegetation on the cantonment area consists of primary successional species such as aspen, willow, alder, wild strawberries, fireweed, along with invasive species such as dandelions, pineapple weed, and plantago. The effects to natural vegetation would be negligible.

Wildlife – Transformation of SBCT would result in additional construction in areas that have been previously disturbed. The original vegetation and soils were bulldozed and filled during the construction of the post in the 1950s. Wildlife use of this area is minimal and impacts would be slight.

Socioeconomics – See Section 4.13.

Mission Support Training Facility (MSTF)

Vegetation – The proposed construction would be developed on previously disturbed habitats. Current vegetation on the cantonment area consists of primary successional species such as aspen, willow, alder, wild strawberries, fireweed, along with invasive species such as dandelions, pineapple weed, and plantago. The effects to natural vegetation would be negligible.

Wildlife – Transformation of SBCT would result in additional construction in areas that have been previously disturbed. The original vegetation and soils were bulldozed and filled during the construction of the post in the 1950s. Wildlife use of this area is minimal and impacts would be slight.

Socioeconomics – See Section 4.13.

Human Health – This facility exists in vicinity of known POLs so contamination to soil/ groundwater is of concern. Due to the levels of POLs, it was determined that this would have minor effects to human health.

Port of Anchorage Deployment Staging Area (POA)

Wetlands – If it is determined that part or the entire project is located within a wetland, then a wetland delineation and permit will need to be obtained from the U.S. Army Corps of Engineers.

Vegetation – The proposed construction would be developed on previously disturbed habitats. Current vegetation on the cantonment area consists of primary successional species such as aspen, willow, alder, wild strawberries, fireweed, along with invasive species such as dandelions, pineapple weed, and plantago. The effects to natural vegetation would be negligible.

Wildlife – The Port of Anchorage project would be situated on 80 acres that were previously used as berthing area for fuel loading. This site has been leveled by heavy equipment in the past, and is within the developed Ship Creek and Port of Anchorage area. Wildlife use of this site is minimal, but probably includes insects, birds, and mammals adapted to urban settings. This site does not have any docks or extensions into Cook Inlet or Ship Creek, and would not affect aquatic species.

Air Quality – FRA has no air quality non-attainment zones; therefore a RONA would not be necessary. Indirect source construction emission information would need to be submitted to USARAK environmental.

Socioeconomics – See Section 4.13.

Cultural Resources – The Port of Anchorage has not been evaluated for eligibility for listing in the National Register of Historic places. The potential to impact cultural resources is unknown. Section 106 will need to be completed.

Human Health and Safety – Placement of a project should take areas with institutional controls and operable units into consideration since they outline known areas of contamination, or areas with Alaska Department of Environmental Conservation (ADEC) and/or Environmental Protection Agency (EPA) agreements. The operable unit status map for FRA is still preliminary.

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 levels (Leq) values, with the Leq values for the evening period (7 PM to 10 PM) increased by 5 decibels (dB) and Leq values for nighttime period (10 PM to 7 AM) 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 – 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. The proposed project site is located within an area identified as within the 55 Ldn noise contour (Zone I).

Alternative C 'New Construction on the Cantonment Area' – COF at FWA and Barracks or MSTF at FRA

The following is a description of known environmental consequences and region specific mitigation independent of the specific site selected. If Alternative C is selected for the proposed COF at FWA or the proposed Barracks or MSTF at FRA, then the exact project location will be supplied to USARAK Environmental NEPA Coordinator for further environmental analysis. If it is determined that resources need to be further evaluated (in addition to the initial evaluation done using Figures D-1 through D-7); if the listed mitigation is not adequate; or that the projects are affecting any of the 'extraordinary circumstances' listed in the Army Regulation 32 CFR Part 651 without mitigation, then a supplemental NEPA document will need to be prepared for each project not meeting these criteria.

Figures D-1 through D-7, showing resources and project locations relevant to the five mission essential projects, are included in Appendix A. If Alternative C is chosen for the proposed COF at FWA or the proposed Barracks or MSTF at FRA mission essential construction projects, then Figures D-1 through D-7 can be referenced to help determine an appropriate site selection.

Figure D-3 shows the air quality carbon monoxide non-attainment zone boundary for FWA. Projects within this boundary must obtain a Record of Non-Applicability (RONA) prior to construction commencement. Projects outside this zone must still return indirect source emission information to USARAK, but a RONA would not be required. FRA has no air quality non-attainment zones; therefore a RONA would not be necessary. Indirect source construction emission information would need to be submitted to USARAK environmental.

Figure D-4 outlines the Ladd AFB Historic District. Projects must go through the Section 106 process (State Historic Preservation Office consultation) regardless of their placement on FWA. However projects within or adjacent to this district have the potential to adversely affect the qualities of the district that make it eligible for listing in the National Register of Historic Places. Consultation would be required early in the planning process for these projects. Figure D-4 also outlines the Ladd Field National Historic Landmark. Projects planned within the landmark boundaries, if not planned sympathetically to the historic characteristics that make the landmark eligible, may jeopardize the properties designation as a National Historic Landmark. In this case, individual Environmental Impact Statements may be required to analyze the environmental impact that the undertaking may have. This is especially true if an undertaking will require the demolition of a building that contributes to the National Historic Landmark.

Projects on FRA must also go through the Section 106 process. There are no identified historic properties at this time on the cantonment area that would need to be considered.

Figures D-5, D-1, and D-6 show general aerial wetlands determinations for FWA and FRA, respectively. If Alternative C for the COF at FWA or the Barracks or MSTF at FRA is chosen, then location of wetlands should be taken into consideration. If it is determined that part or the entire project is located within a wetland, then a wetland delineation and permit will need to be obtained from the U.S. Army Corps of Engineers.

Figures D-2 and D-7 show institutional controls and operable unit status for FWA and FRA, respectively. Placement of a project should take these areas into consideration since they outline

known areas of contamination, or areas with Alaska Department of Environmental Conservation (ADEC) and/or Environmental Protection Agency (EPA) agreements. The operable unit status map for FRA is still preliminary.

Alternative C 'New Construction within Training Area 57' at DTA

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

Surface Water – See Section 4.5

Wetlands – The proposed sites for the UAV would be within TA 57 on DTA. Because there are some wetlands within these training areas, a wetland determination would be done before any ground disturbance begins. If wetlands are present, consultation with the U.S. Army Corps of Engineers would occur and any necessary permits obtained.

No high function wetland impacts are anticipated with the building of the UAV site. The more likely locations for this facility are near current roads and utilities. Wetlands are located within TA 57, but are associated with the kettle lakes in the surrounding hilly terrain. Wetlands within the general site location could be avoided by confining construction to upland areas and avoiding the placement of fill or overburden in low-lying areas.

Vegetation – Vegetation in TA 57 consists of spruce, birch and aspen mixed forest, mostly charred from a 1981 fire. Considerable regrowth has occurred. The newer growth provides premium moose browse. However, no commercially viable timber is present in the area. No rare plant species surveys have been conducted in the area.

Wildlife/Fisheries – Training Area 57 is used either as breeding habitat for birds, part of the home range of large mammals, or as habitat for snowshoe hares, small mammals, and invertebrates. After the 1981 fire charred much of the area, new growth provided forage for species moose and bison.

Several bird species of concern, including the bohemian waxwing, northern shrike, and sharp-tailed grouse, use TA 57 as habitat. These species are included as part of the USARAK Ecosystem Management Plan.

The proposed construction site for the maintenance facility is located within an established Natural Resources Conservation Habitat Management plot. This plot was cleared to improve moose browse in 1999. Use of this area will reduce the amount of land cleared for moose habitat improvement.

Fire Management – See Section 4.11

Cultural Resources – See Section 4.12 Projects located on Donnelly Training Area would require Section 106 review and compliance early in their planning.

Socioeconomics – See Section 4.13

Public Access and Recreation – See Section 4.14 Recreational use of stocked lakes and operation of off-road vehicles and mountain bikes occurs in the general area of Training Area 57. These activities would be limited in Training Area 57 during the launch and recovery portions of UAV training operations.

Noise – See Section 4.16

B.7 Cumulative Impacts for SBCT Construction Projects

Alternative A 'No Action' and Alternative B 'New Construction'

The following is a description of cumulative impacts of the five mission essential construction projects listed by resource. Reasonable construction project alternatives (Alternative A 'No Action Alternative' and Alternative B 'New Construction') for the five construction projects have been evaluated in Appendix Table 2.2.ll. Alternative C 'New Construction in the Cantonment Area' has not been evaluated in Appendix Table 2.2.ll due to the broad range of sites that could be selected. Cumulative Impacts for Alternative C are listed in a separate section below.

Appendix Table 2.2.ll Cumulative Environmental Consequences of the Two Site-Specific Alternatives for the SBCT Construction Projects

Resource	Barracks		MSTF		POA		COFs		UAV	
	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B
Infrastructure	1	1	1	1	1	1	1	1	1	1
Geology	1	1	1	1	1	1	1	1	1	1
Surface Water	1	1	1	1	1	1	1	1	1	2
Ground Water	1	1	1	1	1	1	1	1	1	2
Wetlands	1	1	1	1	1	1	1	1	1	1
Vegetation	1	1	1	1	1	1	1	1	1	3
Wildlife/Fisheries	1	1	1	1	1	1	1	1	1	2
Threatened/Endangered	1	1	1	1	1	1	1	1	1	1
Fire Management	1	1	1	1	1	1	1	1	1	1
Cultural Resources	1	1	1	1	1	1	1	2	1	1
Socioeconomic	1	5	1	5	1	5	1	5	1	5
Public Access/Recreation	1	1	1	1	1	1	1	2	1	1
Subsistence	1	1	1	1	1	1	1	1	1	1
Noise	1	1	1	1	1	1	1	2	1	2
Human Health/Safety	1	1	1	2	1	1	1	1	1	1
Environmental Justice	1	1	1	1	1	1	1	1	1	1

* Resources given a '1' status have little to no environmental consequences and will not be further discussed.

1=No environmental consequences
2=Minor environmental consequences
3=Moderate environmental consequences
4=Severe environmental consequences
5=Beneficial environmental consequences

Fort Wainwright

Two Company Operations Facilities (COFs)

Cultural Resources – The placement of the COFs adjacent to the Ladd Air Force Base Historic District does not adversely affect the historic qualities that make the historic district eligible for inclusion in the National Register of Historic Places. The placement of this project along with

others adjacent to the historic district may begin to have an accumulative affect in that it would affect its view shed.

Public Access/Recreation – Recreation would be affected in two ways. One is that there probably would be more developed recreation such as ballparks, soccer fields, and bike paths. For those that seek out nature for recreation, the training areas are close, still mostly in a natural, undisturbed state, and would remain that way to provide sustainable training for soldiers. Travel to the sites would take just a few minutes longer.

Noise – See Section 4.16.

Donnelly Training Area

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

Surface Water – See Section 4.5.

Ground Water – See Section 4.6.

Vegetation – The amount of vegetation removed would be minimal compared to the overall size of this open forest ecotype found throughout the DTA and the Delta Junction area.

There should be minimal net loss of function or habitat that this ecotype provides. Because the site would probably be placed near existing infrastructure, fragmentation due to new roads, power lines, and the placement of the facility would be minimal.

Wildlife/Fisheries – The loss of forest acreage would have a small negative impact to wildlife in the DTA and the Delta Junction region in general. Although fragmentation of existing larger tracts of forest would not likely occur, larger species (moose, bison) would have a smaller area available for use, there would be a reduction in vegetative cover, which provides forage and cover for large and small species, and additional human activity in the area may push some species (grizzly bear, lynx) further away from the developed areas.

Overall, the loss of this small acreage would be minor compared to the large stands of undisturbed forest throughout the DTA and the Delta Junction region and should have only slight negative impacts to wildlife.

Noise – See Section 4.16.

Fort Richardson

New Barracks Facility (Barracks)

Socioeconomics – See Section 4.13.

Mission Support Training Facility (MSTF)

Human Health/Safety – See Section 4.17.

B.8 Mitigation List

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, mitigation measures would be strictly enforced.

A. Mitigation Pertaining to all Five Construction Projects

The following mitigation measures would need to be addressed regardless of the project or chosen alternative.

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 would 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.

3. *Snow Removal:* Incorporate snow removal operations into the facility design. Ascertain that snow avalanches from roofs would 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:* The contractor would be required to prepare a storm water pollution prevention plan and implement best management practices to stabilize exposed soils and manage storm water runoff.

5. *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 post Fire Department. All spills/releases in USARAK are reported to the Alaska Department of Environmental Conservation (ADEC), Spill Prevention and Response (SPAR) and appropriate mitigation measures are accomplished.

B. Mitigation Specific to Each Construction Project

Fort Wainwright

Two Company Operations Facility (COFs)

Alternative B – 'New Construction' and Alternative C – 'New Construction within the FWA Cantonment Area'

- The U.S. Army Corps of Engineers has determined that a wetland permit is not required for this project. However, if the method, scope or location of the proposed project is altered, another jurisdictional determination may be necessary.
- The State Historic Preservation Officer must concur with the finding of no significant impact on historic properties.

- An air quality construction equipment analysis is required.
- The contractor must comply with Institutional Controls/Operable Unit boundaries identifying construction requirements.
- Completion of an Air Quality Record of Non-Applicability (RONA) is required prior to construction.
- Comply with the USARAK Timber Policy. Existing large White Spruce and Paper Birch would be used in the landscape design if possible, or would be cut and placed in an area accessible to the public for firewood.
- Contractor must avoid any runoff of sediment into the drainage ditches during construction, and follow the FWA landscape design plan. Consider landscape design around outdoor generators, fans, etc. to dampen noise.

Donnelly Training Area

Unmanned Aerial Vehicle (UAV) Maintenance Support Facility

Alternative B – 'New Construction within Training Area 49 or 50' and Alternative C - 'New Construction within Training Area 57'

- A wetland delineation and permit are necessary prior to construction commencement. Although these isolated wetlands are probably considered low function wetlands, any work done that would alter them or the ditches (bridges, culverts) would require a wetlands permit from the U.S. Army Corps of Engineers. Site selection would avoid high function wetlands.
- The State Historic Preservation must concur with the finding of no significant impact on historic properties.
- An air quality construction equipment analysis is required.
- Compliance with the USARAK timber policy and FRA landscaping design plan is required. Existing large White Spruce and Paper Birch would be cut and placed in an area accessible to the public for firewood. Native Alaskan species should be used if landscaping is performed. The use of barriers during construction, and re-vegetation post-construction is required to prevent erosion and runoff to any nearby wetlands/streams/ponds.
- Avoid placement of site on or near high function habitat.

Fort Richardson

New Barracks Facility (Barracks)

Alternative B – 'New Construction' and Alternative C – 'New Construction within the FRA Cantonment Area'

- The State Historic Preservation Officer must concur with the finding of no significant impact on historic properties.
- An air quality construction equipment analysis is required.

- The contractor must comply with Institutional Controls/Operable Unit boundaries identifying construction requirements.
- Compliance with the USARAK timber policy and FRA landscaping design plan is required.

Mission Support Training Facility (MSTF)

Alternative B – 'New Construction' and Alternative C – 'New Construction within the FRA Cantonment Area'

- The State Historic Preservation Officer must concur with the finding of no significant impact on historic properties.
- An air quality construction equipment analysis is required.
- The contractor must comply with Institutional Controls/Operable Unit boundaries identifying construction requirements.
- Compliance with the USARAK timber policy and FRA landscaping design plan is required.

Port of Anchorage Deployment Staging Area (POA)

Alternative B – 'New Construction'

- The State Historic Preservation Officer must concur with the finding of no significant impact on historic properties.
- An air quality construction equipment analysis is required.
- The contractor must comply with Institutional Controls/Operable Unit boundaries identifying construction requirements.
- Compliance with the FRA landscaping design plan is required.

C. COFs AIR QUALITY CORRESPONDENCE

GENERAL CONFORMITY – RECORD OF NON-APPLICABILITY

Project/Action Name: Construction of Two Company Operations Facilities, Fort Wainwright, Alaska (Project 58187)

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

Begin Construction Date: March 2004
Midpoint Construction Date: September 2004
End Construction Date: March 2005

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

_____ The project/action is an exempt action under 40 CFR 153(c) or (d), (SPECIFY APPLICABLE EXEMPTION CATEGORY AND REGULATORY CITATION).

OR

__X__ Total direct and indirect emissions from this project/action have been estimated (No additional carbon monoxide (CO) emissions are associated with this construction project), and are below the conformity threshold value established at 40 CFR 93.153(b) of 100 tons/year CO;

AND

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

Support document and emission estimates if relevant are

( ) ATTACHED

(X) APPEAR IN THE NEPA DOCUMENTATION (Project 58187)

( ) OTHER _____.

_____.
Kate D. Siftar,
Chief, Environmental Compliance

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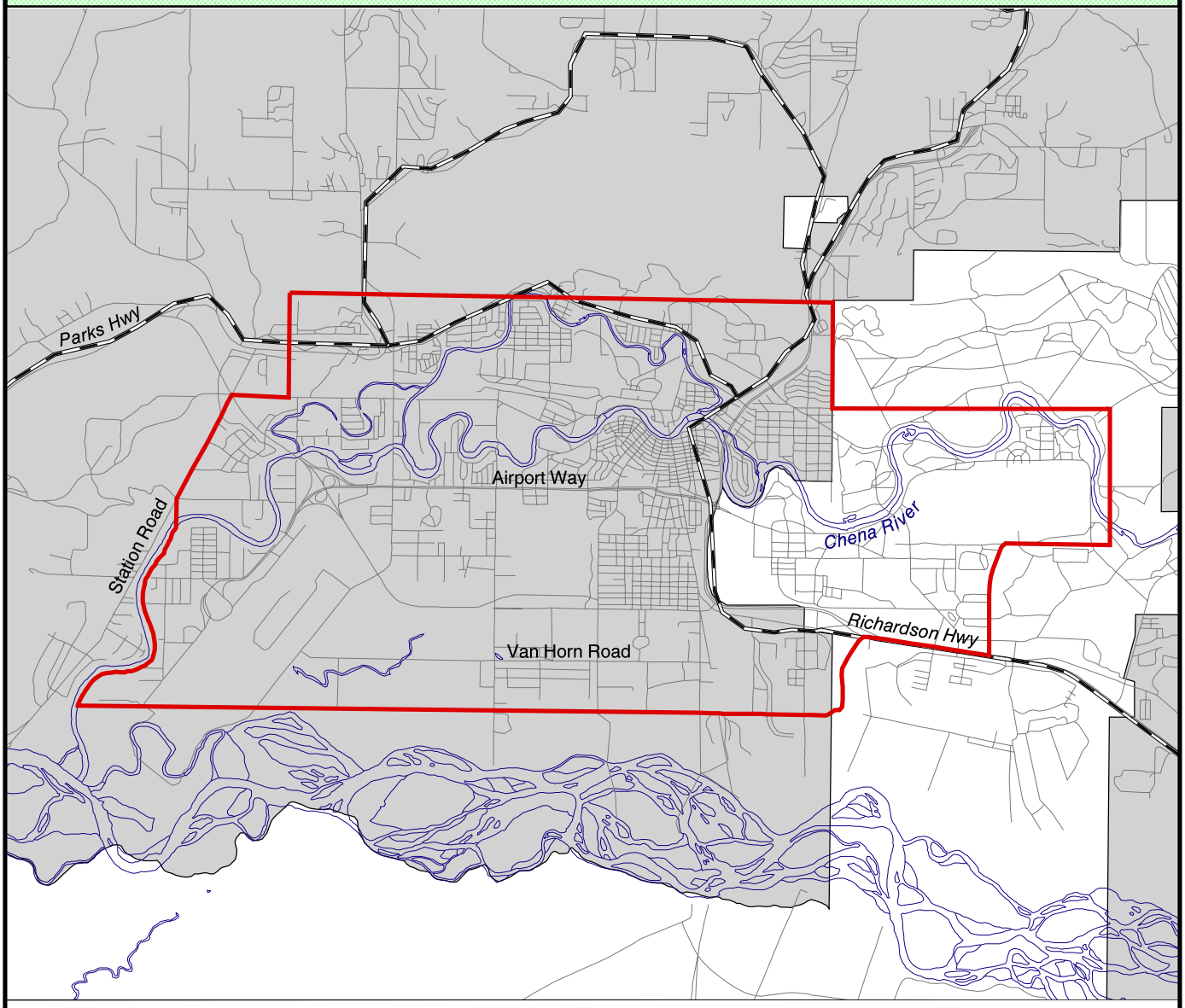
Figure D-1

Air Quality Carbon Monoxide Non-Attainment Zone Fort Wainwright



Legend

- *Air Quality Non-Attainment Zone*
- *Installation Boundary*
- *Streams*
- *Highways*
- *Roads*

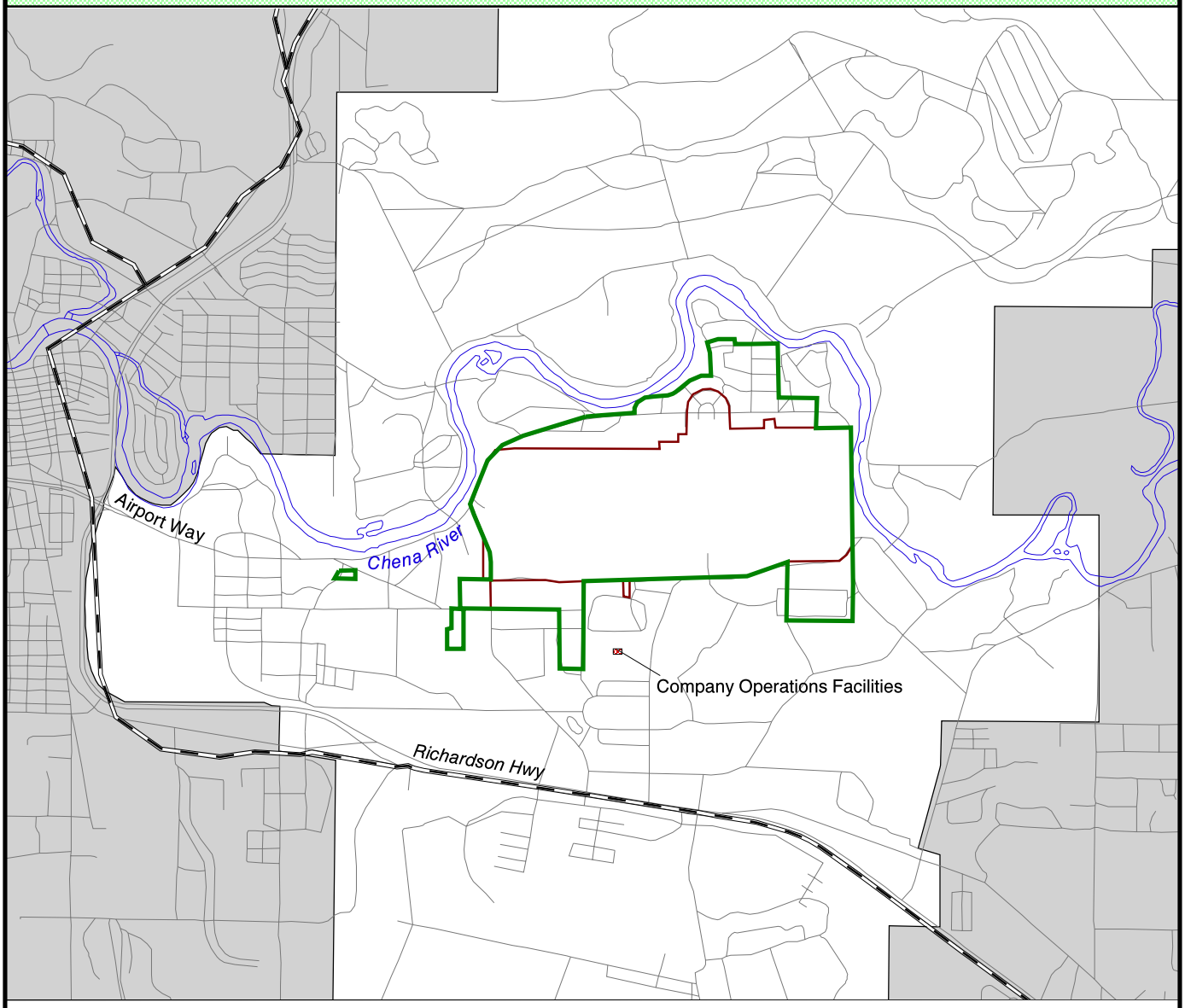
Source:
USARAK Natural Resources 2003

Scale: 1:100000
1 0 1 Mile

N

Figure D-2

Ladd Field National Historic Landmark and Ladd Air Force Base Historic District Fort Wainwright



Legend

- *National Historic Landmark*
- *Installation Boundary*
- *Highways*
- *Historic District Boundary*
- *Streams*
- *Roads*

Source:
USARAK Cultural Resources 2003

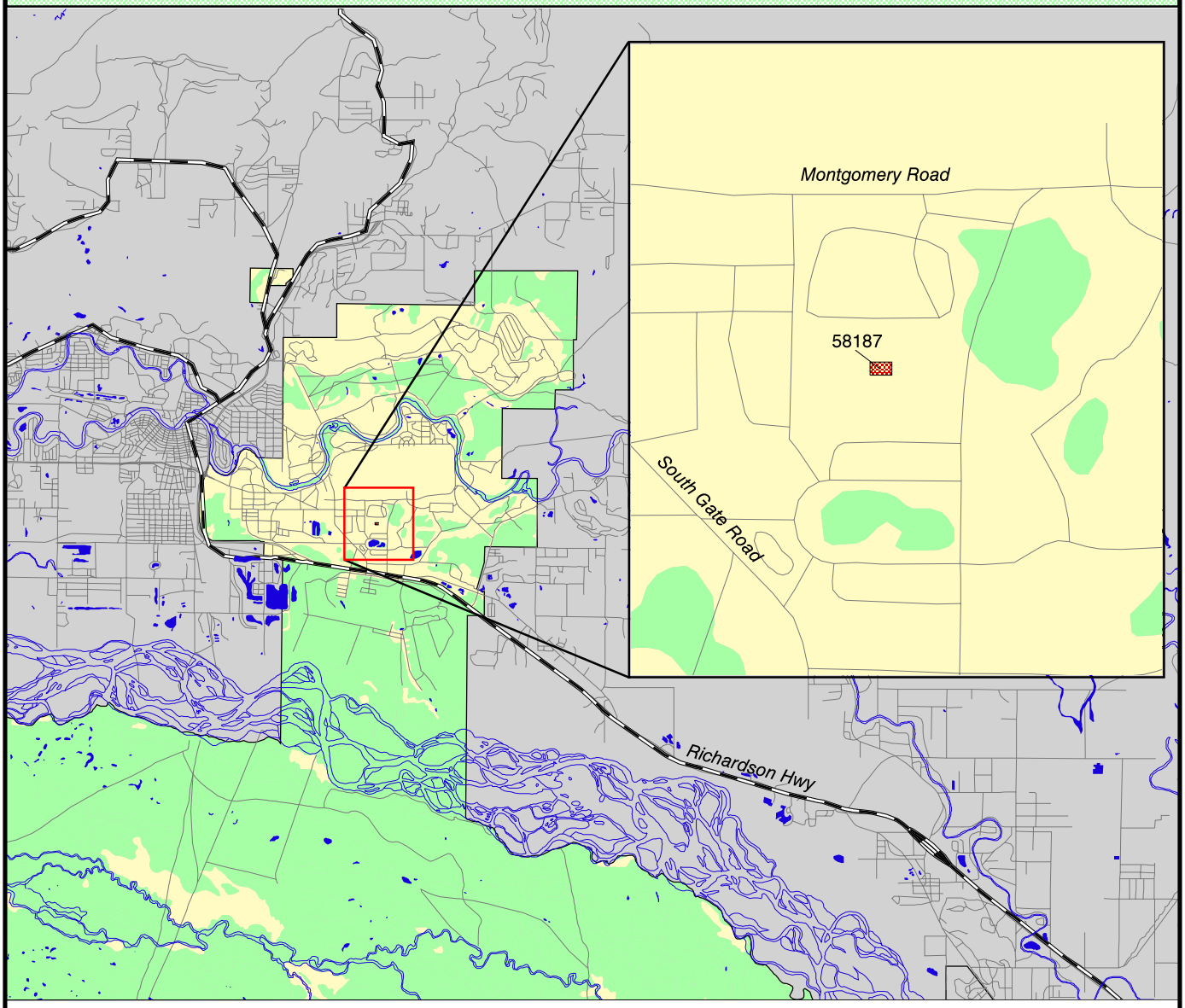
Scale: 1:50000

1 0 1 Mile

N

Figure D-3

Company Operations Facilities at Fort Wainwright and Wetland Delineation



Legend

- *Company Operations Facilities*
- *Installation Boundary*
- *Lakes*
- *Upland*
- *Wetland*
- *Highways*
- *Roads*
- *Streams*

Source:
USARAK
Natural Resources 2003

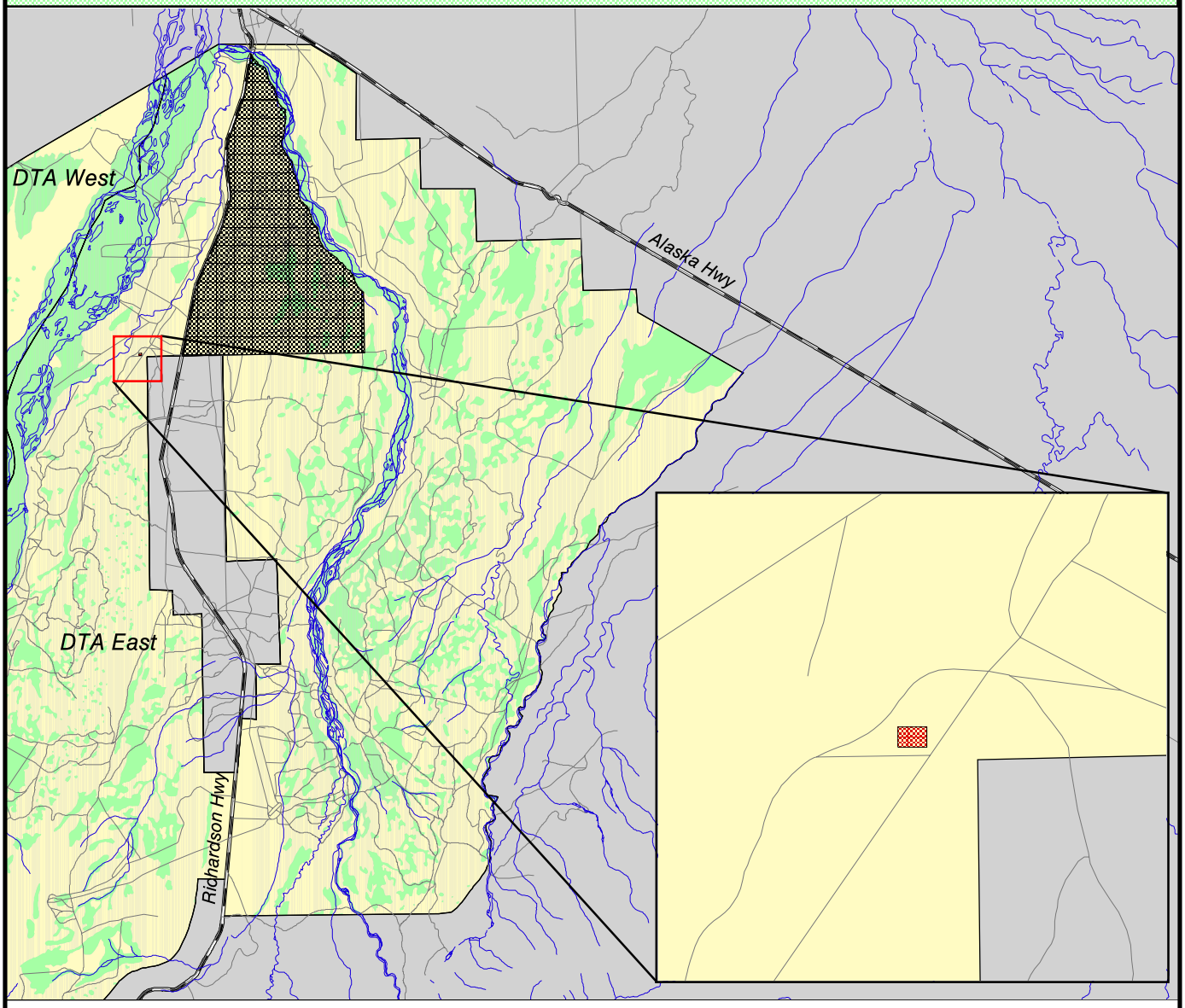
Scale: 1:20000

0.5 0 0.5 Miles

N

Figure D-4

Unmanned Aerial Vehicle Maintenance Support Facility at Donnelly Training Area and Wetland Delineation



Legend

- *Unmanned Aerial Vehicle Maintenance Support Facility*
- *Installation Boundary*
- *Fort Greely*
- *Upland*
- *Wetland*
- *Highways*
- *Roads*
- *Streams*

Source:
USARAK
Natural Resources 2003

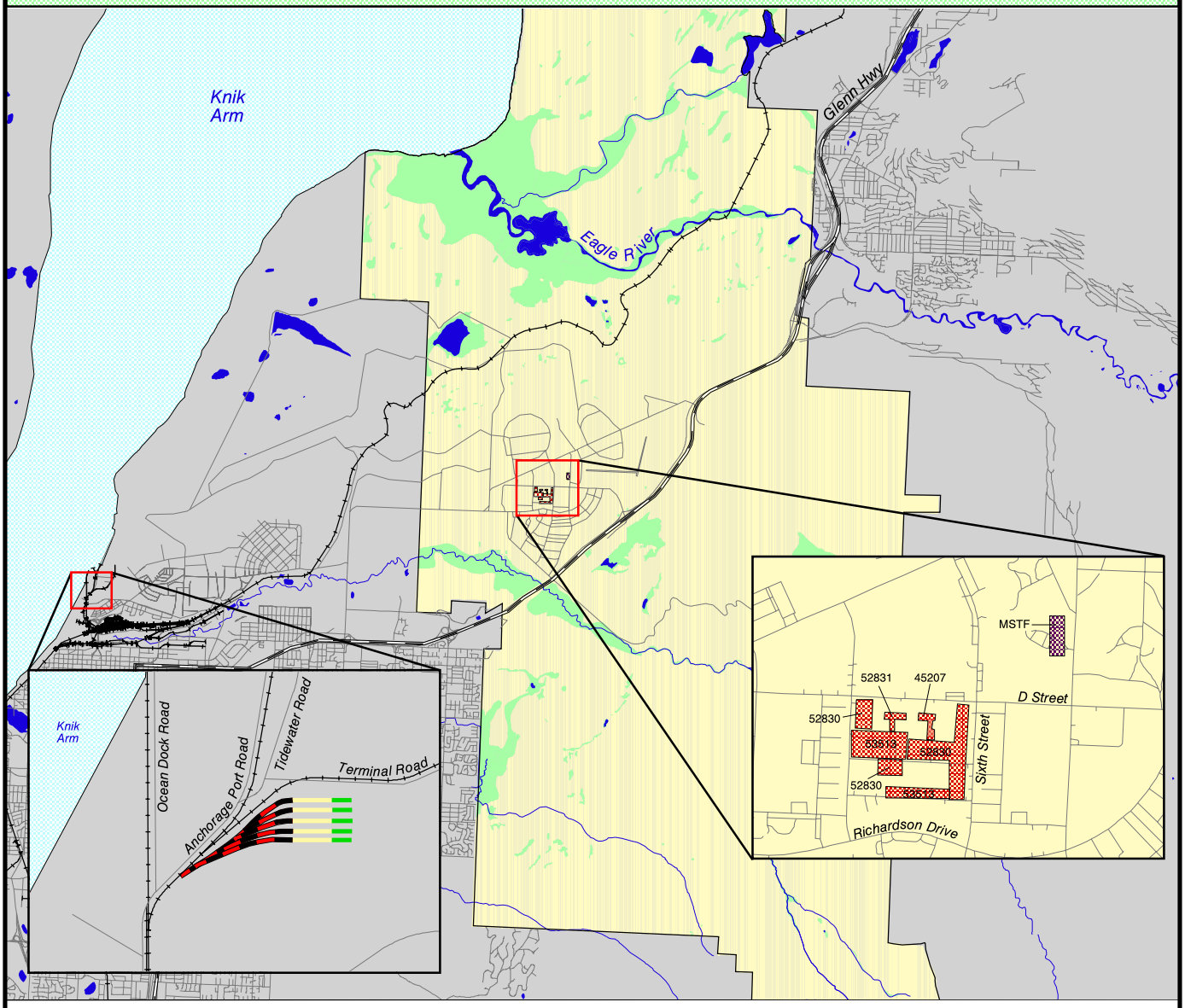
Scale: 1:200000

0.5 0 0.5 Miles

N

Figure D-5

Fort Richardson Barracks, Mission Support Training Facility, Port of Anchorage, and Wetland Delineation



Legend

Port of Anchorage

- *Ramps*
- *New Rail Spurs*
- *Rail Platforms*
- *Installation Boundary*
- *Fort Richardson Barracks*
- *Mission Support Training Facility*
- *Upland*
- *Wetland*
- *Lakes*
- *Highways*
- *Roads*
- *Railroads*
- *Streams*

Source:
USARAK
Natural Resources 2003

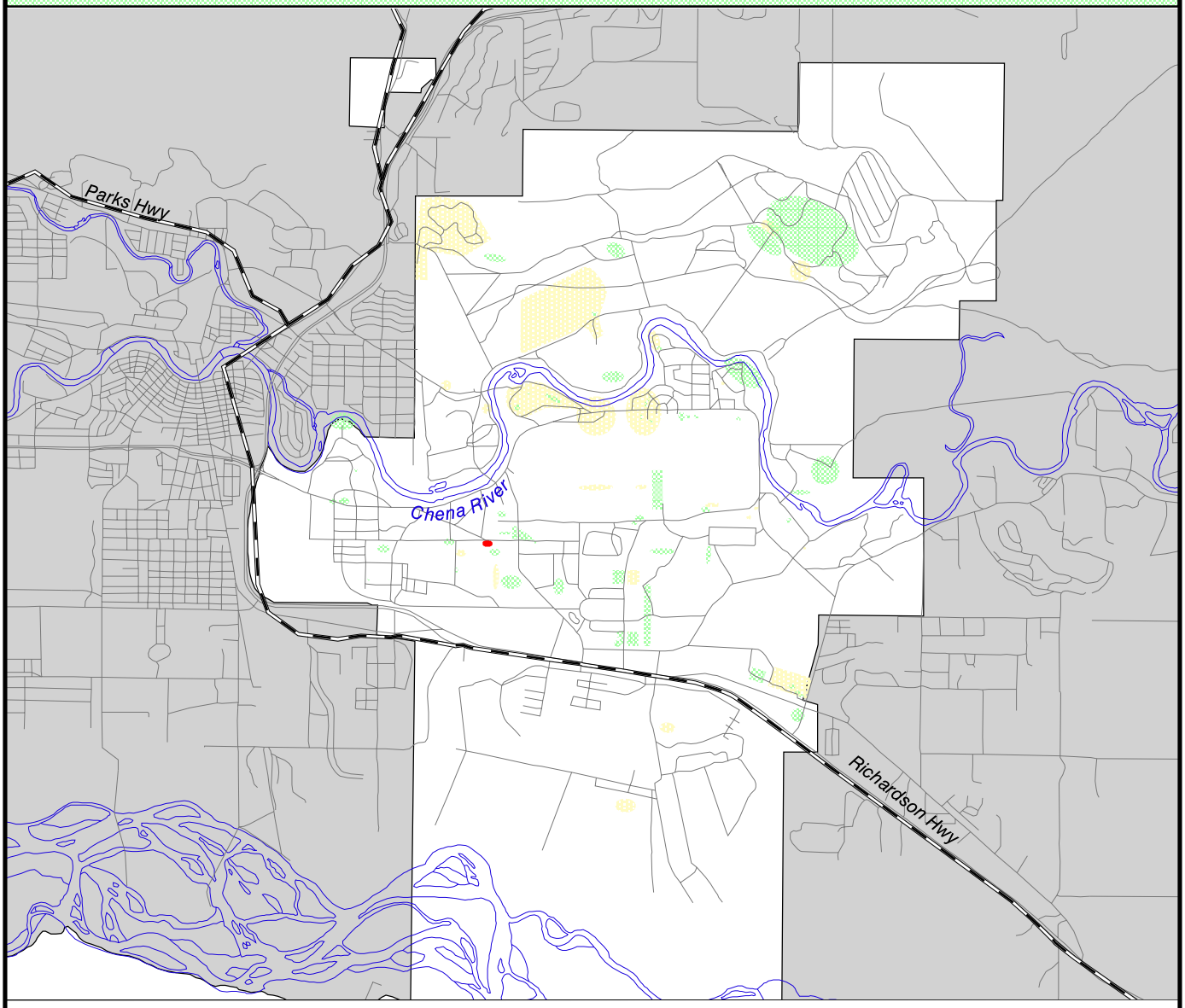
Scale: 1:150000

5 0 5 Miles

N

Figure D-6

Contaminated Sites
Fort Wainwright



Legend

- *Contamination Still being Defined*
  Not all Remedial Action in Place
- *All Remedial Actions in Place*
  Contamination Defined
  Institutional Controls in Place
  Long-Term Monitoring On Going
- *No Further Action*
- *Installation Boundary*
- *Highways*
- *Roads*
- *Streams*

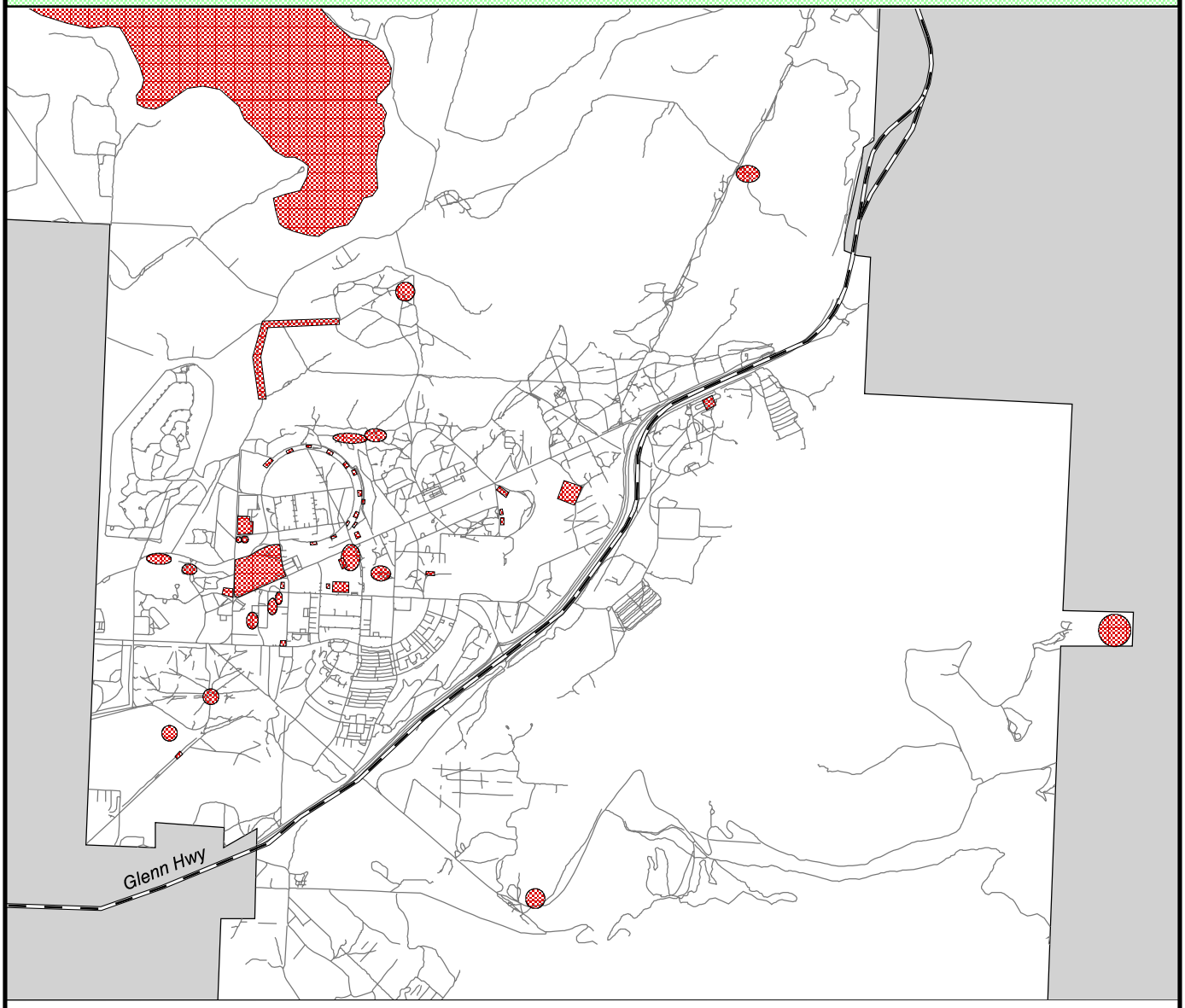
Source:
USARAK Natural Resources 2003

Scale: 1:75000
1 0 1 Mile

N

Figure D-7

Contaminated Sites
Fort Richardson



Legend

Installation Boundary

Contaminated Sites

Highways

Roads

Source:
USARAK Natural Resources 2003

Scale: 1:75000
1 0 1 Mile

N