

TRIP REPORT

FORT MORROW

Site Reconnaissance and Geospatial Data Acquisition Port Heiden, Alaska

**Alaska District
Pacific Ocean Division
U.S. Army Corps of Engineers**

July 2010

Version 1.0



***Prepared By*
United States Army Corps of Engineers
Alaska District
EN-ES-TI (Technical Integration)**

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1.0 INTRODUCTION

A site reconnaissance visit was conducted by USACE Alaska District (POA) on 22-24 June 2010 to Port Heiden, Alaska to observe features of former Fort Morrow. Port Heiden is located on the west coast of the Alaska Peninsula, approximately 140 miles southwest of King Salmon, Alaska (Figure 1).

One purpose of the site visit was to meet with community members to obtain information about their concerns related to environmental impacts from Fort Morrow. An additional purpose of the visit was to collect geospatial information in support of future Formerly Used Defense Site (FUDS) activities at Fort Morrow, and to familiarize project management and engineering representatives with the site characteristics.

1.1 Attendees

The visit was attended by:

Ron Pflum	FUDS Project Manager
Meseret Ghebreslassie	Environmental Engineer
Gordon Osgood	Engineer / GIS Specialist

1.2 Trip Logistics

Site visit attendees travelled to Port Heiden on a scheduled PenAir flight, with a stop in King Salmon, Alaska. Lodging was acquired at Carol's Bed & Breakfast. The community of Port Heiden provided local transportation for POA representatives.

1.3 References

Information in this report is based on the following references.

- Contract Drawing Sheets (1986) Defense Environmental Restoration Account Debris Cleanup and Site Restoration, Port Heiden, Alaska, Inv No. DACA-85-86-B-0039, 45 sheets.
- Contract Drawing Sheets (February 1989) Defense Environmental Restoration Program Debris Cleanup and Site Restoration, Port Heiden & Port Moller, Alaska, Inv No. DACA-85-89-B-0004, selected sheets showing "Area 1" through "Area 12".
- Map by Lake and Peninsula Borough (no date) Area Use Map Port Heiden.
- Preliminary Draft GIS files (June 2010) Army Geospatial Center.
- Conversations between USACE POA representatives and Port Heiden Residents (22-24 June 2010).
- Site visit photographs and GPS data by USACE POA (22-24 June 2010).

2.0 ELECTRONIC RESOURCES

Files resulting from the site visit are stored on the POA computer network, as follows.

Photographs and photograph log:

O:\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS
SITE VISIT 23JUN10

GPS files (raw and differential corrected):

O:\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\GPS

Shapefiles resulting from the GPS data are at:

O:\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\04_SHAPEFILE

Scanned hardcopy maps from 1986 and 1989 are at:

O:\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\03_RASTER

The spatial reference used by POA for Port Heiden GIS work is NAD83, Alaska State Plane Zone 6, feet.

3.0 SITE ACCESS AND LOGISTICS

Port Heiden is accessible via airplane and boat. Scheduled air service is provided by PenAir. There are no hotels or restaurants in Port Heiden. There is a Bed and Breakfast establishment and a local grocery store where food items can be purchased from 10 AM through 6 PM daily. Figure 2 shows locations and features associated with logistics of working in Port Heiden.

4.0 COMMUNITY CONCERNS

POA representatives met with community residents on the afternoon of 22 June 2010 to obtain information about potential contaminated areas associated with the former Fort Morrow facility and activities. Several residents communicated concerns and the approximate locations. These are shown on Figure 3. POA representatives visited the locations of community concerns during the site visit to identify if evidence of contamination or potential contamination is readily apparent.

4.1 Ordnance

Ordnance was found in the past by a community resident, reportedly from an area near the northwest corner of the Fort Morrow area. A map prepared by the Lake & Peninsula Borough (LPB) shows an "old munitions dump site" in an area that was observed on this site visit to be a large ground scar area (Appendix B). The ground scar is located along the western road at:

- Easting 1504218 feet
- Northing 1086019 feet

(NAD 83, Alaska State Plane, Zone 6)

The LPB map also indicates an "old bunker area" in grass-covered ground just up off the beach at the following location:

- Easting 1503198 feet
- Northing 1081096 feet

(NAD 83, Alaska State Plane, Zone 6)

4.2 Possible Drum Carcass Burial Near Airfield

A community resident indicated drum carcasses may have been buried in a hill near the airfield buildings. Although no drums were identified, two hills near the airfield buildings are located at:

- Easting 1514421 feet
- Northing 1081437 feet

(NAD 83, Alaska State Plane, Zone 6)

And

- Easting 1512709 feet
- Northing 1082175 feet

(NAD 83, Alaska State Plane, Zone 6)

Additionally, the LPB map indicates an “old drum disposal area” near the southern end of the north-south runway, at:

- Easting 1513244 feet
- Northing 1078957 feet

(NAD 83, Alaska State Plane, Zone 6)

4.3 Former Drum Storage Along Road

The LPB map shows areas of concern along the roadsides leading south from the airfield (Appendix B). This is consistent with concerns raised during our meeting with community residents, and is also consistent with indications of stacked and scatter drums shown on 1989 maps.

4.4 Possible Buried Debris in Hill Near WAC Site

Community residents indicated concern about buried debris and equipment in a hill located along the road leading toward the White Alice Communication (WAC) site, north of the airfield. The debris was reportedly buried in the hill on the inside left-hand bend of the road. The hill was indicated to be located in the area of:

- Easting 1512238 feet
- Northing 1086376 feet

(NAD 83, Alaska State Plane, Zone 6)

POA walked the hill area and found numerous building pits and a road, however no indications of debris burial were found. Further review of aerial photography and historical documentation may identify nearby location(s) that may be the area of concern.

Note that the 1980s USACE Landfill A is located approximately 2,000 feet northwest of the location of concern (Figure 4). Further inquiry of residents should be made to determine if the concern might actually be Landfill A.

4.5 Buried Debris in Hill South of Airfield

Community residents indicated concern about buried debris in a hill located south of the airfield and north of the borrow pit. Note that the 1980s USACE Landfill B is located in this area (Figure 4). Further inquiry of residents should be made to determine if the concern might actually be Landfill B.

4.6 Buried Debris Near Local Store

Community residents indicated concern about buried debris found near the local store. The area indicated surrounds the following location:

- Easting 1512055 feet
- Northing 1072294 feet

(NAD 83, Alaska State Plane, Zone 6)

PVC pipes, suggestive of monitoring wells, were observed in this area. This area, and two additional areas indicated as “equipment dump sites” are shown on the LPB map.

4.7 Buried Debris Near Residence

Community residents indicated concern about buried debris found in the backyard of a local residence. The approximate location is:

- Easting 1514888 feet
- Northing 1071136 feet

(NAD 83, Alaska State Plane, Zone 6)

4.8 Recent PCB Sampling Under NALEMP Program

Community residents indicated concern about PCB sampling conducted under the NALEMP Program near a residence. The sampling was reportedly conducted in the vicinity of the following location:

- Easting 1517198 feet
- Northing 1068177 feet

(NAD 83, Alaska State Plane, Zone 6)

4.9 Possible Buried Debris Indicated by ADEC

Prior to the POA site visit, the Alaska Department of Environmental Conservation (ADEC) communicated a report of local concern about buried debris and equipment in an area south of the city offices building. Going into the site visit, the area was suspected to be an area of differing vegetation cover shown on aerial photography at the following location:

- Easting 1517996 feet
- Northing 1069700 feet

(NAD 83, Alaska State Plane, Zone 6)

POA representatives walked this area and found it to be a swampy area typical of an old lake bed, and it was observed to lead into a watercourse toward the west that crosses under the road. POA found no indication of buried debris, and does not believe this is the location of concern. See the photograph below.



Looking northeast at swampy area east of road. (23 June 2010)

5.0 SITE VISIT

POA representatives visited numerous locations across the former Fort Morrow area (Figure 4). Photographs and GPS positions were taken at most locations.

5.1 Road Conditions

Many roads in the Fort Morrow area were driven to access sites. Road conditions are described in Figure 5. A 4WD pickup truck was used, however it remained in 2WD at all times during the site visit. During wet periods 4WD would be needed on some roads/trails.

5.2 Garage Area

The garage area is located a short distance south of the airfield. Community representatives reported the garage was used by Alaska Department of Transportation and Public Facilities (ADOT&PF) after the military. The garage structure has been demolished, and the concrete foundation remains. Piles of equipment/vehicle skeletons are located southeast of the shop foundation.

Maps from 1989 show drum storage in the area surrounding the garage. Spills were indicated on the 1989 maps at some of these drum areas, and some impacted soil was removed. An underground storage tank was removed from outside the west wall of the shop, and a spill was indicated near the southeast corner of the garage. Across the road to the north from the garage are several long trenches. Drums were reportedly stored in these trench areas. Spills were indicated on 1989 maps, and some soil was removed.



Looking west at debris pile near former garage building. Garage foundation is right of the photograph (23 June 2010)



Looking south at depressions where drums were stored and spills occurred. (23 June 2010)



Looking southeast at area located northwest of garage, with prior drum storage. (23 June 2010)



Looking south at area northwest of garage, with prior drum storage, spill, and prior soil removal. (23 June 2010)

5.3 Landfills from 1980s Removal Action

USACE constructed two debris landfills as part of the BDDR removal in the 1980s (Figure 4). Landfill A is located north of the airfield, east of the former WAC site. Landfill B is located south of the airfield, just north of a current borrow pit.



Looking east at Landfill A from eastern edge of former WAC site. (23 June 2010)



Looking northeast at Landfill B. (23 June 2010)

5.4 Building Pits

Numerous buildings existed at Fort Morrow, including quarters, mess halls, latrines, warehouses, cold storage buildings, sheds, ammo storage buildings, pump houses, recreation buildings, and others. Many structures were Quonset huts, and others were wood frame structures. Some warehouses had concrete footings.

Many buildings at Fort Morrow were set in excavated depressions, termed here as “building pits”, for protection from wind and also possibly for defensive purposes. Soil removed to create the depression was bermed adjacent to the depression to increase the depth. Building debris was removed in the 1980s and the depressions remain. The following photographs show examples of various building pits observed during the site visit.



Typical building pit for a Quonset hut barracks structure. (23 June 2010)



Typical building pit for a mess hall, this one overgrown with alder. (23 June 2010)



Looking north at building pit for reported ordnance storage building. (23 June 2010)



Looking north at warehouse foundation with concrete footings. (23 June 2010)

5.5 Fuel Storage Pits

The preliminary draft GIS information provided to POA by the Army Geospatial Center (AGC) delineated an area of fuel storage pits in the western Fort Morrow area. These roughly circular pits ranged from about 10 to 20 feet deep.



Looking south into a former fuel storage pit. (23 June 2010)



Looking southwest from inside a former fuel storage pit. (23 June 2010)

5.6 Defensive Positions

Numerous shallow pits and trenches were found along the western edge of the Fort Morrow area. These features are not shown on 1980s hardcopy maps, and are believed to be defensive defilade positions (“foxholes”).



Looking west at typical "foxhole" along western edge of Fort Morrow. (23 June 2010)

5.7 Infirmary Area

An infirmary was located at the eastern edge of the Fort Morrow area. Based on 1980s maps, the infirmary compound contained infirmary buildings, an x-ray and lab building, warehouse, administration building, recreation building, kitchen and mess hall, pump house, power house, radio station, several quarters, and several hospital wards.

A concrete foundation was found in the southern part of the infirmary compound and buried piping was identified. One pipe smelled of petroleum.



Looking northeast at bermed ground in infirmary compound area. Infirmary and wards were set in low areas between berms. (23 June 2010)



Looking at concrete foundation at infirmary area. (23 June 2010)

5.8 Northwest Spill Area / Ordnance Area

A location at the northwestern corner of the Fort Morrow area was shown in preliminary draft AGC information as a spill location, and was reported by the community as an ordnance location. The location was visited and found to be a large flat ground scar of sand and gravel surface soil. No debris was found. Hardened tar pieces were found at the surface.



Looking west at large ground scar along western road, reported as a spill area and an ordnance area. (23 June 2010)

5.9 Battalion B-209th Area

The Battalion B-209th facilities are located at the northwestern corner of the Fort Morrow area. Based on 1980s maps, this area contained quarters, admin building, shower, storage building, recreation building, pump house, mess hall, power house, and latrines.

A wooden cross was found at this area. This location may be a gravesite. Coordinates of this feature are:

- Easting 1504690 feet
- Northing 1087222 feet

(NAD 83, Alaska State Plane, Zone 6)



Looking southwest at wooden cross. Camera shutter partially closed. (23 June 2010)

5.10 White Alice Communications Site

The location of the former White Alice Communications (WAC) site was visited. Concrete antennae foundations remain at this site, and several monitoring wells were observed. This site is being investigated and remediated by the U.S. Air Force, and was therefore not a primary area of interest under this FUDS site visit.



Looking west across the former WAC site area, with monitoring wells and concrete antennae foundation. (23 June 2010)

5.11 C.A.A. Range Station

The C.A.A. Range Station was located in the southeastern area of Fort Morrow. This area was visited and only concrete foundations were observed. Maps from 1989 show that a transformer shed existed at this site, and about 100 drums were stacked south of the shed. No drums or debris were observed during this site visit, and it is assumed that these items were removed in the 1980s.



Looking northwest at C.A.A. Range Station antennae foundations. (24 June 2010)

6.0 CONSIDERATIONS

6.1 Access to Sites

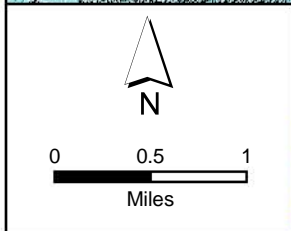
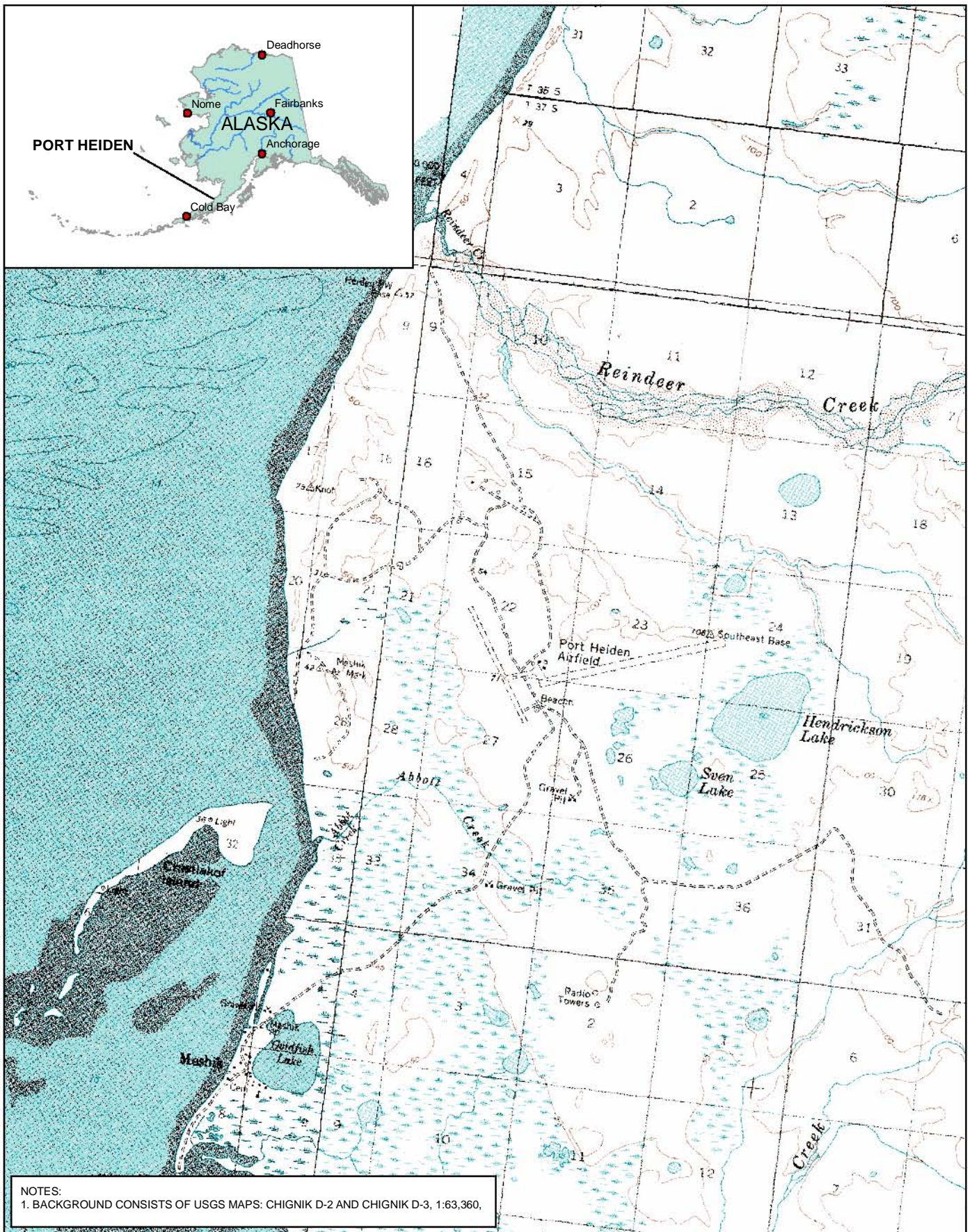
Many off-road areas where Fort Morrow facilities existed are accessible by truck-mounted drill rig. However access to some areas would require 4WD and/or all-terrain vehicle due to bermed and hummocky ground or wet conditions.

6.2 Accommodations

Lodging is very limited in Port Heiden, and advance planning well is advised. Groceries are available at the local store, however there are no restaurants.

6.3 Soil Conditions

The surface appearance of soil at Fort Morrow sites suggests drilling would not be difficult, and that UVOST would be a possible investigative tool. Boring logs from prior Air Force work conducted along the former fuel pipeline and at the WAC site should be reviewed to verify this assumption.

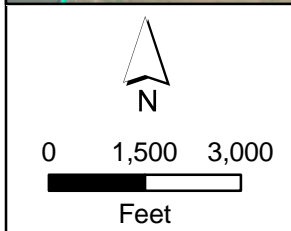
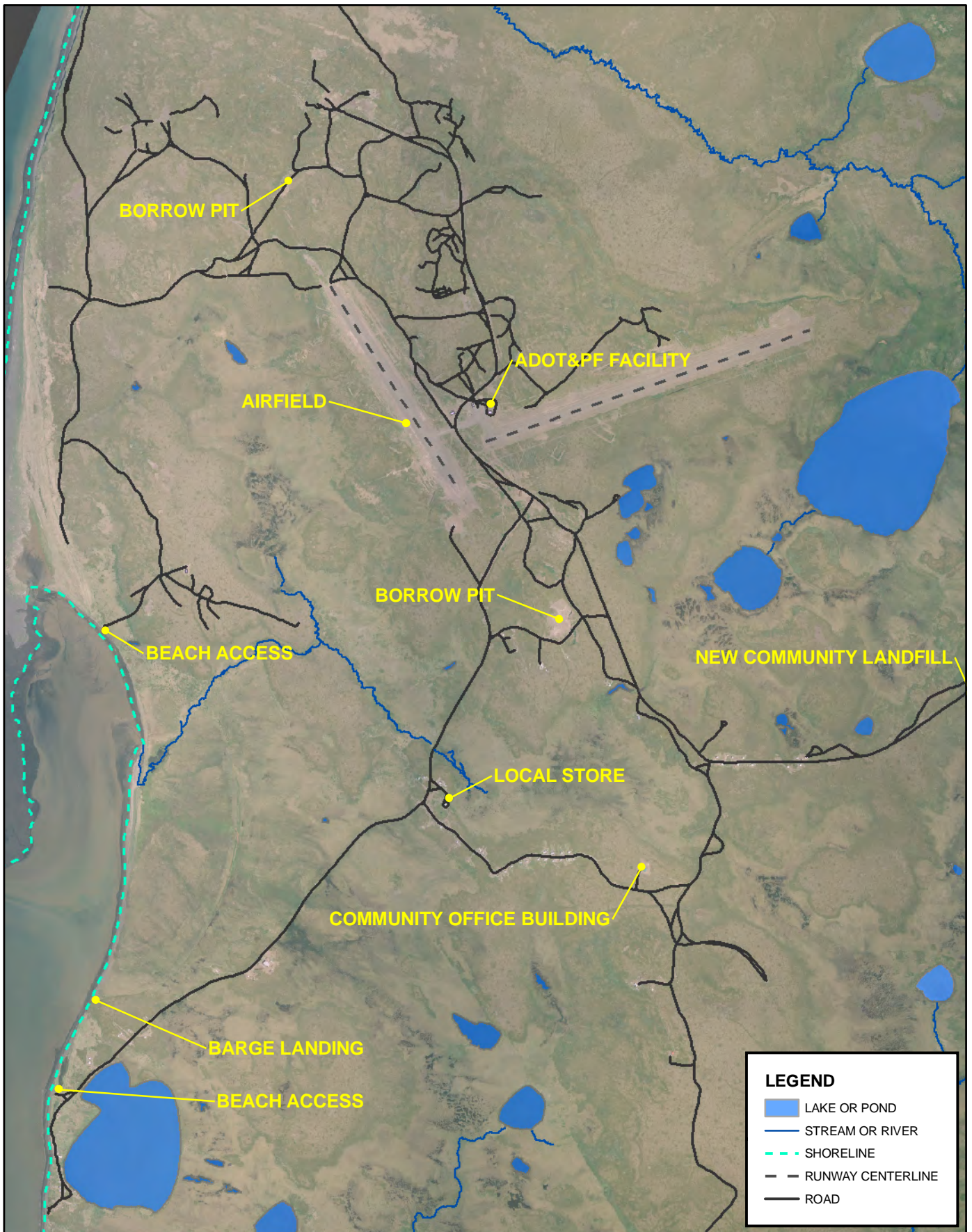


LOCATION MAP

PORT HEIDEN (FORT MORROW)
F10AK0243
PORT HEIDEN, ALASKA

FIGURE 1



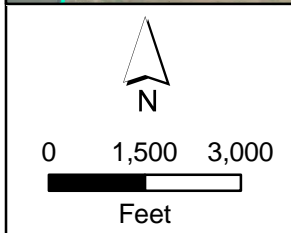
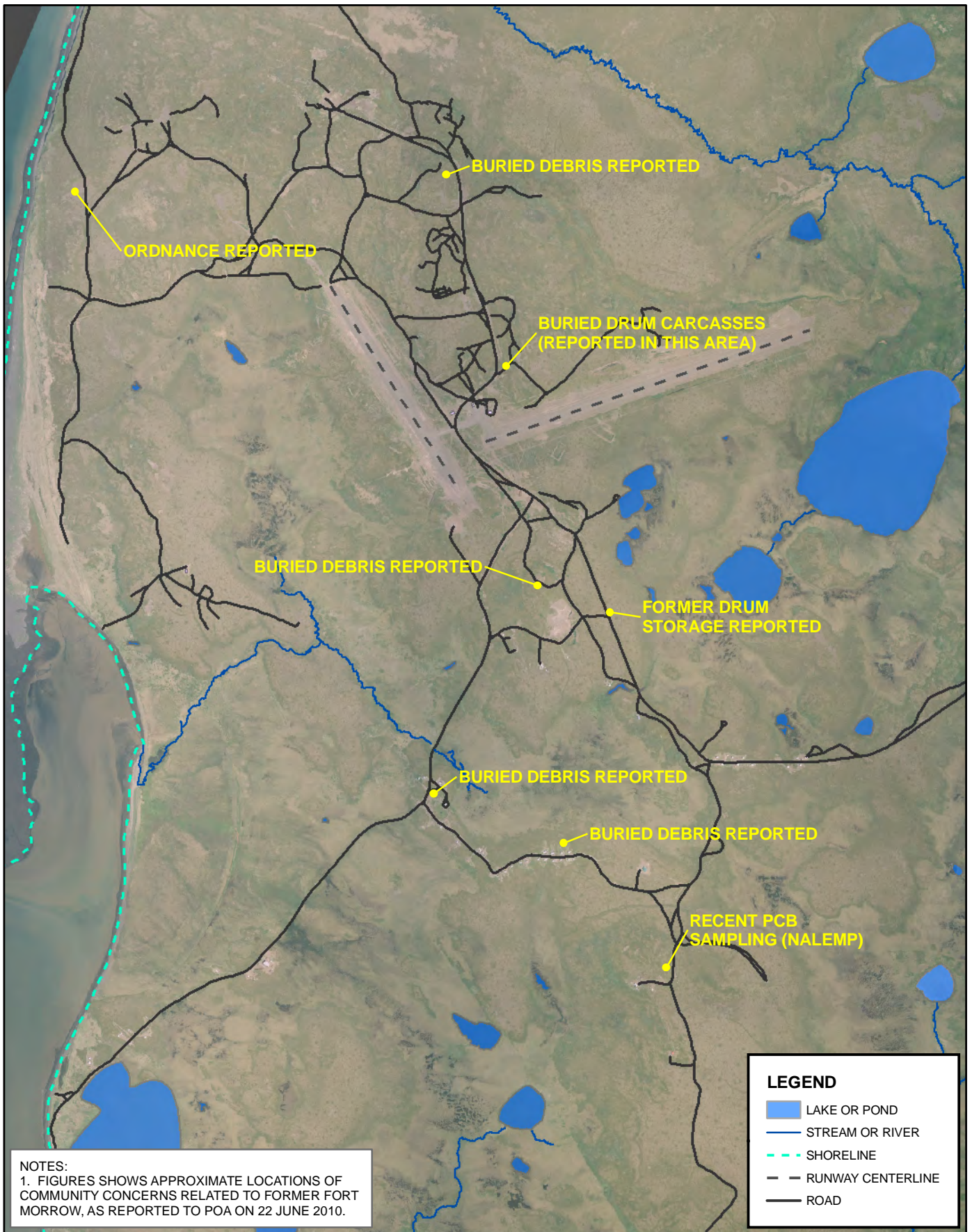


PORT HEIDEN LOGISTICS




FORT MORROW - F10AK0027
PORT HEIDEN, ALASKA

FIGURE 2



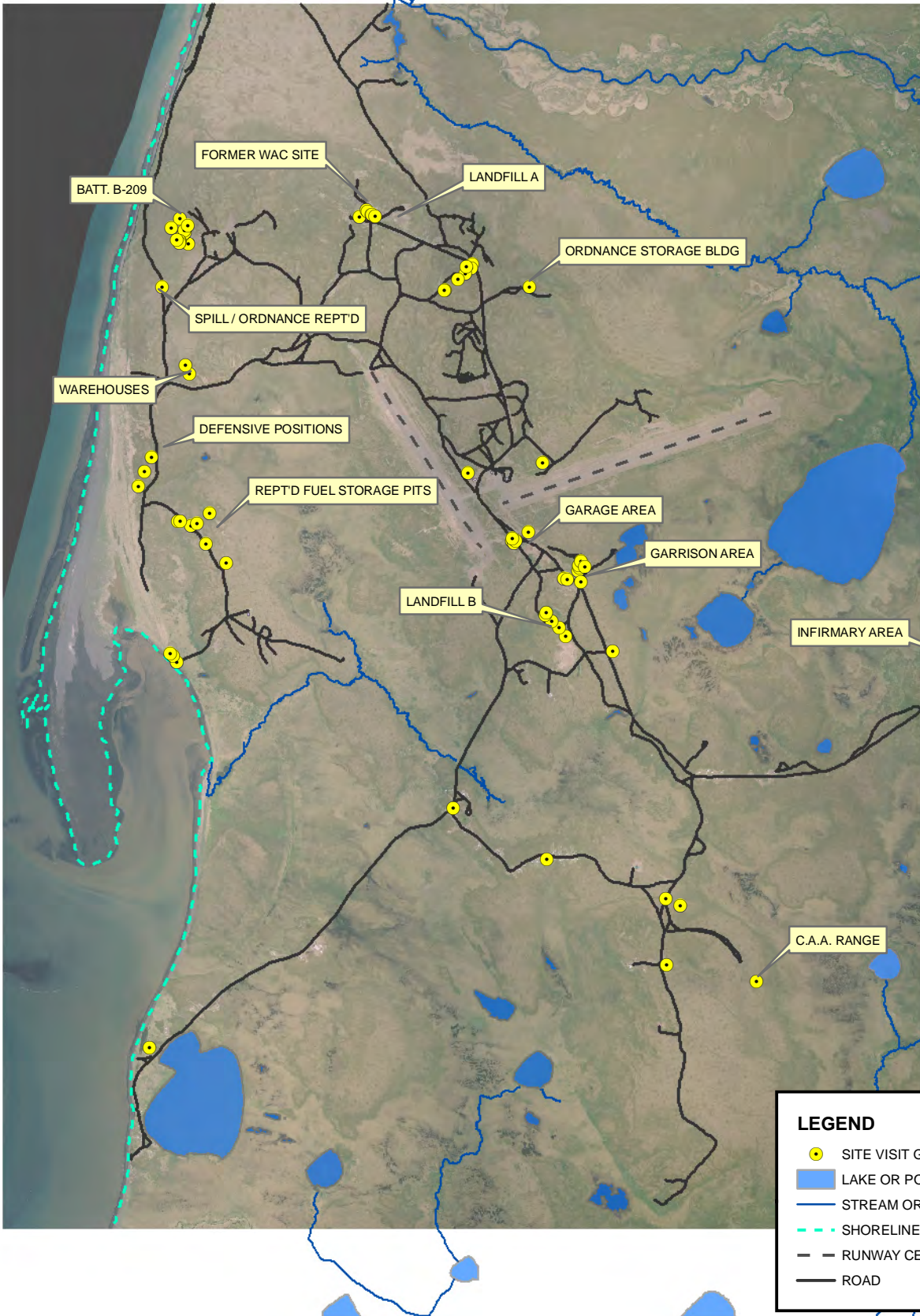
COMMUNITY CONCERNS

FORT MORROW - F10AK0027
 PORT HEIDEN, ALASKA









U.S. Army
 Corps of Engineers
 Alaska District

FIGURE 3



LEGEND

-  SITE VISIT GPS LOCATIONS
-  LAKE OR POND
-  STREAM OR RIVER
-  SHORELINE
-  RUNWAY CENTERLINE
-  ROAD



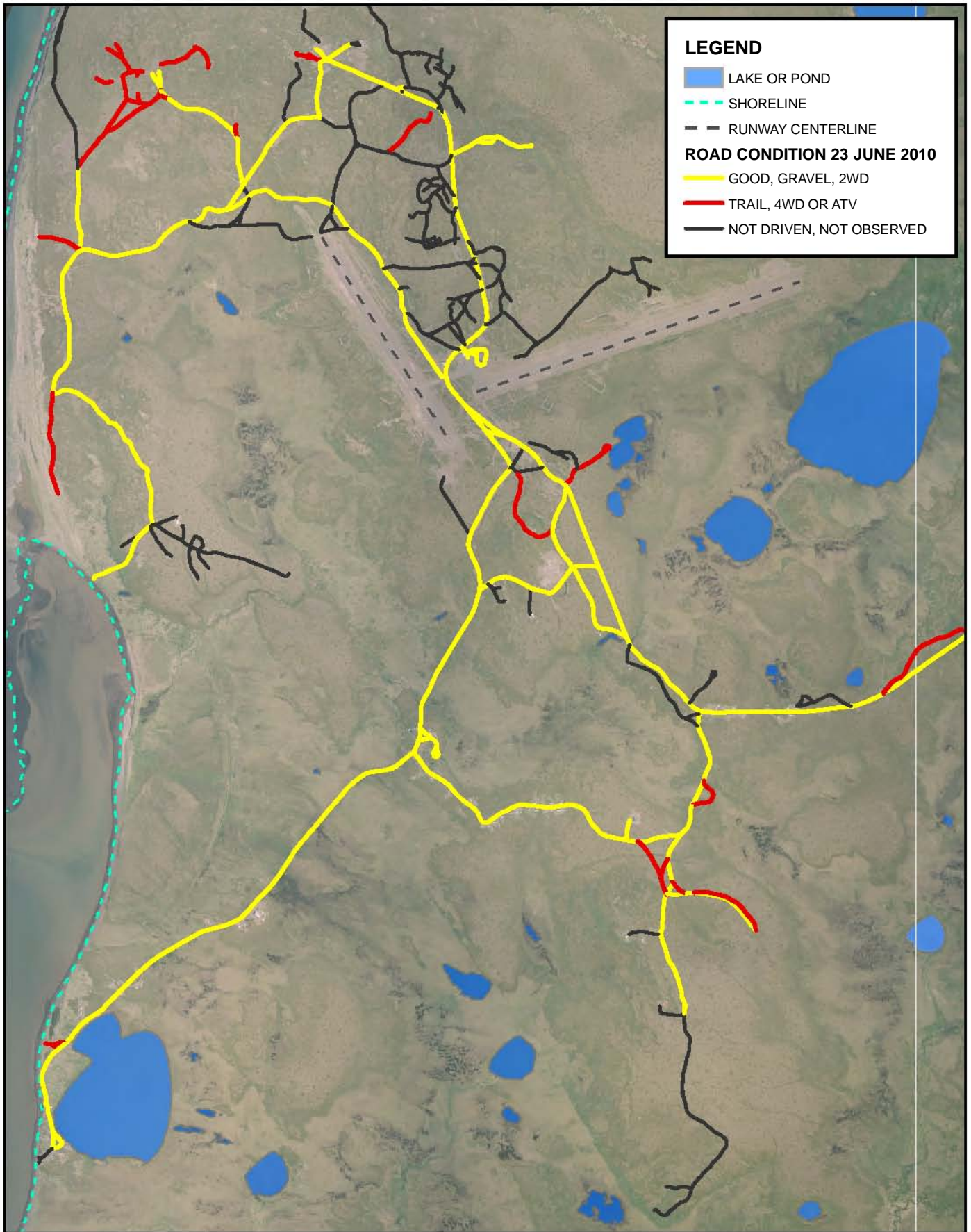
0 2,000 4,000
 Feet



SITE VISIT LOCATIONS

FORT MORROW - F10AK0027
 PORT HEIDEN, ALASKA

FIGURE 4



LEGEND

- LAKE OR POND
- - - SHORELINE
- - - RUNWAY CENTERLINE

ROAD CONDITION 23 JUNE 2010

- GOOD, GRAVEL, 2WD
- TRAIL, 4WD OR ATV
- NOT DRIVEN, NOT OBSERVED

N

0 1,500 3,000

Feet

ROAD CONDITIONS - 23 JUNE 2010

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FORT MORROW - F10AK0027
PORT HEIDEN, ALASKA

FIGURE 5

APPENDIX A
PHOTOGRAPH LOG

(Note – Links in this file will work only on the POA computer network)

PHOTOGRAPH LOG – FORT MORROW SITE VISIT (22-24 JUNE 2010)

Name IMG_	Description	Direction of View	Subject	Link
3305	Swamp area located SE of Port Heiden office building, across road. This was targeted as area reported to have equipment and wood debris disposed. However, this area is an old lake that has eutrified into swamp. Drainage leads west from this area, through culvert in road. No debris observed.	NE	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3305.JPG
3306	Swamp area located SE of Port Heiden office building, across road. Looking down-drainage. This was targeted as area reported to have equipment and wood debris disposed. However, this area is an old lake that has eutrified into swamp. Drainage leads west from this area, through culvert in road. No debris observed.	W	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3306.JPG
3307	Swamp area located SE of Port Heiden office building, across road. Looking at grass with standing water. This was targeted as area reported to have equipment and wood debris disposed. However, this area is an old lake that has eutrified into swamp. Drainage leads west from this area, through culvert in road. No debris observed.		General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3307.JPG
3308	Swamp area located SE of Port Heiden office building, across road. Looking at grass with standing water. This was targeted as area reported to have equipment and wood debris disposed. However, this area is an old lake that has eutrified into swamp. Drainage leads west from this area, through culvert in road. No debris observed.	NE	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3308.JPG
3309	Swamp area located SE of Port Heiden office building, across road. Looking across drainage toward road. This was targeted as area reported to have equipment and wood debris disposed. Drainage leads west from this area, through culvert in road. No debris observed.	W	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3309.JPG
3310	Swamp area located SE of Port Heiden office building, across road. Looking from road at drainage. This was targeted as area reported to have equipment and wood debris disposed. Drainage leads west from this area, through culvert in road. No debris observed.	NE	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3310.JPG
3311	Swamp area located SE of Port Heiden office building, across road. Looking from road down-drainage. Drainage leads west from this area, through culvert in road. No debris observed.		General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3311.JPG
3312	Landfill B	NE	LANDFILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3312.JPG

				cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3312.JPG
3315	Hill along road toward WAC site, inside of road bend. Photo shows typical quonset hut building pit.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3315.JPG
3317	Alder-filled building pit on hill along road toward WAC site. This was a long building.	N	BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3317.JPG
3318	Small pit located on hill along road toward WAC site. This may have been a latrine.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3318.JPG
3319	Photo from soil mound at WAC site. Looking toward soil piles and "North Landfill"	NW	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3319.JPG
3320	WAC Site		WAC	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3320.JPG
3321	WAC Site. Photo shows soil mound.	W	WAC	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3321.JPG
3322	Looking from WAC site toward USACE Landfill A.	E	LANDFILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3322.JPG
3323	Typical building pit at the most northwest military encampment site.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3323.JPG
3324	cross located at most northwest military encampment site. Photo had shutter partially closed.	SW		\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3324.JPG
3326	survey monument		MONUMENT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3326.JPG
3327	Shutter, pit			\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3327.JPG
3328	Trail leading west from most northwest military encampment site	W	TRAIL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Proje

	toward beach.			cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3328.JPG
3329	Reported spill site along western road.	NE	SPILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3329.JPG
3330	Reported spill site along western road. Large ground scar area shown. Tar pieces found at surface.	W	SPILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3330.JPG
3331	Warehouse area. Concrete warehouse foundation remains. Coal found.	N	BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3331.JPG
3332	Reported fuel storage area along western road. Deep pit with sidewalls ranging 10-20 feet high.	S	FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3332.JPG
3333	Photo shows a reported fuel storage pit.	N	FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3333.JPG
3334	Photo shows a reported fuel storage pit.		FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3334.JPG
3335	Photo shows a reported fuel storage pit.	S	FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3335.JPG
3336	Beach at northwest road access.	NW	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3336.JPG
3337	Beach at northwest road access.	SE	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3337.JPG
3338	Access road at beach at northwest road access point.	NE	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3338.JPG
3339	Manmade depressions in beach bank near road access point.	SE	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3339.JPG
3340	Pit west of northwest road. Appears to be a defensive position.	W	PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Proje

				cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3340.JPG
3341	Pit west of northwest road. Appears to be a defensive position.	E	PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3341.JPG
3342	Infirmary site.		INFIRMARY	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3342.JPG
3343	Infirmary site.	SW	INFIRMARY	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3343.JPG
3344	Coal at infirmary site		COAL	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3344.JPG
3345	Concrete foundation at infirmary site. Looking at pipe.		INFIRMARY	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3345.JPG
3346	Concrete foundation at infirmary site. Looking at pipe with fuel odor.	N	INFIRMARY	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3346.JPG
3347	Latrine building foundation located SE of former ADOT shop.	SE	LATRINE	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3347.JPG
3348	Pit near latrine building.		PIT	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3348.JPG
3349	Woodstave pipe located in berm, southeast of ADOT shop	S	PIPE	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3349.JPG
3350	Area with prior drum storage and reported release. Prior excavation per old maps. NW of former ADOT shop.	S	SPILL	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3350.JPG
3351	Area with prior drum storage and reported release. Prior excavation per old maps. NW of former ADOT shop.	SE	SPILL	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3351.JPG
3353	Building pit for reported ordnance storage building.	N	BUILDING	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3353.JPG

			PIT	cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3353.JPG
3354	Concrete pad inside footprint of building pit for reported ordnance storage building.	SE	BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3354.JPG
3355	Building pit for reported ordnance storage building.	S	BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3355.JPG
3356	Concrete pad inside footprint of building pit for reported ordnance storage building.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3356.JPG
3357	Concrete pad inside footprint of building pit for reported ordnance storage building.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3357.JPG
3359	Antennae foundation pads at CAA range area	NW	ANTENNAE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3359.JPG
3360	Antennae foundation pads at CAA range area	S	ANTENNAE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3360.JPG
3307	Swamp area located SE of Port Heiden office building, across road. Looking at grass with standing water. This was targeted as area reported to have equipment and wood debris disposed. However, this area is an old lake that has eutrified into swamp. Drainage leads west from this area, through culvert in road. No debris observed.		General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3307.JPG
3308	Swamp area located SE of Port Heiden office building, across road. Looking at grass with standing water. This was targeted as area reported to have equipment and wood debris disposed. However, this area is an old lake that has eutrified into swamp. Drainage leads west from this area, through culvert in road. No debris observed.	NE	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3308.JPG
3309	Swamp area located SE of Port Heiden office building, across road. Looking across drainage toward road. This was targeted as area reported to have equipment and wood debris disposed. Drainage leads west from this area, through culvert in road. No debris observed.	W	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3309.JPG
3310	Swamp area located SE of Port Heiden office building, across road.	NE	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3310.JPG

	Looking from road at drainage. This was targeted as area reported to have equipment and wood debris disposed. Drainage leads west from this area, through culvert in road. No debris observed.			cts\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3310.JPG
3311	Swamp area located SE of Port Heiden office building, across road. Looking from road down-drainage. Drainage leads west from this area, through culvert in road. No debris observed.		General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3311.JPG
3312	Landfill B	NE	LANDFILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3312.JPG
3313	shutter			\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3313.JPG
3314	shutter			\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3314.JPG
3315	Hill along road toward WAC site, inside of road bend. Photo shows typical quonset hut building pit.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3315.JPG
3316	shutter			\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3316.JPG
3317	Alder-filled building pit on hill along road toward WAC site. This was a long building.	N	BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3317.JPG
3318	Small pit located on hill along road toward WAC site. This may have been a latrine.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3318.JPG
3319	Photo from soil mound at WAC site. Looking toward soil piles and "North Landfill"	NW	General	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3319.JPG
3320	WAC Site		WAC	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3320.JPG
3321	WAC Site. Photo shows soil mound.	W	WAC	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS_SITE_VISIT_23JUN10\IMG_3321.JPG

3322	Looking from WAC site toward USACE Landfill A.	E	LANDFILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3322.JPG
3323	Typical building pit at the most northwest military encampment site.		BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3323.JPG
3324	cross located at most northwest military encampment site. Photo had shutter partially closed.	SW		\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3324.JPG
3325	shutter			\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3325.JPG
3326	survey monument		MONUMENT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3326.JPG
3327	shutter			\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3327.JPG
3328	Trail leading west from most northwest military encampment site toward beach.	W	TRAIL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3328.JPG
3329	Reported spill site along western road.	NE	SPILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3329.JPG
3330	Reported spill site along western road. Large ground scar area shown. Tar pieces found at surface.	W	SPILL	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3330.JPG
3331	Warehouse area. Concrete warehouse foundation remains. Coal found.	N	BUILDING PIT	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3331.JPG
3332	Reported fuel storage area along western road. Deep pit with sidewalls ranging 10-20 feet high.	S	FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3332.JPG
3333	Photo shows a reported fuel storage pit.	N	FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS SITE VISIT 23JUN10\IMG_3333.JPG

3334	Photo shows a reported fuel storage pit.		FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS\SITE VISIT 23JUN10\IMG_3334.JPG
3335	Photo shows a reported fuel storage pit.	S	FUEL STORAGE	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS\SITE VISIT 23JUN10\IMG_3335.JPG
3336	Beach at northwest road access.	NW	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS\SITE VISIT 23JUN10\IMG_3336.JPG
3337	Beach at northwest road access.	SE	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS\SITE VISIT 23JUN10\IMG_3337.JPG
3338	Access road at beach at northwest road access point.	NE	BEACH	\\Poa-vs2im.poa.ds.usace.army.mil\poa\EN\Public\Engineer\Projects\FUDS\Port_Heiden_F10AK0027\10_OTHER\PHOTOS\SITE VISIT 23JUN10\IMG_3338.JPG

APPENDIX B
LPB MAP
(Lake and Peninsula Borough Map)

