



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

**Department of  
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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2569.38.020.01  
2569.38.020.02  
2569.38.020.03  
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May 3, 2016

Charley Peyton  
United States Air Force  
611 CES/CEVR  
10471 20th Street  
JBER, AK 99506-2200

Re: Cleanup Complete Determination for Groundwater Zone 6 and associated sites at  
King Salmon Divert, AK

Dear Mr. Peyton:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the King Salmon Divert (KSD) OT032 Groundwater (GW) Zone 6 site (also referred to as Rapids Camp and Naknek Recreation Camp 1), as well as associated sites. These include:

- 2569.38.020 - King Salmon AS OT032 GW Zone 6, Hazard ID (ID): 2633,
- 2569.38.020.01 - King Salmon AS Rapids Camp Beach Doc (SS005 Beach Dock/Drum Area), ID: 702,
- 2569.38.020.02 - King Salmon AS Rapids Camp Gen Pad (SS004 Generator Pad), ID: 701,
- 2569.38.020.03 - King Salmon AS Rapids Camp Landfill (LF003 Landfill), ID: 707, and
- 2569.38.020.04 - King Salmon AS Rapids Camp Septic (WP002 Septic Tanks/ST001), ID: 706.

This decision letter memorializes the site history, cleanup actions, and specific conditions required to effectively manage remaining contamination. No further remedial action will be required as long as compliance with these conditions is maintained. The regulatory authority for this determination is under 18 AAC 75.

**Site Description and Background**

Rapids Camp was established in 1952 as a recreational facility for troops stationed at the King Salmon AS. The facility included boat docks, fish camps, lodging, and a fuel storage area. Waste oils, fuels and polychlorinated biphenyls (PCBs) were used and stored at the site. The camp was permanently closed in 1977.

Seven groundwater zones for the King Salmon AS were established in areas with similar hydrological, geological, geographical, and contamination characteristics, and contain numerous Installation Restoration Program (IRP) sites within each zone. The five IRP sites associated with Groundwater Zone 6 are listed above.

A Record of Decision (ROD) for Final Remedial Action, Naknek Recreation Camp 1 (Rapids Camp/Site OT032) dated April 2000 was signed and approved in 2000.

Of note, King Salmon Air Station SA06 (Former Helicopter Pad SA006) appears to be in the vicinity of GW Zone 6, but was not addressed in the ROD. This site requires further coordination to determine closure criteria.

### **Contaminants of Concern**

**Soil:** An isolated area of subsurface soil with DRO concentrations up to 9,300 mg/kg was left in-place in the generator pad area. This area of impacted soil is located approximately 45 feet above the groundwater table and 30 feet below ground surface (bgs).

No other soil contamination is known to be present onsite above established cleanup levels; although minor detections below cleanup levels may be present.

**Groundwater:** No known groundwater contamination remains onsite within the Rapids Camp/Zone 6 area.

### **Cleanup Levels**

The cleanup levels appropriate for Rapids Camp/Groundwater Zone 6 are the ADEC 18 AAC 75 Tables B1 and B2, Method 2 Soil Cleanup Levels (migration to groundwater), and Table C Groundwater Cleanup Levels, with the exception of the generator pad area.

Based on modeling, which indicated that this contamination will not leach to the groundwater, a cleanup level of 12,500 mg/kg (the maximum allowable DRO soil concentration under 18 AAC 75) was established for the generator pad area.

### **Characterization and Cleanup Activities**

The CERCLA process was initiated at the King Salmon Air Station in 1985 and culminated with the signing of the Record of Decision (ROD) for Rapids Camp/Zone 6 in 2000. Milestones achieved through implementation of the CERCLA process include:

- June 1988 - Preliminary Assessment (PA) of the site was conducted.
- 1990 and 1991 - Site Investigation (SI) activities were performed at Rapids Camp.
- 1994 - Remedial Investigation (RI) activities were performed at Rapids Camp.
- 1996 through 1998 - Additional investigations and evaluations, including a baseline human and ecological risk assessment, fate and transport modeling, a Feasibility Study (FS) to evaluate remedial alternatives, and site monitoring were performed.
- March 1998 - Proposed Plan (PP) for Interim Remedial Action (IRA) at Rapids Camp was prepared.
- June 1999 - Additional excavation of surface soils contaminated above ADEC cleanup levels was completed at five isolated areas. This additional excavation eliminated the need for continued monitoring of these areas.
- 2000 - A Record of Decision (ROD) for Final Remedial Action, Naknek Recreation Camp 1 (Rapids Camp/Site OT032) dated April 2000 was signed and approved.

- The selected remedy for the site includes institutional controls (land use restrictions), inspection and maintenance of the landfill cap, and continued groundwater monitoring, with no further remedial action planned, as the final action for Rapids Camp.
- 2000-Present – IC inspections ongoing at Rapids Camp.
- 2001 - The final Long-Term Monitoring Work Plan for Rapids Camp was approved.
- 2001-2005 – Annual Groundwater Monitoring occurred at Rapids Camp.
- 2007 - No DRO or VOC detections above cleanup levels were documented at groundwater monitoring well MW-15 (at LF003) in the five-year review; ADEC approved decommissioning MW-15.
- 2008 - Monitoring well MW-15 was decommissioned and all long-term groundwater monitoring activities at Rapids Camp were completed.
- 2015 - Land Use Controls were established in the U.S. Air Force Land Use Control Management Plan, Pacific Air Force Regional Support Center Installations (most recent version: July 2015).

After all cleanup activities were complete, no known contamination above established cleanup levels remains in place at Rapids Camp.

As previously mentioned, an isolated area where subsurface soil with DRO concentrations up to 9,300 mg/kg was left in-place in the generator pad area (2569.38.020.02 - King Salmon AS Rapids Camp Gen Pad - SS004 Generator Pad). The remaining DRO concentrations are below the established cleanup levels for this site (12,500 mg/kg). In 1998, SESOIL modeling was performed to evaluate the impact of leaching from the DRO-impacted soil in-place in the generator pad area. The leaching assessment predicted that DRO would not leach to the groundwater within a 50-year modeling timeframe. The SESOIL modeling does not predict unacceptable risk to site groundwater or the Naknek River as a result of the DRO-impacted soil at the site.

#### **Cumulative Risk Evaluation**

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative non-carcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

#### **Exposure Pathway Evaluation**

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De-Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

**Table 1 – Exposure Pathway Evaluation**

Pathway	Result	Explanation
Sub-Surface Soil Contact	Exposure Controlled	Contamination remains in the sub-surface at Generator Pad SS004 at a depth of approximately 30 feet bgs. Land use restrictions have been put in place to prevent disturbance of soil in this area. Additionally, a vegetated soil cap is in place at Landfill LF003 and land use restrictions are in place.
Groundwater Ingestion	Pathway Incomplete	Although there is no known groundwater contamination within Zone 6 and DRO migration from soil beneath the former generator pad is not anticipated to reach groundwater, drinking water restrictions have been implemented by the U.S. Air Force at this site.

**Notes to Table 1:** “De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. “Pathway Incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors. “Exposure Controlled” means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

**ADEC Decision**

Petroleum contamination remains in sub-surface soil below approved cleanup levels; however, ADEC has determined there is no unacceptable risk to human health or the environment as long as the contamination is properly managed.

If the U.S Air Force relinquishes the property or portion thereof, a Notice of Environmental Contamination (deed notice) may be required. A deed notice would be recorded in the State Recorder’s Office as an institutional control (IC) that identifies the nature and extent of contamination at the property and the conditions that the owners and operators are subject to in accordance with this decision document. These conditions are as follows:

1. Land Use Restrictions (LUR) are presented in the attached Figure excerpt from the U.S. Air Force Land Use Control Plan 2015 (Figure 2-22). LURs include
  - a. No excavation of soils deeper than 5-feet bgs within the boundary of the former generator pad (SS004) or the former septic tanks (ST001).
  - b. No excavation or construction is permitted within the boundary of the capped landfill (LF003).
  - c. No installation of drinking water wells within 100 feet of the boundaries of sites SS004, ST001 and LF003 within OT032.
  - d. Note: there are no ICs on site SS005.
  
2. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, these management conditions may not be protective and ADEC may require additional remediation and revised conditions. Annual monitoring of ICs will continue; protectiveness determinations and remedy evaluation will be included as part of the five year review. Five year review reports shall be submitted to ADEC.
  
3. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 75.325. A “site” [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership. (See attached site figure.)

4. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. Institutional controls will be removed in the future if documentation can be provided that shows cleanup levels have been met. Management conditions 2-4 remain in effect after ICs are removed.

This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

#### **Appeal**

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please feel free to contact Holly Weiss-Racine at (907) 269-0298.

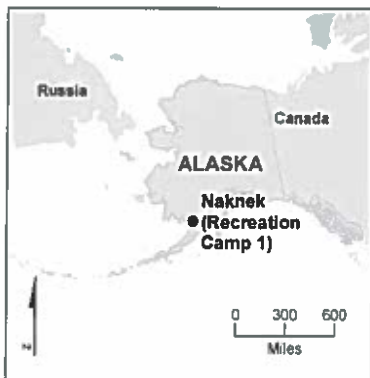
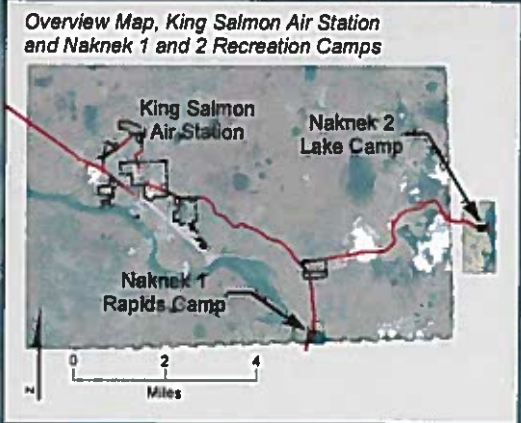
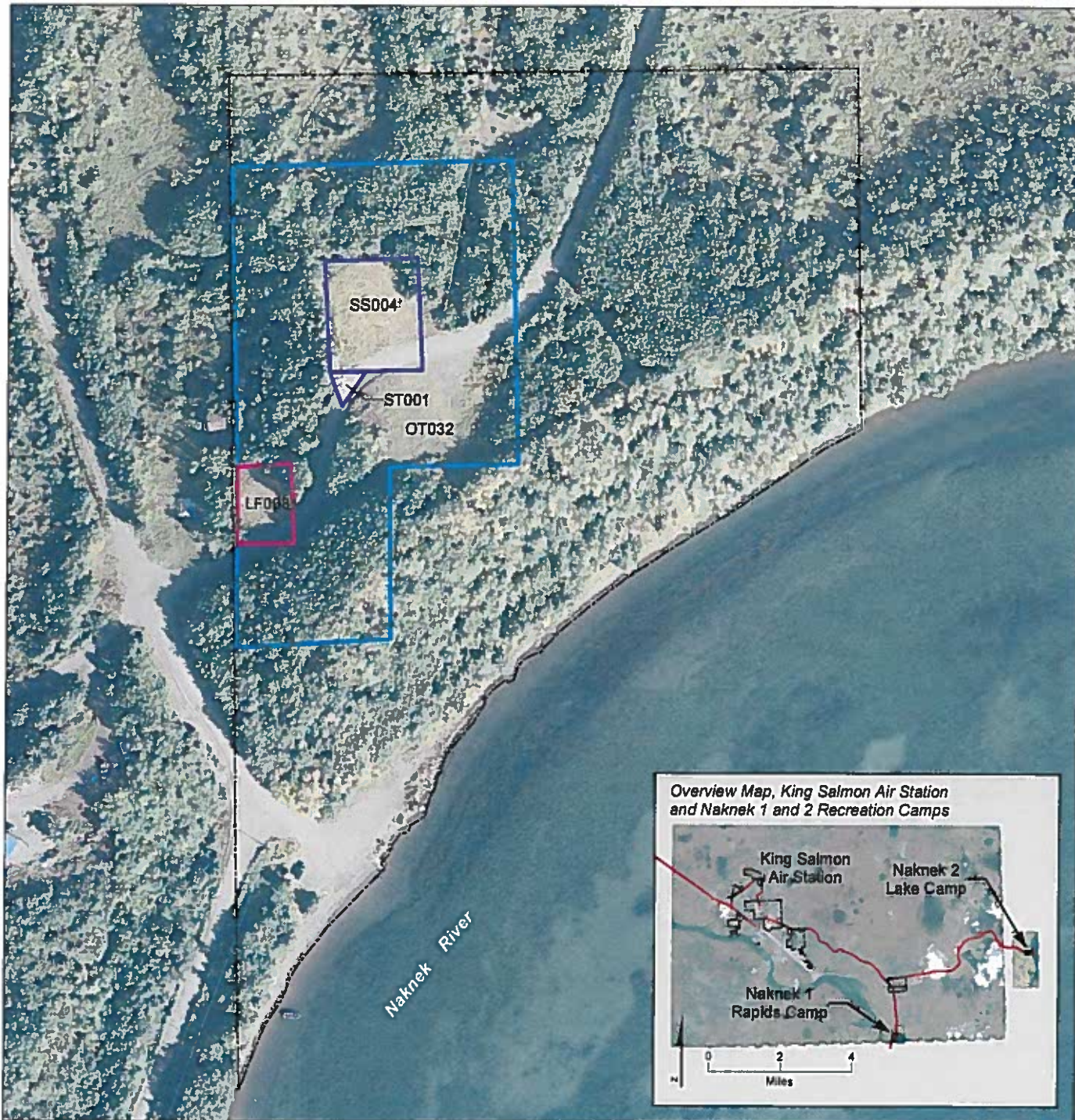
Sincerely,



Kimberly DeRuyter  
Environmental Program Manager

Attachments: Land Use Control Plan (2015) Figure 2-22  
ROD (2000) Figure 4





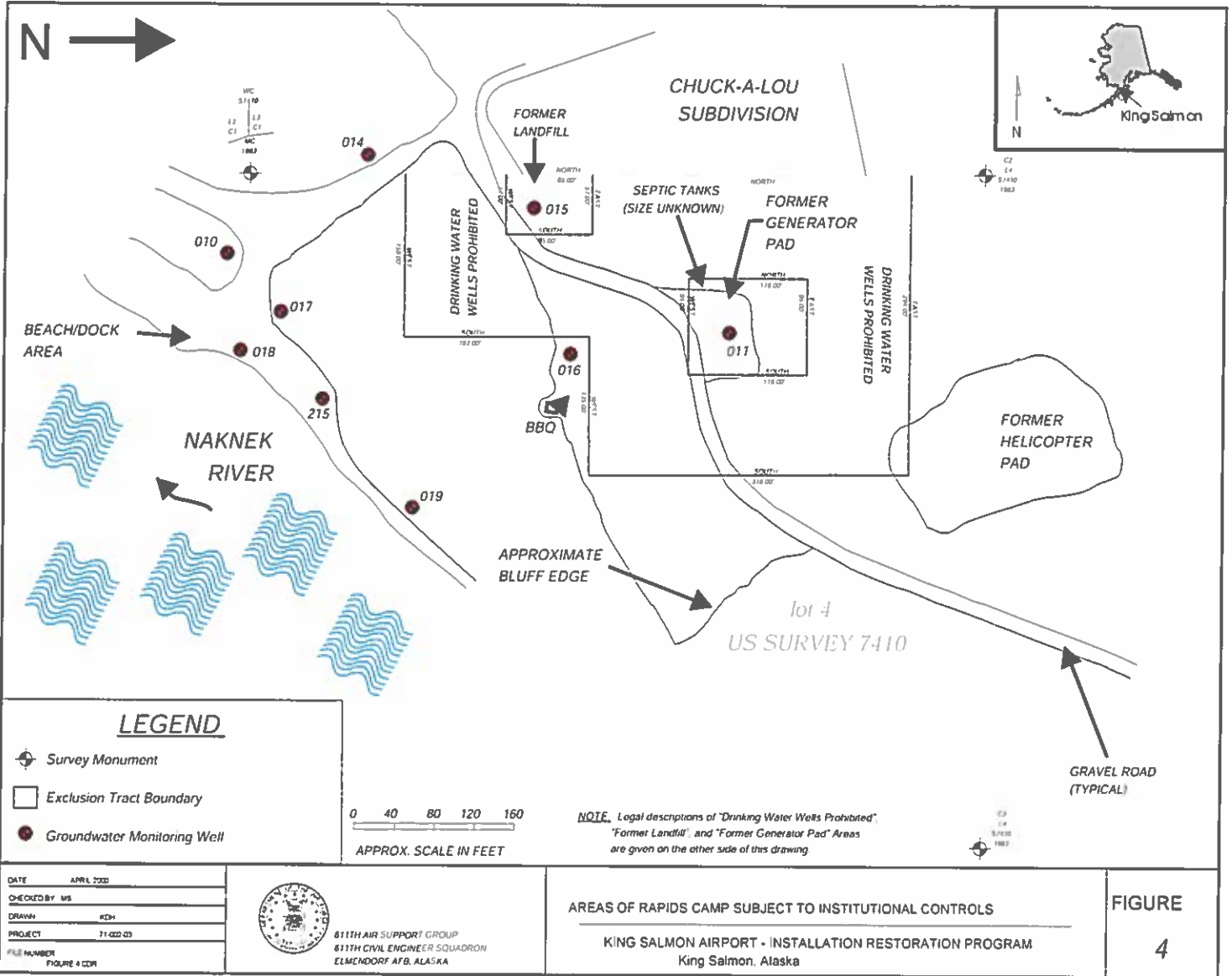
- Restrictions on groundwater use and/or disposal
- Soil cap restrictions (non-landfill/contaminated soil)
- Landfill restrictions
- Installation boundary



**Notes:**

1. LUC = Land Use Control. LUC boundaries depicted on this figure are preliminary pending final analysis of survey information. LUC boundaries will be updated once this information is available.
2. Data from 611th GeoBase for Naknek 1 Recreation Camp. GeoBase data could be incomplete and are of unknown accuracy.
3. Data are rendered in UTM Zone 4N, WGS84, Meters.
4. For more detailed land use restriction information, see individual site summaries.

**FIGURE 2-22**  
 Installation Map - Naknek Recreation Camp 1  
 Land Use Control Management Plan 2015  
 Pacific Air Forces Regional Support Center Installations  
 Joint Base Elmendorf-Richardson, Alaska



DATE APRIL 2000  
 CHECKED BY MS  
 DRAWN RDN  
 PROJECT 71-022-03  
 FILE NUMBER FIGURE 4 CDR

511TH AIR SUPPORT GROUP  
 511TH CIVIL ENGINEER SQUADRON  
 ELMENDORF AFB, ALASKA

CHUCK-A-LOU SUBDIVISION

FORMER LANDFILL

SEPTIC TANKS (SIZE UNKNOWN)

FORMER GENERATOR PAD

FORMER HELICOPTER PAD

DRINKING WATER WELLS PROHIBITED

DRINKING WATER WELLS PROHIBITED

LOT 4 US SURVEY 7410

GRAVEL ROAD (TYPICAL)

APPROXIMATE BLUFF EDGE

BBQ

BEACH/DOCK AREA

NAKNEK RIVER

010, 014, 015, 016, 017, 018, 019, 215

King Salmon

FIGURE 4 CDR