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PORT HEIDEN RADIO RELAY STATION


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Status: Active

Database Name: Port Heiden or Port Moller

Location: Port Heiden, on the north side of the Alaska Peninsula

Latitude/Longitude: See database entries

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Contacts updated: May 20, 2014

Summary updated: May 20, 2014

PDF Version

Click on photos or maps for larger versions.

DESCRIPTION

Port Heiden, pop. 118, is located at the mouth of the Meshik River on the north side of the Alaska Peninsula, 424 miles southwest of Anchorage. It's a traditional Alutiiq community – many maintain a subsistence lifestyle and are involved in commercial fishing.

The community has two former military installations:

- ▶ Port Heiden [White Alice Communication System \(WACS\)](#) site, which later became the Port Heiden Radio Relay Station. A portion of it is still owned by the Air Force.
- ▶ Fort Morrow – The fort was a WWII Army Air Corps base and is now a [Formerly Used Defense Site, or FUDS](#). (For more on Fort Morrow, see the link for it under [Contaminated Sites Database](#) reports at the bottom of this page.)



“Super sacks” – each containing 5 cubic yards of PCB-contaminated soil – north of the airport runways await shipment to the Lower 48. Photo taken during the 2012 summer/fall field season. (Air Force photo)

In 1942, the War Department acquired more than 1 million acres for Fort Morrow. The old fort consisted of several hundred buildings, housed as many as 5,000 personnel, and had a footprint covering several square miles. Then the site was abandoned following World War II.

In the 1950s, the Air Force acquired 172 acres within the former Fort Morrow and built a White Alice site. The WACS sites relayed signals from [Distant Early Warning \(DEW\)](#) defense communication sites to combat centers of the Alaska air command. Port Heiden was also one of the state's 12 DEW-line radar stations.

The 12 DEW-line stations, along with 18 Aircraft Control and Warning stations, were built in Alaska from 1950 through 1959, to detect possible attacks from the Soviet Union. The Aleutian segment of DEW-line stations included a main station at Cold Bay, and auxiliary stations at



Preschoolers through 12th-graders attend Port Heiden's Meshik School, which is about 2½ miles as the crow flies from the remaining contamination – the Radio Relay Station site. The community's first school was established in the early 1950s, according to the Alaska Department of Commerce, Community & Economic Development. All photos on this page were taken in Port Heiden in 2009, unless another year is noted. (Air Force photo)

Port Heiden, Port Moller, Cape Sarichef, Driftwood Bay and Nikolski.

The WACS stations wove a telephone and telegraph network by bouncing both civilian and military communications signals off the earth's troposphere, enabling combat centers to receive reports of aircraft detected by the DEW line. Each site had large parabolic, tropospheric antennas.

The antennas stood 60 feet tall and 60 feet wide. WACS linked the Aircraft Control and Warning stations and the DEW-line with Elmendorf Air Force Base (AFB) and Eielson AFB, and also linked the Ballistic Missile Early Warning Site at Clear AFB with the

North American Defense Command. The systems eventually consisted of 71 separate facilities.

The Air Force operated the WACS in Port Heiden until 1969, when it was converted to a Radio Relay Station. Then the Radio Relay Station became obsolete in the 1970s. It was abandoned in November 1978.

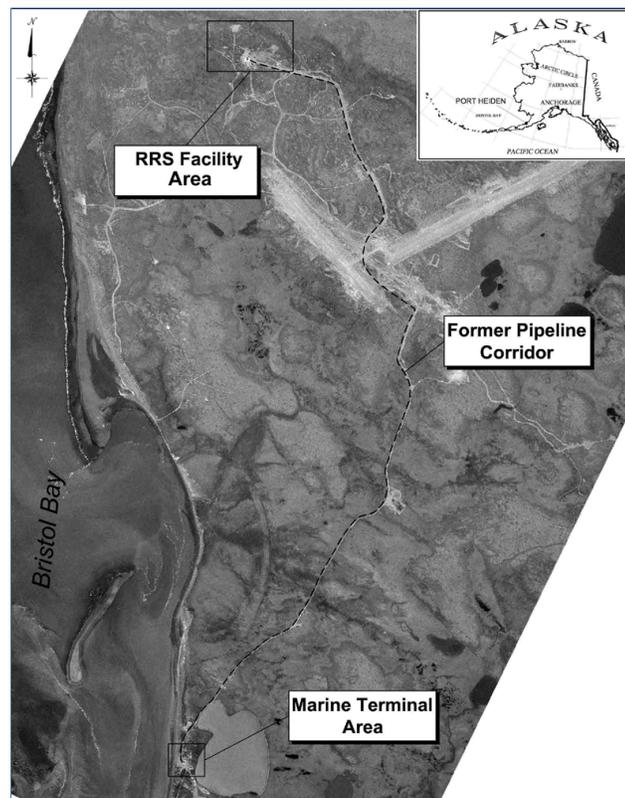
The old village site for Port Heiden was Meshik, on the coast, but residents moved from there to higher ground near Port Heiden's airport and the former Radio Relay Station facility.

The overall Port Heiden Radio Relay Station has three main areas: (1) the Radio Relay Station; (2) the Marine Terminal Area – the former location of a petroleum, oil and lubricant, or POL, tank farm and pump house; and (3) the Site Road/Former Fuel Pipeline Corridor, which is between the Radio Relay Station and the airport. (See the black and white map.) There are roughly 18 source areas at the overall site, and no buildings or structures from the radio relay station remain.

PUBLIC HEALTH AND ENVIRONMENTAL CONCERNS

The soil still has PCB (polychlorinated biphenyls) hot spots, TCE (trichloroethylene) and other chlorinated solvents, diesel and other petroleum constituents. Groundwater contains TCE and other chlorinated solvents, diesel and other petroleum constituents. Multiple releases above-ground and below-ground occurred at the former facility.

People may be exposed to pollutants by touching contaminated soil or water (skin contact) or by accidentally ingesting contaminated soil or water. Contaminants such as PCBs that have bioaccumulated in fish and other wildlife may also pose a health threat to humans.



The above map shows an overview of the Radio Relay Station, Site Road/Former Fuel Pipeline Corridor (between the Radio Relay Station and the airport), Airport Road (from the airport to the Marine Terminal Area), the Former Fuel Pipeline Corridor runs near the road) and the Marine Terminal Area. Most of the homes of Port Heiden residents are in the area east of Airport Road, about where the upper left corner of the white "Former Pipeline Corridor" box is on the map. Meshik School is in the light area east of Airport Road.

A HISTORY OF THE CLEANUP WORK

1981-1986 – The Air Force 5099th Civil Engineering and Operations Squadron removed [hazardous material](#) and PCB-contaminated soil from the former Port Heiden Radio Relay Station facility (referred to as the former RRS facility here).

1986-1988 – The U.S. Army Corps of Engineers (Army Corps of Engineers) conducted site investigations and prepared bid documents for the complete demolition and restoration of the former RRS facility.

1990-1992 – The Army Corps of Engineers and its contractors conducted a complete demolition of the former RRS facility, and removed hazardous wastes and PCB- and petroleum-contaminated soil.

1995 – The 611th Air Support Group (the Air Force) conducted a [preliminary assessment](#) and [site inspection](#), which included collecting soil samples from the former RRS facility.

2000 – The Air Force collected soil samples at those sites previously identified for further investigation.

2003 – The Army Corps of Engineers, under the Native American Lands Environmental Mitigation Program (or NALEMP), sampled all private drinking water supply wells in the community of Port Heiden.

2004 – The Air Force began the [Remedial Investigation and Feasibility Study](#) process to identify any remaining contamination and evaluate risks.

2005 – The Air Force finalized the Remedial Investigation and Feasibility Study for work performed on 18 sites at the former RRS facility from May 2004 through September 2004. The field investigation included the collection of sufficient data to delineate the nature and extent of contamination present at the sites.

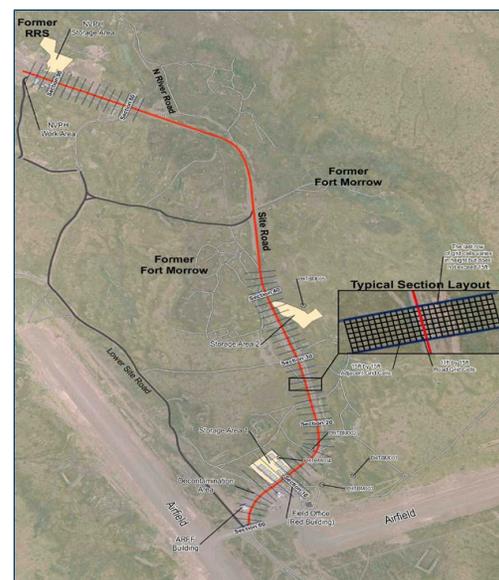
2007 – The Air Force awarded a performance-based contract for the [cleanup](#) of all the sites on the Port Heiden RRS facility. The contract included a [Proposed Plan](#), [Record of Decision](#), and implementing [remedial actions](#).

2008 – The Air Force's Proposed Plan selected excavation, washing and off-site disposal of PCB-contaminated soil in a permitted landfill as the preferred alternative for soil. For groundwater, [natural attenuation](#) and long-term [monitoring](#) were the preferred alternative.

2009 – DEC and the Air Force signed a Record of Decision. It required the excavation, soil-washing and disposal of PCB-contaminated soil in an off-site landfill. Long-term groundwater monitoring and institutional controls were the selected remedy for the contaminated groundwater. (An [institutional control](#) is a condition or restriction, usually long term, on a site to protect people and the environment from exposure to oil or a hazardous substance. It could range from a requirement to monitor soil or groundwater, to a fence or conservation easement. The institutional control stays with the land when it's sold.)

2010 – DEC issued a Compliance Advisory to the Air Force for the improper disposal of PCB-contaminated soil above the level stated in the landfill permit – 10 milligrams per kilogram (mg/kg). A compliance advisory is a letter that informs the responsible party of alleged violations of specific

The most significant contamination in Port Heiden was the PCB-contaminated soil along Site Road/Former Fuel Pipeline Corridor from the Radio Relay Station to the airport. The cleanup there is set to be done by September 2014. After that, most of the remaining contamination will be at the Radio Relay Station. The soil there still has PCB hotspots, [TCE \(trichloroethylene\)](#) and other chlorinated solvents, and [diesel](#) and other [petroleum](#) constituents. The [groundwater](#) at the Radio Relay Station still has TCE and other chlorinated solvents, plus diesel and other petroleum constituents. Crews are also working there during this field season (2014), and will continue in future field seasons. Residual soil and groundwater contamination will be addressed through land-use controls and long-term groundwater monitoring. The time to achieve [cleanup](#) is expected to take more than 10 years. (Air Force map)



The soil sampling for Site Road for the 2012 summer/fall field season is shown on the above map. Each short blue line across Site Road represents one sampling grid (see inset). Each square (or cell) in the grid represents one soil sample, and each grid represents a 15-foot by 15-foot sampling area, with a sample every foot. (Air Force/Jacobs map)

environmental regulations and provides deadlines for a response to comply with environmental regulations.

2011 – The Air Force’s performance-based contractor successfully removed PCB-contaminated soil from the landfill and sent it to a permitted facility in the Lower 48. The Air Force began removing PCB-contaminated soil that was found in the road between the airport and the former RRS facility.

2012 – DEC closed out the Compliance Advisory letter. The Air Force’s contractor for the Site Road cleanup successfully removed 19,129 cubic yards of PCB-contaminated soil and sent it to a permitted off-site disposal facility in Lower 48.

2013 – The removal of PCB-contaminated soil by the Air Force’s contractor continued for the remaining contamination at Site Road – an estimated 5,000 cubic yards.



Sandbags keep a tarp on a stockpile of soil contaminated with [PCBs \(polychlorinated biphenyls\)](#) from blowing away at Port Heiden. The soil was later shipped to a Lower 48 facility, where it was burned in a special incinerator or buried in a [hazardous material](#) landfill.

PCBs were manufactured in the U.S. from 1929 until they were banned in 1979, and most instances of contamination occurred before 1979. PCB contamination in Alaska mainly came from leaky electrical transformers and the improper disposal of PCB oil on the ground. (Air Force photo)

CURRENT STATUS

▶ **Site Road/Former Fuel Pipeline Corridor, between the airport and the Radio Relay Station** – The most significant contamination in Port Heiden was the PCB-contaminated soil in this area. The cleanup is set to be done by September 2014.

▶ **Radio Relay Station** – Most of the remaining contamination at Port Heiden is in the Radio Relay Station area. The soil still has PCB hotspots, TCE, diesel and other petroleum constituents, and the groundwater still has TCE, diesel and other petroleum constituents. Crews are also working at the Radio Relay Station during this field season (2014), and will continue in future field seasons. Residual soil and groundwater contamination will be addressed through land-use controls and long-term groundwater monitoring. The time to achieve cleanup is expected to take more than 10 years.

▶ **Marine Terminal Area** – The contamination in this area was from petroleum, and the majority of the land that’s contaminated is now under the waters of Bristol Bay. There is little contaminated area that has not eroded away.

▶ **Former Fuel Pipeline Corridor between the airport and the Marine Terminal Area** – There are areas of petroleum contamination in this area (Site SS06), and the Air Force is addressing them through land-use controls and groundwater monitoring.



Air Force contractors work in protective gear while moving the PCB-contaminated soil. The tarp under the truck is to keep the truck’s tires from tracking the contamination onto the clean dirt on the road. PCBs are known to cause cancer in animals, and the data strongly suggest that PCBs cause cancer in humans, according to the EPA. PCBs also have significant non-[carcinogenic](#) effects on animals, including effects on the immune, reproductive, nervous and endocrine systems. Studies in humans provide evidence for the potential for non-carcinogenic health effects as well, the EPA said. PCBs [bioaccumulate](#) in fish and other wildlife.

MORE INFORMATION



- ▶ Record of Decision for Port Heiden Radio Relay Station (February 2009, signed March 2009) – ([pdf 1.8MB](#))
- ▶ Proposed Plan - Port Heiden Radio Relay Station (February 2008) - ([pdf 683K](#))
- ▶ Nearly all the [Air Force documents on the Port Heiden cleanup](#):
The Air Force Administrative Record for most Air Force contaminated sites in Alaska can be found at <http://afcec.publicadmin-record.us.af.mil/>. Click on "continue" at the bottom, then "Port Heiden RRS, AK" in the left column. Then select the individual site and click on "Search." The documents will appear at the bottom of the page.
- ▶ [Superfund, or Comprehensive Environmental Response, Compensation and Liability Act \(CERCLA\)](#)
- ▶ DEC's previous Web pages on Port Heiden:
February 2008 ([pdf 150K](#))
- ▶ DEC's [Glossary/Acronyms](#) link is on the bottom of the Contaminated Sites Program's home page.

General DEC Fact Sheets

- "Cleanup Process for Contaminated Sites," (March 2009) – ([pdf 304K](#))
- "How DEC Makes Cleanup Decisions," (June 2009) – ([pdf 20K](#))
- "Introduction to Groundwater," (June 2009) – ([pdf 412K](#))
- "Understanding Contaminant Concentrations," (June 2009) – ([pdf 164K](#))
- "Department of Defense Cleanups," (June 2009) – ([pdf 59K](#))
- "Environmental Laws and Regulations," (June 2009) – ([pdf 39K](#))
- "Environmental Cleanup Methods," (June 2009) – ([pdf 171K](#))
- "Human Health Risk Assessment," (June 2009) – ([pdf 78K](#))
- "Common Alaska Contaminants and their Sources," (June 2009) – ([pdf 240K](#))

Other websites about Port Heiden:

- ▶ Alaska Department of Community and Economic Development's [Community Information Summary on Port Heiden](#) (Select "Community Information," then go to Port Heiden.)
- ▶ Alaska Department of Labor and Workforce Development's [Alaska Local and Regional Information on Port Heiden](#) (Pull down "All Places" on the right to Port Heiden, then next to that, click "go." Then, in the section below that, click on "next.")
- ▶ [Lake & Peninsula Borough](#)
- ▶ [Lake and Peninsula School District](#)
- ▶ [Bristol Bay Native Corporation \(an Alaska Native Claims Settlement Act regional corporation\)](#)
- ▶ [Bristol Bay Native Association, Inc. \(a Tribal consortium\)](#)
- ▶ Native Village of Port Heiden (Click [here](#) and [here](#).)

CONTAMINATED SITES DATABASE REPORTS

There are a number of individual "contaminated sites" on the Galena Airport, and reports on the status of each are available on [DEC's database](#).

- ▶ [Port Heiden OT01 Composite Facility](#)
- ▶ [Port Moller AFS Radio Relay Site](#)
- ▶ [Port Heiden SS06 POL Pipeline](#)
- ▶ [Port Heiden SS05 POL Tankfarm](#)
- ▶ [Port Heiden SS04 Septic Tank](#)
- ▶ [Port Heiden WP02 Black Lagoon](#)
- ▶ [Port Heiden AOC02 Gray Lagoon](#)

- ▶ [Port Heiden - Fort Morrow FUDS](#)
- ▶ [Port Heiden AOC07 Landfill A \(FUDS\)](#)
- ▶ [Port Heiden AOC08 Landfill B \(FUDS\)](#)



Meshik, Port Heiden's old village site, is shown along the coast, south of the current-day Port Heiden. Residents moved from Meshik to higher ground near Port Heiden's airport and the former Radio Relay Station facility, because storm waves had eroded much of the old townsite and threatened to destroy community buildings. Port Heiden incorporated in 1972. (Air Force photo)

For reports on more sites, including closed ones in the area, [click here](#) and choose "Port Heiden" in the city drop-down box.

[Glossary/Acronyms](#) [Site Map](#) [Commissioner](#) [Public Notices](#) [External Links](#)

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