

OCT 8 2004

DEPT. OF ENVIRONMENTAL
AND NATURAL RESOURCES

Request for No Further Remedial Action Planned

Site: House 101, also known as Two Party Agreement (TPA) Site 9q, National Oceanic and Atmospheric Administration (NOAA) Site 53, and Tract A Lot 101.

Location: St. Paul Island, Alaska is approximately 800 miles southwest of Anchorage in the Bering Sea. On the island, House 101 is located on the southeast portion of Village Hill along Gorbach Street in the City of St. Paul, near City Hall (170° 16' 54.84" W longitude, 57° 7' 15.38" N latitude; Figure 1).

Legal Property Description: The location of House 101 and the previously associated underground storage tank (UST) is Lot 1, Block 9, U.S. Survey No. 4943, Alaska, Tract "A", St. Paul Townsite, accepted by the Bureau of Land Management August 2, 1968 (Figure 2). The federal government currently owns the associated surface and subsurface property.

Type of Release: Potential sources and release mechanisms include: 1) diesel fuel spills occurring during UST fueling; and 2) diesel fuel leaks occurring from the UST or its associated piping.

History and Background:

The 1940s era house served as quarters for government employees, although in subsequent years it was occupied by island school teachers. Sometime after 1987, private parties assumed beneficial rights to the house and leased it to the Federal Aviation Administration. The building is currently unoccupied. An UST was installed on House 101 property to store heating oil for the home. NOAA proposed to remove the UST in anticipation of the transfer of the real property under the Transfer of Property Agreement (TOPA; NOAA 1984) to Aleut Native American entities. NOAA prepared a corrective action plan (CAP; NOAA 2002) for the removal of the UST at House 101, implemented the CAP in October 2002, and provided a corrective action report (CAR; NOAA 2003). In 2004, the National Park Service's Historic American Building Survey team measured, sketched, and photographed this building.

Summary of Site Investigations:

House 101 was only recently identified as a site of concern under Public Law 104-91. Therefore, no previous soil samples were collected at the House 101 property.

Groundwater flow has not been well described for this site. Several groundwater monitoring wells are in the general vicinity of House 101. NOAA contractors conducted quarterly groundwater monitoring from September 2000 to September 2001 at wells MWA-4 and MWA-6 (Figure 3). Low levels of diesel-range organic compounds (DRO) well below the Table C cleanup level of 1,500 µg/L were detected in both wells (IT Alaska Inc. 2002). Contractors also conducted quarterly groundwater monitoring from October 2003 to July 2004, sampling wells MWA-4, MWA-6, MWA-7, and MWA-8 (Figure 3). Data is currently available from the first three quarters. Petroleum constituents were not detected in MWA-4 or MWA-6. Low levels of DRO were detected in MWA-7 and MWA-8. A full report on 2003-2004 sampling events will be available late in 2004.

Summary of Applied Cleanup Levels:

NOAA employed ADEC Method Two cleanup criteria, discussed at 18 AAC 75.341(c) (ADEC 2000). Under the TPA, for benzene NOAA had the option to cleanup to the less stringent State of Alaska cleanup level in effect in 1991 (ADEC 1991). ADEC uses 15 feet below ground surface (bgs) to define subsurface soil to which residents will have a reasonable potential to be exposed through the inhalation or ingestion pathways (ADEC 2000; 18 AAC 75.340 (j)(2)). Therefore NOAA is not obligated to excavate contaminated soil occurring at depths deeper than 15 feet to address the inhalation and ingestion pathways. Cleanup criteria were applied to the maximum extent practicable (18 AAC 75.325 (f), 18 AAC 75.990).

Summary of Cleanup Actions:

Excavation activities began at House 101 (Figure 4) on October 23, 2002 by NOAA contractor, Bering Sea Eccotech, Inc. (BSE). Contaminated soils were removed by an excavator, loaded on dump trucks, and hauled to the petroleum-contaminated soil (PCS) stockpile at the Blubber Dump (Figures 5 and 6). The contaminated soils were eventually treated in an enhanced thermal conduction system and disposed of at the local landfill (BSE 2003). After the UST was exposed, approximately 800 gallons of diesel fuel were pumped out of it prior to its removal. The fuel was given to community members of the City of St. Paul. On October 24, 2002, the UST was removed from the ground (Figure 7), placed directly on a flat bed truck, and transported to BSE's garage facility at the St. Paul airport.

Following tank removal, the excavation was increased to a depth of 16 feet bgs. Excavation to greater depths was not feasible with available on-site equipment. Additional soils could not be removed from the north excavation sidewall without jeopardizing the integrity of an adjacent concrete walkway and the foundation of House 101. A total of 65 cubic yards (yd³) of soil was removed from the UST excavation.

Following the removal of all accessible contaminated soils, six confirmation samples were collected to confirm the condition of remaining in-place soils (Figure 8, Tables 1 and 2). Gasoline-range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and polynuclear aromatic hydrocarbons (PAHs) were not detected in any of the six samples collected from the excavation.

DRO was detected above the ADEC Method Two cleanup level of 250 mg/kg in sample SNPTA101SS05, with a concentration of 5,040 mg/kg. This sample was collected 8 feet bgs from the north wall of the excavation, adjacent to the House 101 foundation. Further excavation in the area of this sample was not practicable.

Confirmation sample SNPTA101SS01 and duplicate sample SNPTA101SS02 revealed that DRO levels at 16 feet bgs (excavation limit) were below cleanup levels, 236 mg/kg and 241 mg/kg, respectively. DRO was not detected in samples SNPTA101SS03, SNPTA101SS04, and SNPTA101SS06, collected from the west excavation wall (14 feet bgs), the south excavation wall (10 feet bgs), and the east end of the excavation bottom (5.5 feet bgs), respectively.

RRO was detected in one sample (SNPTA101SS02) at 31.3 mg/kg, well below the Method Two cleanup level of 10,000 mg/kg RRO. This was the only sample containing RRO above laboratory detection level.

The removed UST was cleaned with soap and water and cut into manageable pieces for recycling off-island. In accordance with Section 6.2.6 in the corrective action plan (NOAA 2002), the rinsate generated during UST cleaning was transported to the Blubber Dump PCS stockpile and discharged onto the stockpile and ultimately treated.

The UST excavation was backfilled with clean fill material obtained from the scoria quarry at Telegraph Hill on St. Paul Island. The fill was placed in the excavation in 6- to 8-inch lifts and compacted with the excavator bucket. The site was restored to grade.

The source of the contamination (*i.e.*, a 1,000-gallon UST) has been successfully removed from the House 101 site. All contaminated soils associated with the UST have been removed from the site to the extent practicable, successfully treated, and ultimately disposed of at the Tract 42 landfill. Soils containing DRO concentrations exceeding the site cleanup level at the northwest excavation sidewall indicate the potential for contamination to extend below the existing structure; however, this area is inaccessible without compromising the integrity of House 101.

Recommend Action:

In accordance with paragraph 59 of the Two Party Agreement (NOAA 1996), NOAA requests written confirmation that NOAA completed all appropriate corrective action at House 101, TPA Site 9q/Site 53 in accordance with the Agreement and that Alaska Department of Environmental Conservation (ADEC) requires no further remedial action plan from NOAA.

References:

- Alaska Department of Environmental Conservation (ADEC). 1991. *Interim Guidance for Non-UST Contaminated Soil Cleanup Levels, Contaminated Sites Program*. July 17, 1991.
- ADEC. 2000. Title 18 of the *Alaska Administrative Code 75*, Articles 3 and 9. *Oil and Hazardous Substances Pollution Control Regulations*. State of Alaska. Amended through October 28, 2000.
- Bering Sea Eccotech, Inc. 2003. *Enhanced Thermal Conduction Yearly Report, St. Paul Island, Initial Draft*. February.
- IT Alaska Corporation. 2002. Draft Annual Groundwater Monitoring Report 2001, St. Paul Island, Alaska. March.
- National Oceanic and Atmospheric Administration (NOAA). 1984. Transfer of Property Agreement.
- NOAA. 1996. *Pribilof Islands Environmental Restoration Two-Party Agreement*, Attorney General's Office File No. 66 1-95-0126. National Oceanic and Atmospheric Administration. January 26.
- NOAA. 2002. *Corrective Action Plan, UST Removals, Selected U.S. Government Sites, St Paul Island, Alaska*. August 13.
- NOAA. 2004. *UST Removal and Corrective Action Report TPA Site 9-Q – House 101 St. Paul Island, Alaska*. February 9.

For the National Oceanic and Atmospheric Administration



John Lindsay
NOAA, Pribilof Project Office

9/30/04

Date

Approvals: In accordance with Paragraph 59 of the Two Party Agreement, this is to confirm that all corrective action has been completed at House 101, TPA Site Number 9q/Site 53 in accordance with the Agreement and that no plan for further remedial action is required.

For the Alaska Department of Environmental Conservation



Loujs Howard
Alaska Department of Environmental Conservation
Remedial Project Manager

10/11/04

Date

Tables and Figures

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House 101, TPA Site 9q/Site 53
St. Paul Island, Alaska

Table 1: Petroleum Hydrocarbon Analytical Data Summary for Confirmation Samples, House 101, TPA Site 9q/Site 53, St. Paul Island, Alaska

| Sample# | Sample Depth (feet) | GRO (AK101) (mg/kg) | Benzene (EPA 8021B) (mg/kg) | Toluene (EPA 8021B) (mg/kg) | Ethylbenzene (EPA 8021B) (mg/kg) | Total Xylene (EPA 8021B) (mg/kg) | DRO (AK102) (mg/kg) | RRO (AK103) (mg/kg) |
|------------------------|---------------------|---------------------|-----------------------------|-----------------------------|----------------------------------|----------------------------------|---------------------|---------------------|
| SNPTA101SS01 | 16 | ND(5.07) | ND(0.0253) | ND(0.101) | ND(0.101) | ND(0.101) | 236 | ND(26.0) |
| SNPTA101SS02 | 16 | ND(5.53) | ND(0.0277) | ND(0.111) | ND(0.111) | ND(0.111) | 241 | 31.3 |
| SNPTA101SS03 | 14 | ND(4.91) | ND(0.0246) | ND(0.0982) | ND(0.0982) | ND(0.0982) | ND(26.5) | ND(26.5) |
| SNPTA101SS04 | 10 | ND(5.64) | ND(0.0282) | ND(0.113) | ND(0.113) | ND(0.113) | ND(25.4) | ND(25.4) |
| SNPTA101SS05 | 8 | ND(6.81) | ND(0.0340) | ND(0.136) | ND(0.136) | ND(0.136) | 5,040 | ND(249) |
| SNPTA101SS06 | 3.5 | ND(12.4) | ND(0.0618) | ND(0.247) | ND(0.247) | ND(0.247) | ND(26.3) | ND(26.3) |
| SNPTATB01 (trip blank) | - | ND(2.55) | ND(0.0127) | ND(0.0509) | ND(0.0509) | ND(0.0509) | NA | NA |

Notes:

1. ND=non-detect. The number provided in parentheses is the practical quantitation limit (PQL).
2. mg/kg = milligrams per kilogram.
3. Indicates result above regulatory criteria
4. NA=Not Applicable

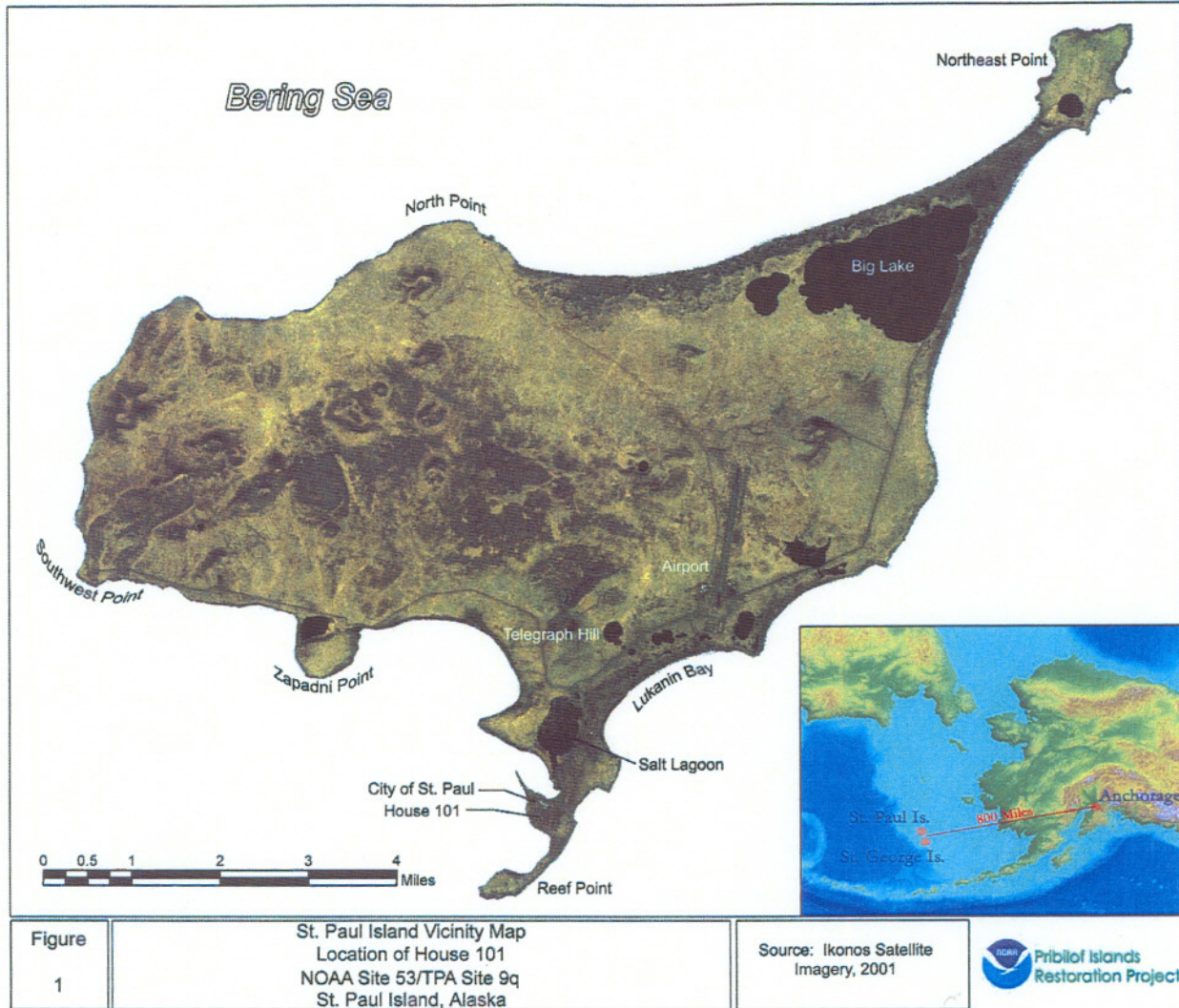
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Table 2. Polynuclear Aromatic Hydrocarbon Analytical Data Summary for Confirmation Samples, House 101, TPA Site 9q/Site 53, St. Paul Island, Alaska

| Sample# | Sample Depth (feet) | Benzo(a) Anthracene | Benzo[a] pyrene | Benzo[b] Fluoranthene | Benzo[k] fluoranthene | Chrysene | Dibenzo [a,h] anthracene | Fluorene | Indeno [1,2,3-c,d] pyrene | Naphthalene |
|------------------------|---------------------|---------------------|-----------------|-----------------------|-----------------------|-----------|--------------------------|-----------|---------------------------|-------------|
| SNPTA101SS01 | 16 | ND(0.648) | ND(0.648) | ND(0.648) | ND(1.30) | ND(0.648) | ND(0.907) | ND(0.648) | ND(0.648) | ND(0.907) |
| SNPTA101SS02 | 16 | ND(0.645) | ND(0.645) | ND(0.645) | ND(1.29) | ND(0.645) | ND(0.902) | ND(0.645) | ND(0.645) | ND(0.902) |
| SNPTA101SS03 | 14 | ND(0.663) | ND(0.663) | ND(0.663) | ND(1.33) | ND(0.663) | ND(0.928) | ND(0.663) | ND(0.663) | ND(0.928) |
| SNPTA101SS04 | 10 | ND(0.635) | ND(0.635) | ND(0.635) | ND(0.635) | ND(0.635) | ND(0.890) | ND(0.635) | ND(0.635) | ND(0.890) |
| SNPTA101SS05 | 8 | ND(0.622) | ND(0.622) | ND(0.622) | ND(1.24) | ND(0.622) | ND(0.870) | ND(0.622) | ND(0.622) | ND(0.870) |
| SNPTA101SS06 | 3.5 | ND(0.657) | ND(0.657) | ND(0.657) | ND(1.31) | ND(0.657) | ND(0.902) | ND(0.657) | ND(0.657) | ND(0.920) |
| SNPTATB01 (trip blank) | - | NA | NA | NA | NA | NA | NA | NA | NA | NA |

1. ND=non-detect. The number provided in parentheses is the practical quantitation limit (PQL).
2. mg/kg = milligrams per kilogram.
3. Indicates result above regulatory criteria
4. Shading indicates instances where the PQL is higher than the applicable cleanup level.
5. NA=Not Applicable

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| <p>Figure 2</p> | <p>Legal Property Description Map House 101 UST NOAA Site 53/TPA Site 9q St. Paul Island, Alaska</p> | <p>Sources: BLM Tracts (BLM MTPs 1983), TPA 9q Boundary (NOAA GIS 2004), Aerial Photo (Aeromap US 1996).</p> |
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Figure 3 Groundwater Sampling Results House 101 UST NOAA Site 53/TPA Site 9q St. Paul Island, Alaska

Sources: Well locations and Excavation Extent (NOAA GPS 2002/2004), Aerial photo (Aeromap US 1996).





Figure 4. House 101, general view



Figure 5. Utility lines and petroleum-stained soil in the UST excavation



Figure 6. Excavation of petroleum-contaminated soil with a maximum depth of 16 feet below grade



Figure 7. Removed 1000-gallon UST

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