

Request for No Further Remedial Action Planned

Site: House 102, also known as Two Party Agreement (TPA) site 9r and National Oceanic and Atmospheric Administration (NOAA) Site 54.

Location: St. Paul Island, Alaska is approximately 800 miles southwest of Anchorage in the Bering Sea. On the island, House 102 is located on the southeast portion of Village Hill along Gorbach Street in the City of St. Paul, near City Hall (170° 16' 54.75" W longitude, 57° 7' 14.71" N latitude; Figure 1).

Legal Property Description: The location of House 102 and the previously associated underground storage tank (UST) is Lot 2, 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 estate.

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, island entities assumed beneficial rights to the house and rented it to various individuals. An UST was installed on House 102 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 2003) for the removal of the UST at House 102, implemented it in July 2003, and provided a corrective action report (CAR; NOAA 2004).

Summary of Site Investigations:

House 102 was only recently identified as a site of concern under Public Law 104-91. Therefore, no previous soil samples were collected in the vicinity of House 102. Visual observations, however, indicated the presence of contaminated soil near the UST fill pipe.

Groundwater flow has not been well described for this site. Several groundwater monitoring wells are in the general vicinity of House 102. 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 1500 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.

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Summary of Applied Cleanup Levels:

NOAA employed ADEC Method Two cleanup criteria, discussed at 18 AAC 75.341(c) (ADEC 2003). 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 (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 Clean up Actions

Excavation activities at House 102 were initiated on July 24, 2003, and completed on July 25, 2003. Excavation was conducted in the area of the former UST located on the south side of the residence (Figures 3). Utilities in the area were identified before excavation began, and at various times throughout the removal action when unknown lines were discovered. Following utility locates, appurtenances associated with the UST were disconnected, and the excavation began (Figure 4).

Excavation was conducted using a track-mounted excavator. Dump trucks carried the excavated petroleum-contaminated soils (PCS) to the NOAA PCS stockpile located near the St. Paul landfill. In the first stage of the excavation, the UST was uncovered and removed (Figure 5). The contents of the UST were identified as fresh diesel fuel, which was reused by the current tenant of the residence in a new aboveground storage tank (AST; Figure 6).

Initial areas of excavation were selected based on the presence of the UST, while the extent of excavation was determined based on thin-layer chromatography (TLC) screening sample analyses (NOAA 2002) as well as visual and olfactory observations, proximity to structures, and excavator access to the area. Upon removal of the UST, the excavation was expanded based on TLC screening sample analyses as well as visual and olfactory observations. If contaminant concentrations remained above ADEC Method Two cleanup levels based on TLC screening sample analyses, additional excavation was conducted unless further excavation was prevented by equipment limitations or the presence of obstructions.

An unidentified cement utility line was discovered at approximately 3 feet bgs along the southern boundary of excavation (Figure 4). Utility locate personnel from the City of St. Paul could not determine whether the line was active. Excavation continued downward to a depth of approximately 18 feet bgs, where the excavator could no longer operate safely. The excavation, although limited by the presence of obstructions including structures (building foundations) and buried utility lines, was expanded laterally until TLC screening sample analyses indicated contaminant concentrations were below ADEC Method Two cleanup levels, at which time confirmation samples were taken.

Eight confirmation samples and three field duplicate samples were collected from the bottom and sidewalls of the excavation (Figure 7) for laboratory analyses including benzene, toluene, ethyl benzene, and xylene (BTEX); DRO; gasoline range organics (GRO); residual range organics (RRO); select polynuclear aromatics hydrocarbons (PAHs); and lead. Confirmation samples

indicated DRO concentrations that varied from not detected to 8,300 mg/kg; two of the eight samples collected from this area exceeded the ADEC Method Two cleanup level of 250 mg/kg. The elevated concentrations of DRO were detected in samples SP54-CS-007-180 and SP54-CS-008-180, which were collected from the bottom of the excavation at 18 feet bgs, the limit of the excavator reach. Concentrations for all other contaminants were below the ADEC Method Two cleanup levels. Laboratory reporting limits were below ADEC Method Two cleanup levels for all analyses except benzene. For benzene, a reporting limit of 0.1 mg/kg or lower was achieved, which is above the current ADEC Method Two cleanup level of 0.02 mg/kg, but below the alternative cleanup level (*i.e.*, the State of Alaska cleanup level in effect in 1991) of 0.5 mg/kg. Analytical results are summarized in Tables 1 and 2.

A total of approximately 50 cubic yards (CY) of PCS was removed from the excavation; PCS was removed to the extent practicable given equipment limitations and site conditions. The excavation was backfilled with clean soils from NOAA Telegraph Hill quarry. The material was brought in by trucks, dumped into the excavation, and compacted by the excavator. The area of excavation was restored to its original grade, and a new AST was installed at this location by the house occupant. Backfill and site restoration activities were completed on July 25, 2003.

Recommended 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 102, TPA 9r/Site 54 in accordance with the Agreement and that 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.

ADEC. 2003. 18 AAC 75, Articles 3 and 9. *Oil and Hazardous Substances Pollution Control Regulations.* State of Alaska. Effective date January 30, 2003.

IT Alaska Inc. 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. January 26.

NOAA. 2002. *Standard Operating Procedure for the Analysis of Soils and Sediments for Diesel-Range Organics by Thin Layer Chromatography.* September 5.

NOAA. 2003. *Corrective Action Plan for Underground Storage Tank Removals at Tract A House 102 (TPA Site 9r) and Duplex Building and Former E-Shop (Parcel 6F) TPA Site 9i, St. Paul Island, Alaska.* April 29.

NOAA. 2004. *Final Corrective Action Report, Site 54/TPA Site 9r—Tract A House 102, St. Paul Island, Alaska*. September 3.

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For the National Oceanic and Atmospheric Administration

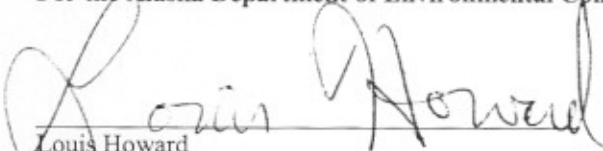


John Lindsay
NOAA, Pribilof Project Office

10/11/04
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 102, TPA Site 9r/Site 54, St. Paul Island, Alaska, in accordance with the Agreement and that no plan for further remedial action is required.

For the Alaska Department of Environmental Conservation



Louis Howard
Alaska Department of Environmental Conservation
Remedial Project Manager

Nov 1, 2004
Date

Tables and Figures

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St. Paul Island, Alaska

Table 1. Petroleum Hydrocarbon and Lead Analytical Data Summary for Confirmation Samples, House 102, TPA Site 9r/Site 54, St. Paul Island, Alaska

Sample Number	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	RRO (mg/kg)	Lead (mg/kg)
Site 54/TPA Site 9r Confirmation Samples									
SP54-CS-001-100	10	0.04 U	0.04 U	0.04 U	0.04 U	2 U	10 U	50 U	2.12
SP54-CS-001-250 ^a	10	0.02 U	0.02 U	0.02 U	0.02 U	1 U	10 U	50 U	1.55
SP54-CS-002-030	3	0.03 U	0.03 U	0.03 U	0.03 U	2 U	10 U	50 U	ND
SP54-CS-003-030	3	0.03 U	0.05	0.03 U	0.06	2 U	230	50 U	39.8
SP54-CS-004-100	10	0.03 U	0.03 U	0.03 U	0.03 U	2 U	10 U	50 U	0.83 U
SP54-CS-005-100	10	0.03 U	0.03 U	0.03 U	0.03 U	2 U	10 U	50 U	2.34
SP54-CS-006-030	3	0.03 U	0.03 U	0.03 U	0.03 U	2 U	10 U	50 U	6.95
SP54-CS-007-180	18	0.10 U	0.10 U	0.10 U	0.10 U	5 U	7,300	430	1.47
SP54-CS-007-250 ^b	18	0.10 U	0.10 U	0.10 U	0.10 U	5 U	8,300	480	0.79 U
SP54-CS-008-180	18	0.06 U	0.06 U	0.06 U	0.06 U	3 U	4,900	260	1.38
SP54-CS-008-250 ^c	18	0.07 U	0.07 U	0.07 U	0.07 U	4 U	5,200	290	1.39
Site 54/TPA Site 9r Stockpile Samples									
SP22-SS-901	1.5	0.02	0.02	0.02 U	0.03	1 U	80	91	39.3
SP22-SS-902	1.5	0.03 U	0.03 U	0.03 U	0.04	2 U	110	77	46.0
SP22-SS-903	1.5	0.02 U	0.02	0.02 U	0.04	1 U	350	75	45.4
SP22-SS-904	1.5	0.02 U	0.04	0.02 U	0.07	1 U	250	69	62.4
SP22-SS-905	1.5	0.02 U	0.02 U	0.02 U	0.03	1	140	79	43.7
SP22-SS-906	1.5	0.02 U	0.02	0.02 U	0.03	1 U	10 U	77	21.7
Trip Blank Sample									
Trip blank	--	0.02 U	0.02 U	0.02 U	0.02 U	1 U	--	--	--
ADEC Method Two Cleanup Level ^d		0.02	5.4	5.5	78	300	250	10,000	400
Alternative Cleanup Level ^e		0.5 ^f	54	NA	NA	1,400 ^g	2,500	NA	NA

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Table 1 (continued).

Notes

bold	Indicates concentration above one or both cleanup levels. Although reporting limits for benzene sometimes exceeded the ADEC Method Two cleanup level of 0.02 mg/kg, all reporting limits were below the alternative cleanup level of 0.5 mg/kg.
ADEC	Alaska Department of Environmental Conservation
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
DRO	Diesel-range organic compounds
GRO	Gasoline-range organic compounds
mg/kg	Milligram per kilogram
--	Not analyzed
NA	Not available
PAH	Polynuclear aromatic hydrocarbon
RRO	Residual-range organic compounds
TPA	Two-Party Agreement
U	The analyte was analyzed for, but not detected above the sample reporting limit
a	Duplicate of sample number SP54-CS-001-100.
b	Duplicate of sample number SP54-CS-007-180.
c	Duplicate of sample number SP54-CS-008-180.
d	Cleanup level is from Title 18 of the <i>Alaska Administrative Code</i> 75 "Oil and Hazardous Substances Pollution Control Regulations," published by the State of Alaska and amended through October 28, 2000. Contaminants of concern for this site are limited to BTEX, GRO, DRO, RRO, and select PAHs; although not identified as a contaminant of concern in the corrective action plan, lead is included because lead analyses were conducted on some samples.
e	Cleanup level obtained from ADEC Method Two based on the "Ten Times Rule" applied to the migration to groundwater pathway, as discussed in Section 5.0 of the corrective action plan (NOAA 2003a).
f	Under the TPA, NOAA is required to comply with the 1991 ADEC cleanup level for benzene (0.5 mg/kg).
g	Cleanup level selected is based on more stringent value associated with ingestion and inhalation pathways.

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Table 2. Polynuclear Aromatic Hydrocarbon Analytical Data Summary for Confirmation Samples, House 102, TPA Site 9r/Site 54, St. Paul Island, Alaska

Sample Number	Sample Depth (feet bgs)	Naphthalene (mg/kg)	Acenaphthylene (mg/kg)	Acenaphthene (mg/kg)	Fluorene (mg/kg)	Phenanthrene (mg/kg)	Anthracene (mg/kg)	Fluoranthene (mg/kg)	Pyrene (mg/kg)	Benz(a)anthracene (mg/kg)	Chrysene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Benzo(a)pyrene (mg/kg)	
Site 54/TPA Site 9r Confirmation Samples															
SP54-CS-001-100	10	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
SP54-CS-001-250 ^a	10	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
SP54-CS-002-030	3	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
SP54-CS-003-030	3	0.018	0.005 U	0.005 U	0.005 U	0.013	0.005 U	0.011	0.016	0.005 U	0.006	0.008	0.005 U	0.005 U	
SP54-CS-004-100	10	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
SP54-CS-005-100	10	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
SP54-CS-006-030	3	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
SP54-CS-007-180	18	0.050 U	0.050 U	0.050 U	1.700	2.100	0.050 U	0.050 U	0.160	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	
SP54-CS-007-250 ^b	18	0.050 U	0.050 U	0.050 U	1.600	2.400	0.050 U	0.050 U	0.180	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	
SP54-CS-008-180	18	0.050 U	0.050 U	0.050 U	0.270	0.050 U	0.050 U	0.050 U	0.075	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	
SP54-CS-008-250 ^c	18	0.050 U	0.050 U	0.050 U	0.280	0.050 U	0.050 U	0.050 U	0.110	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	
Site 54/TPA Site 9r Stockpile Samples															
SP22-SS-901	1.5	0.02 J	0.01 U	0.01 U	0.01 U	0.04 J	0.01	0.04 J	0.04 J	0.02 J	0.02 J	0.02	0.01	0.02	
SP22-SS-902	1.5	0.01	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.02	0.02	0.01	0.01	0.02	0.01 U	0.02	
SP22-SS-903	1.5	0.07	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01	0.02	0.01 U	0.01	0.01	0.01 U	0.01	
SP22-SS-904	1.5	0.01	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01	0.02	0.01	0.01	0.01	0.01 U	0.01	
SP22-SS-905	1.5	0.03	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01	0.02	0.01 U	0.01	0.01	0.01 U	0.01	
SP22-SS-906	1.5	0.01	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.02	0.02	0.01	0.01	0.01	0.01 U	0.01	
<i>ADEC Method Two Cleanup Level^d</i>		43	NA	210	270	NA	4,300	NA	1,500	6	620	11	110	1	

Notes

- ADEC Alaska Department of Environmental Conservation
- bgs Below ground surface
- mg/kg Milligram per kilogram
- NA Not available
- TPA Two-Party Agreement
- U The analyte was analyzed for, but not detected above the sample reporting limit
- J Analyte was positively identified, but numerical value is estimated concentration; result is considered qualitatively acceptable, but quantitatively unreliable

- a Duplicate of sample number SP54-CS-001-100.
- b Duplicate of sample number SP54-CS-007-180.
- c Duplicate of sample number SP54-CS-008-180.
- d Cleanup level is from Title 18 of the *Alaska Administrative Code* 75, "Oil and Hazardous Substances Pollution Control" regulations, published by the State of Alaska and amended through October 28, 2000.

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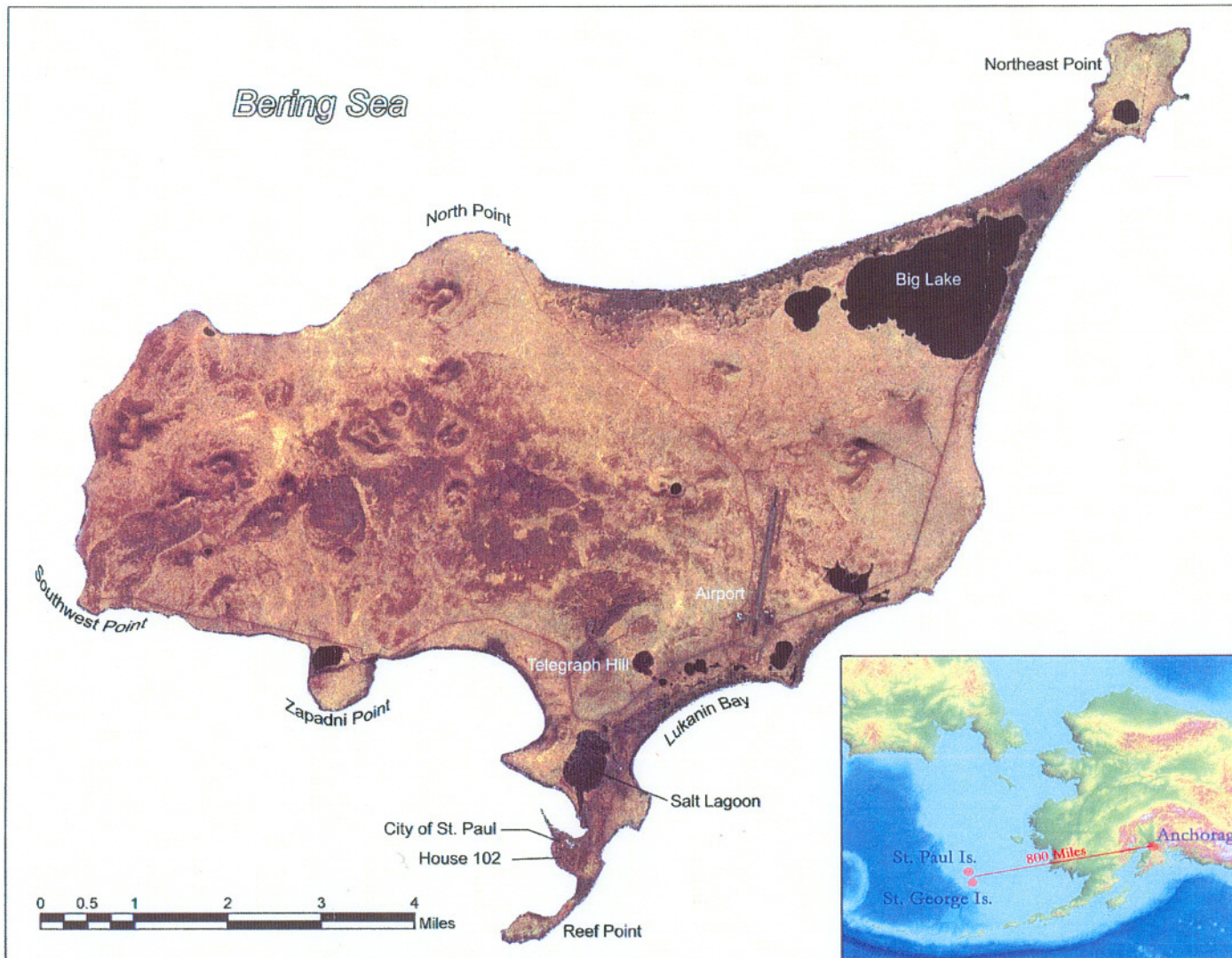


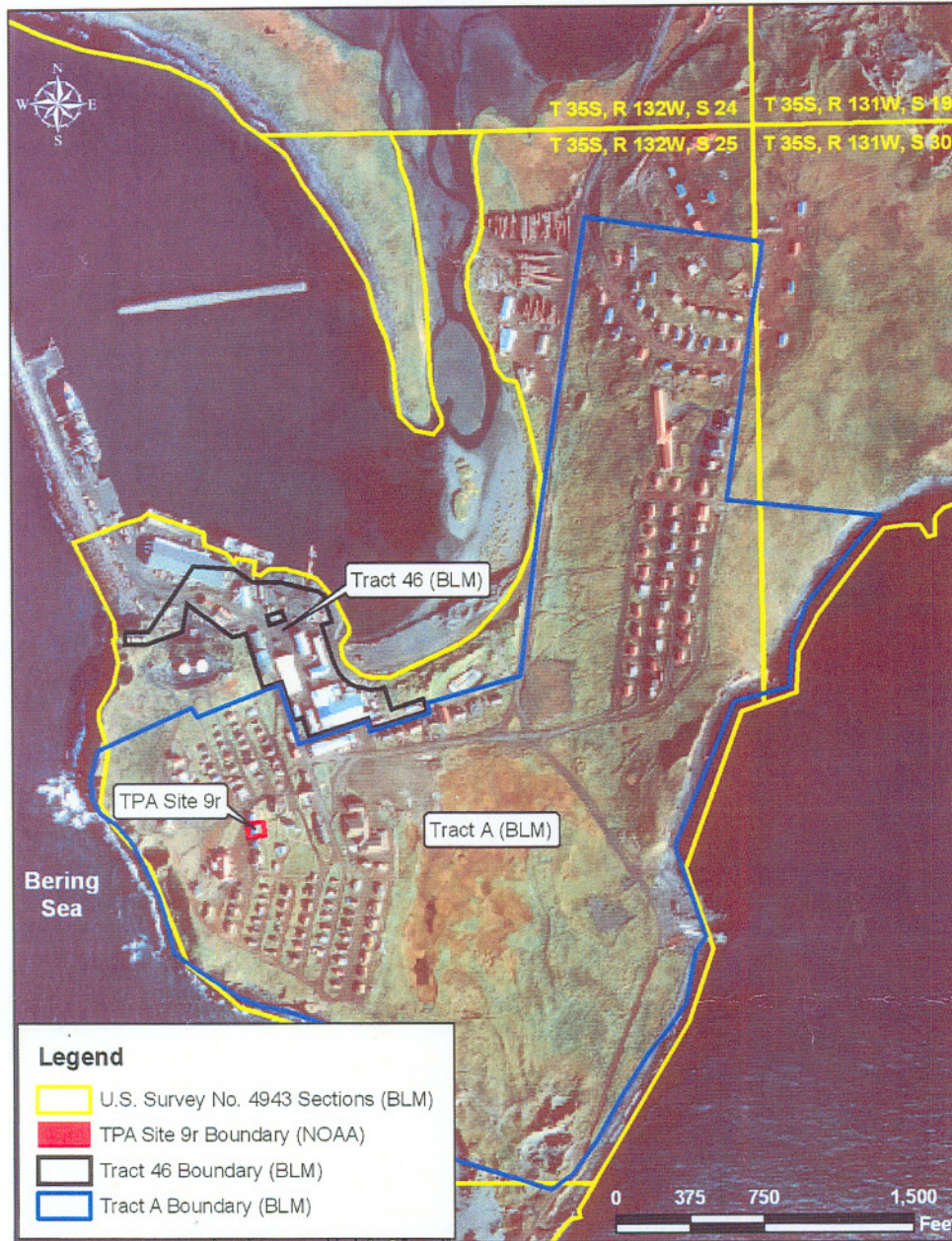
Figure
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St. Paul Island Vicinity Map
House 102
Site 54/TPA Site 9r
St. Paul Island, Alaska

Source: Ikonos Satellite
Imagery, 2001



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<p>Figure 2</p>	<p>Legal Property Description Map House 102 UST NOAA Site 54/TPA Site 9r St. Paul Island, Alaska</p>	<p>Sources: BLM Tracts (BLM MTPs 1983), TPA 9r Boundary (NOAA GIS 2004), Aerial Photo (Aeromap US 1996).</p>
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Figure 3
 Groundwater Sampling Results
 House 102
 NOAA Site 54/TPA Site 94
 St. Paul Island, Alaska

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





Figure 4. Excavation at the House 102 underground storage tank site. An unidentified cement utility line discovered at approximately 3 feet below ground surface can be seen along the boundary of the excavation.

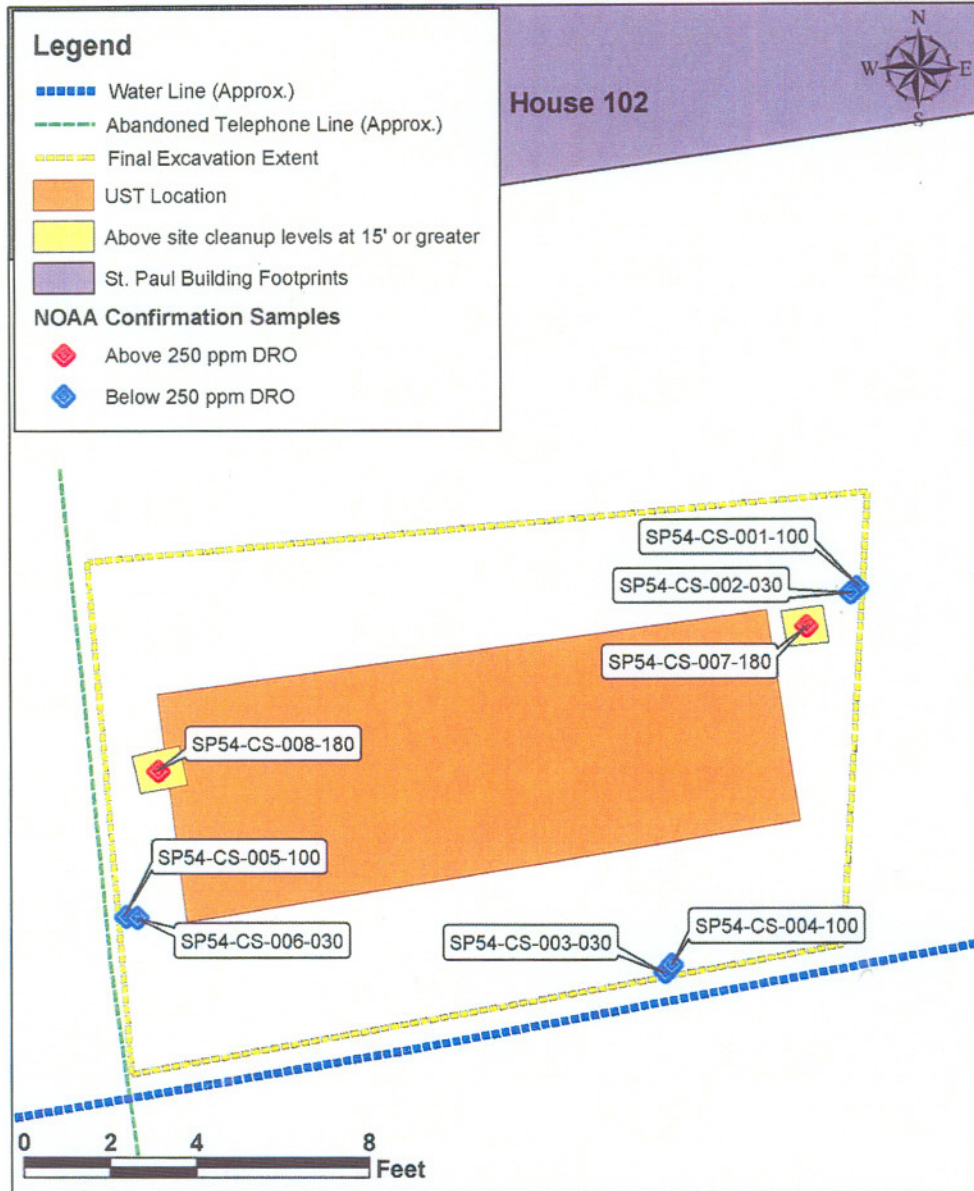


Figure 5. The underground storage tank removed from House 102.



Figure 6. The new aboveground storage tank installed to replace the removed underground storage tank.

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<p>Figure 7</p>	<p>Site Excavation Map House 102 Site 54/TPA Site 9r St. Paul Island, Alaska</p>	<p>Sources: Excavation Extent, Confirmation Samples and UST Location (NOAA GPS 2003), Water and Phone Lines (NOAA GIS 2004).</p>	
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