Request for No Further Remedial Action Planned

Site: West Dock Fuel Transfer Facility, also known as Two Party Agreement (TPA) Site 9p and National Oceanic and Atmospheric Administration (NOAA) Site 51

Location: St. Paul Island, Alaska is approximately 800 miles southwest of Anchorage in the Bering Sea. On the island, the West Dock Fuel Transfer Facility is situated northeast of the Decommissioned Power Plant Annex and adjacent to the southern edge of the West Dock landing on Village Cove (57°07'27" N latitude, 170°16'56" W longitude; Figure 1).

Legal Property Description: The structures and area of excavation are located in the northern portion of Tract 46, Township 35 South, Range 132 West, of the Seward Meridian, Alaska, as shown on the dependent resurvey of a portion of U.S. Survey No. 4943, Alaska, Tract "A", St. Paul Townsite, officially filed June 3, 1997 (Figure 2).

Type of Release: Potential release mechanisms include: 1) leaks associated with the fuel transfer pipelines; and 2) spills associated with fuel transfer operations.

History and Background:
The West Dock Fuel Transfer Facility consists of a small concrete pump house and associated fuel transfer lines. Based on historical aerial photographs, the concrete pump house was constructed sometime between 1951 and 1959 (U.S. Department of Interior 1951, 1959). During operation, floating fuel transfer lines were reportedly connected from fuel barges in Village Cove to the pump house through West Dock landing. Gasoline and diesel fuel pipelines generally ran south-southwest from the West Dock Fuel Transfer Facility to a valve box near the base of Village Hill. The valve box was used to distribute fuel to other parts of the island. A former fuel tank farm was located on the north side of Village Hill, approximately 200 feet south of the Decommissioned Power Plant Annex; however, it has not been determined whether the West Dock Fuel Transfer Facility was connected to this tank farm.

Summary of Site Investigations:
An expanded site investigation conducted by Hart Crowser, Inc. (Hart Crowser) in 1996 identified the presence of total petroleum hydrocarbons in soil at the West Dock Fuel Transfer Facility (Hart Crowser 1997); however, no contaminants were detected above Alaska Department of Environmental Conservation (ADEC) cleanup levels.

In 1999, Columbia Environmental Services, Inc. (CESI) collected a soil sample at 2 feet below ground surface (bgs) from the north side of the West Dock Fuel Transfer Facility (CESI 2001). Analytical data for this sample revealed the presence of diesel-range organic compounds (DRO) at 1,100 milligrams per kilogram (mg/kg), exceeding the ADEC Method Two cleanup level. Residual-range organic compounds (RRO) were also identified at a concentration of 8,600 mg/kg, below the Method Two cleanup level, at this location.

NOAA contractors conducted quarterly groundwater monitoring from September 2000 to September 2001 and from October 2003 to July 2004 in the vicinity of the West Dock Fuel Transfer Facility. During 2000-2001 sampling events, DRO were detected above their Alaska

Department of Environmental Conservation (ADEC) Table C cleanup level of 1,500 µg/l in wells MW46-9 and MW46-14, with maximum detected concentrations of 1,600 µg/l and 2,900 µg/l, respectively (IT Alaska Inc. 2002; Figure 3). During the first three quarters of 2003-2004 sampling, no Table C cleanup level exceedances were detected in wells MW46-9 or MW46-14. High concentrations of DRO and gasoline-range organic compounds (GRO), as well as benzene and toluene, have been detected in wells located up gradient (Mitretek Systems 2002) from the West Dock Fuel Transfer Facility (*e.g.,* 28,000 µg/l DRO and 21,000 µg/l GRO in MW46-28; Figure 3). [Note that NOAA's contractor for the 2001 sampling analyzed for residual-range organic compounds (RRO) by adapting soil analytical method AK103. The adapted method was never approved by ADEC, and no ADEC approved method exists. Thus, although the contractor reported detecting RRO above its ADEC Table C cleanup level in MW46-14, ADEC has indicated it does not consider this data to be valid, and the results are not included herein.]

Mitretek Systems (2002) evaluated the 2000-2001 groundwater data for the St. Paul Village area, which includes the West Dock Fuel Transfer Facility. The Mitretek report demonstrated that groundwater in the vicinity of St. Paul Village has high total dissolved solids and can be brackish. Consequently, the groundwater in the area is not suitable for drinking water. The evaluation, in part, provided a rationale for using alternative groundwater cleanup levels that are protective of human health and the environment where the groundwater is not potable. Mitretek concluded in accordance with 18 AAC 75.350 (ADEC 2000) that groundwater in the Village area is not currently used and does not afford any potential future use as a drinking water source. These findings provided the basis for the application of the Ten Times Rule discussed below.

Summary of Applied Cleanup Levels:
NOAA employed ADEC Method Two cleanup criteria, discussed at 18 AAC 75.341(c) (ADEC 2000). Alternative cleanup levels were also applied for some compounds. For benzene, under the TPA, NOAA had the option to cleanup to the less stringent State of Alaska cleanup level in effect in 1991 (ADEC 1991). Additionally, NOAA proposed and ADEC approved the use of alternative cleanup levels under 18 AAC 75.345 and 18 AAC 75.350, commonly referred to as the Ten Times Rule (ADEC 2002, Mitretek Systems 2002). According to these regulations, if groundwater beneath a site contains contaminant concentrations above the cleanup levels provided in ADEC Table C, then the soil may be remediated to levels ten times higher than those provided in Method Two Tables B1 and B2 for the migration to groundwater pathway for those contaminants found in groundwater at concentrations above the cleanup levels provided in ADEC Table C; however, if the inhalation or ingestion pathway values are more stringent than the migration to groundwater pathway, then the more stringent value is to be applied. 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 Alaska Administrative Code 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.

Summary of Cleanup Actions:
Corrective action activities for the West Dock Fuel Transfer Facility were initiated in conjunction with corrective action activities at the Decommissioned Power Plant Annex (TPA Site 9d/Site 19) on June 24, 2003 and were largely completed on July 7, 2003 (NOAA 2003,

Tetra Tech 2004a). Final completion of the corrective action occurred on October 9, 2003, with the disposal of contaminated soil that had originally been placed into drums during excavation activities due to concerns regarding the potential presence of polychlorinated biphenyls (PCB). Analytical data subsequently documented that PCBs were not present. Initial areas of excavation were selected based on suspected contamination identified during previous investigations, while the extent of excavation was determined based upon thin-layer chromatography (TLC) screening sample analyses or visual and olfactory observations. Excavation of contaminated soil was conducted to the maximum extent practicable. If contaminant concentrations remained above ADEC Method Two cleanup levels based on TLC screening sample analyses, additional excavation was conducted even if the concentrations were below alternative cleanup levels unless further excavation was prevented by the presence of obstructions. The excavated PCS was stockpiled at the Tract 42 landfill site, pending final disposal at the National Weather Service land spreading site, or other ADEC approved disposal alternative.

On June 27, 2003, personnel initiated excavation activities at the West Dock Fuel Transfer Facility. Two areas of contamination were excavated during the corrective action (Figure 4): Area 1 (approximately 17 feet long and 15 feet wide) is located north of the pump house; and Area 2 (approximately 35 feet long and 10 feet wide) is located south of the pump house and generally trends from north to south.

Area 1 was selected to investigate a hot spot identified during a sampling event conducted by CESI in 1999 (CESI 2001). The excavation was advanced vertically to a maximum depth of 4 feet bgs, where refusal was encountered, and laterally until no signs of contamination were identified based on TLC screening sample analyses or visual and olfactory observations.

Area 2 was selected to allow removal of the former diesel fuel and gasoline pipelines from this area. As personnel uncovered the former pipelines, the lines were cut, drained, and staged for disposal. The excavation was not advanced beyond a maximum depth of 4 feet bgs because of refusal and the presence of a live electric line crossing the area diagonally beneath the pipelines. The excavation could not be expanded laterally in any direction as a result of the presence of the pump house to the north, a live electrical line to the east and south, and the access road to the west (Figure 4).

Two confirmation samples were collected from Area 1 and six from Area 2 for laboratory analyses including benzene, toluene, ethylbenzene, and total xylenes (BTEX), DRO, GRO, RRO, select polynuclear aromatic hydrocarbons (PAHs), and lead (Table 1, Figure 5). Confirmation samples collected from the bottom of Area 1 indicated all contaminant concentrations were below their ADEC Method Two cleanup levels. In Area 2, confirmation samples collected from the bottom indicated DRO concentrations that varied from 38 mg/kg to 2,600 mg/kg; three of the six samples collected from this area exceeded the ADEC Method Two cleanup level of 250 mg/kg, and one of the six samples exceeded the alternative cleanup level of 2,500 mg/kg. The sample exceeding the alternative cleanup level for DRO (SP51-CS-002-040) was collected from the bottom of the excavation, which could not be further excavated due to the reasons discussed above. Benzene concentrations in confirmation samples collected from the bottom of Area 2 varied from not detected to 0.15 mg/kg; five of the eight samples collected from this area exceeded the ADEC Method Two cleanup level of 0.02 mg/kg, but none of the samples

exceeded the alternative cleanup level of 0.5 mg/kg. Concentrations of all other contaminants in confirmation samples collected from Area 2 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, reporting limits varied from 0.02 mg/kg to 0.04 mg/kg, which is above the ADEC Method Two cleanup level of 0.02 mg/kg, but below the alternative cleanup level of 0.5 mg/kg.

Each excavation was backfilled after TLC screening sample analyses indicated contaminant concentrations below ADEC Method Two cleanup levels and fixed laboratory confirmation samples had been collected. If remaining contamination was suspected but further excavation was prevented by the presence of obstructions such as structures, rock, boulders, and utility lines, backfill was also placed after fixed laboratory confirmation samples had been collected. Backfill operations involved transporting clean fill material from the portion of the Telegraph Hill quarry owned by Tanadgusix Corporation (TDX) to the site (Tetra Tech 2004b), dumping the material into the excavation, and compacting the fill material with the excavator bucket or by track-walking the excavator over the area. Each area of excavation was restored to its original grade. Backfilling and site restoration activities were completed on July 7, 2003.

During the corrective action, a total of approximately 250 cubic yards of soil were removed from the excavations at the West Dock Fuel Transfer Facility. Stockpile samples collected from the removed PCS contained concentrations of DRO that varied from 7,000 mg/kg to 26,000 mg/kg and RRO that varied from 2,100 mg/kg to 6,700 mg/kg (Tetra Tech 2004c). Pipelines removed from the excavations were cut into manageable sections and staged for future off-island disposal. In addition, the pump house building was cleaned, and all trash and debris were removed from the interior. Pipes and bolts within the building were cut flush with the surface of the concrete, and access ways were sealed with plywood.

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 the West Dock Fuel Transfer Facility, TPA Site 9p/Site 51 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, 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.

ADEC. 2002. Letter from Louis Howard, Project Manager, Alaska Department of Environmental Conservation, to John Lindsay, Project Manager, NOAA Pribilof Project Office regarding ADEC conditional approval for applying the Ten Times Rule. May 30.

Columbia Environmental Sciences, Inc. 2001. Draft Site Characterization Report, Tract 46 and Vicinity (TPA Site 9), St. Paul Island, Alaska. Version 2.1. CESI. Kennewick, WA. December 16.

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Mitretek Systems. 2002. Groundwater Use and Classification in the Vicinity of Tract 46, St. Paul Island, Pribilof Islands, Alaska. Prepared by Mitretek Systems, for the National Oceanic and Atmospheric Administration. June 5.

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NOAA. 2003. Final Draft Corrective Action Plan for the Removal of the West Dock Fuel Transfer Facility (Site 9P) and the Decommissioned Power Plant Annex (Site 9D), St. Paul Island, Alaska. May 21.

Tetra Tech EM Inc. (Tetra Tech). 2004a. Final Corrective Action Report, Site 19/TPA Site 9d-Decommissioned Power Plant Annex, Site 51/TPA Site 9p-West Dock Fuel Transfer Facility, St. Paul Island, Alaska.

Tetra Tech. 2004b. Letter Report, Summary of 2003 Field Season Backfill Activities, St. Paul Island, Alaska. July 23.

Tetra Tech. 2004c. Letter Report, Summary of 2003 Field Season Stockpile Activities, St. Paul Island, Alaska. July 23.

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Woodward-Clyde Consultants, Inc. 1994. Site Inspection Report, St. Paul Island, Alaska. Contract No. DACA67-92-D-1017. Delivery Order No. 36. November.

For the National Oceanic and Atmospheric Administration

John Lindsay
NOAA, Pribilof Project Office

9/10/04
Date

Approvals: In accordance with Paragraph 59 of the Two Party Agreement, this is to confirm that all corrective action has been completed at the West Dock Fuel Transfer Facility, TPA Site 9p/Site 51, 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

9/14/04
Date

Tables and Figures

Table 1. Analytical Data Summary for Confirmation Samples from the West Dock Fuel Transfer Facility, TPA Site 9p/Site 51, St. Paul Island, Alaska

Sample Number	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	RRO (mg/kg)	Lead (mg/kg)
Site 51/TPA Site 9p Confirmation Samples									
SP51-CS-001-040	4	0.02 U	0.02 U	0.02 U	0.02 U	1 U	38	50 U	6.88
SP51-CS-002-040	4	**0.04**	0.17	0.06	0.43	4	**2,600**	340	46.90
SP51-CS-003-040	4	**0.06**	0.18	0.06	0.40	3	**700**	220	15.50
SP51-CS-004-020	2	**0.03**	0.15	0.08	0.38	2	130	220	36.30
SP51-CS-005-020	2	**0.15**	0.54	0.14	0.95	9	**330**	720	24.60
SP51-CS-006-020	2	**0.06**	0.23	0.05	0.39	4	110	280	22.80
SP51-CS-907-040	4	0.02 UJ	0.03 UJ	0.02 UJ	0.19 UJ	3 UJ	130 J	200 J	23.60
SP51-CS-908-040	4	0.04 UJ	0.13 UJ	0.04 UJ	0.32 UJ	2 UJ	110 J	110 J	40.30
Trip Blank Samples									
Trip blank	- -	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	1 UJ	--	--	--
Trip Blank	- -	0.02 U	0.02 U	0.02 U	0.02 U	1 U	--	--	--
Trip blank	- -	0.02 U	0.02 U	0.02 U	0.02 U	1 U	--	--	--
Trip blank	- -	0.02 U	0.02 U	0.02 U	0.02 U	1 U	--	--	--
Method Two Cleanup Level[a]		*0.02*	*5.4*	*5.5*	*78*	*300*	*250*	*10,000*	*400*[e]
Alternative Cleanup Level[b]		*0.5*[c]	*54*	*NA*	*NA*	*1,400*[d]	*2,500*	*NA*	*NA*

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
DPPA	Decommissioned Power Plant Annex
DRO	Diesel-range organic compounds
GRO	Gasoline-range organic compounds
mg/kg	Milligrams 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
UJ	The analyte was analyzed for, but not detected. The associated numerical value is the estimated sample reporting limit
a	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. Contaminants of concern for this site are limited to BTEX, GRO, DRO, RRO, select PAHs, and lead.
b	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 (National Oceanic and Atmospheric Administration [NOAA] 2003).
c	Under the TPA, NOAA is required to comply with the 1991 ADEC cleanup level for benzene (0.5 mg/kg).
d	Cleanup level selected is based on more stringent value associated with ingestion and inhalation pathways.
e	Although these sites are in an industrial area, NOAA is using the residential cleanup level for lead (400/mg/kg).

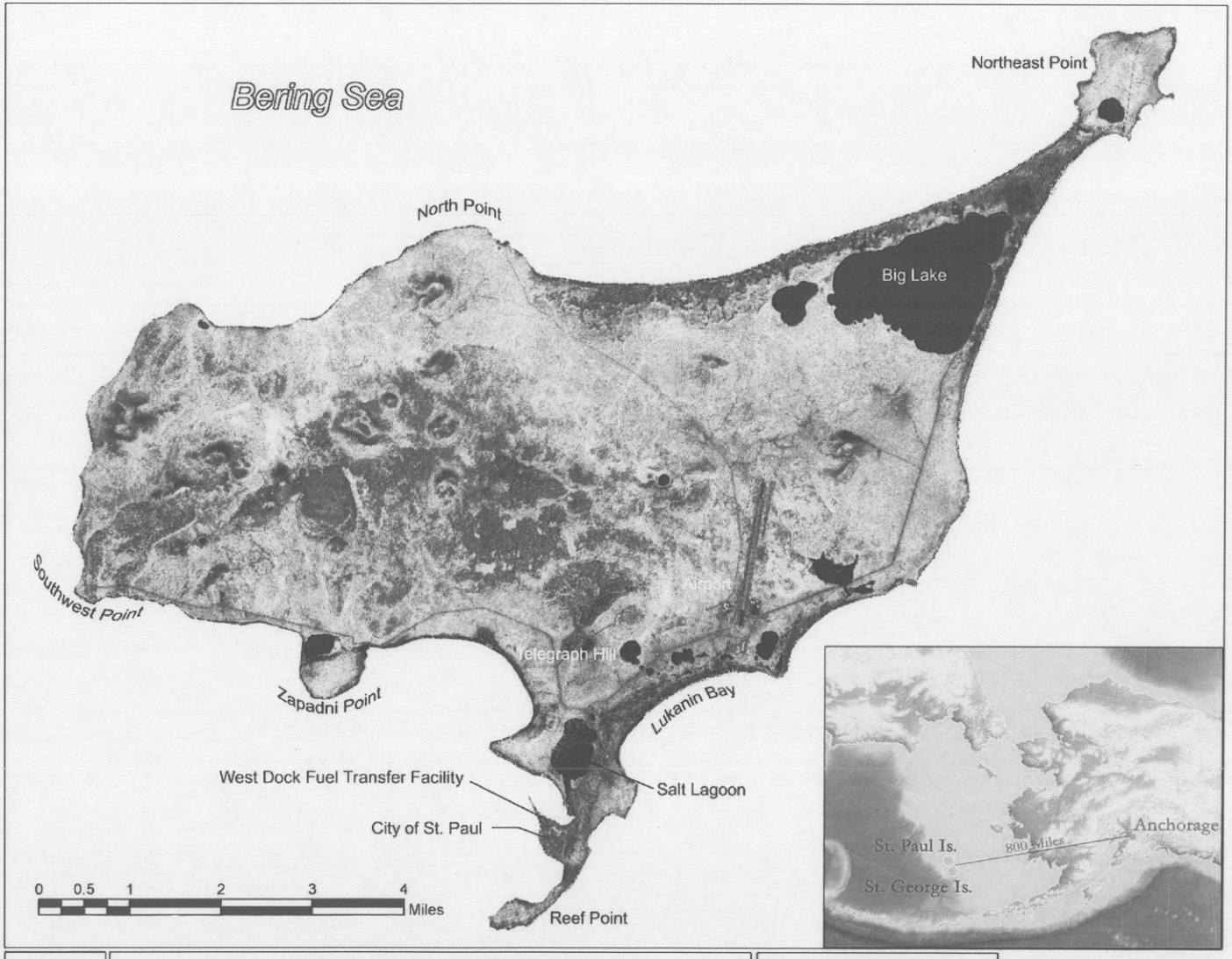

Figure 1	St. Paul Island Vicinity Map Site 51/West Dock Fuel Transfer Facility (TPA Site 9p) St. Paul Island, Alaska	Source: Ikonos Satellite Imagery, 2001	Pribilof Islands Restoration Project

Figure 2	Legal Property Description Map West Dock Fuel Transfer Facility Site 51/TPA Site 9p St. Paul Island, Alaska	Sources: BLM Tract (BLM MTPs 1983), TPA 9p Boundary (NOAA GIS 2004), Aerial Photo (Aeromap US 1996).

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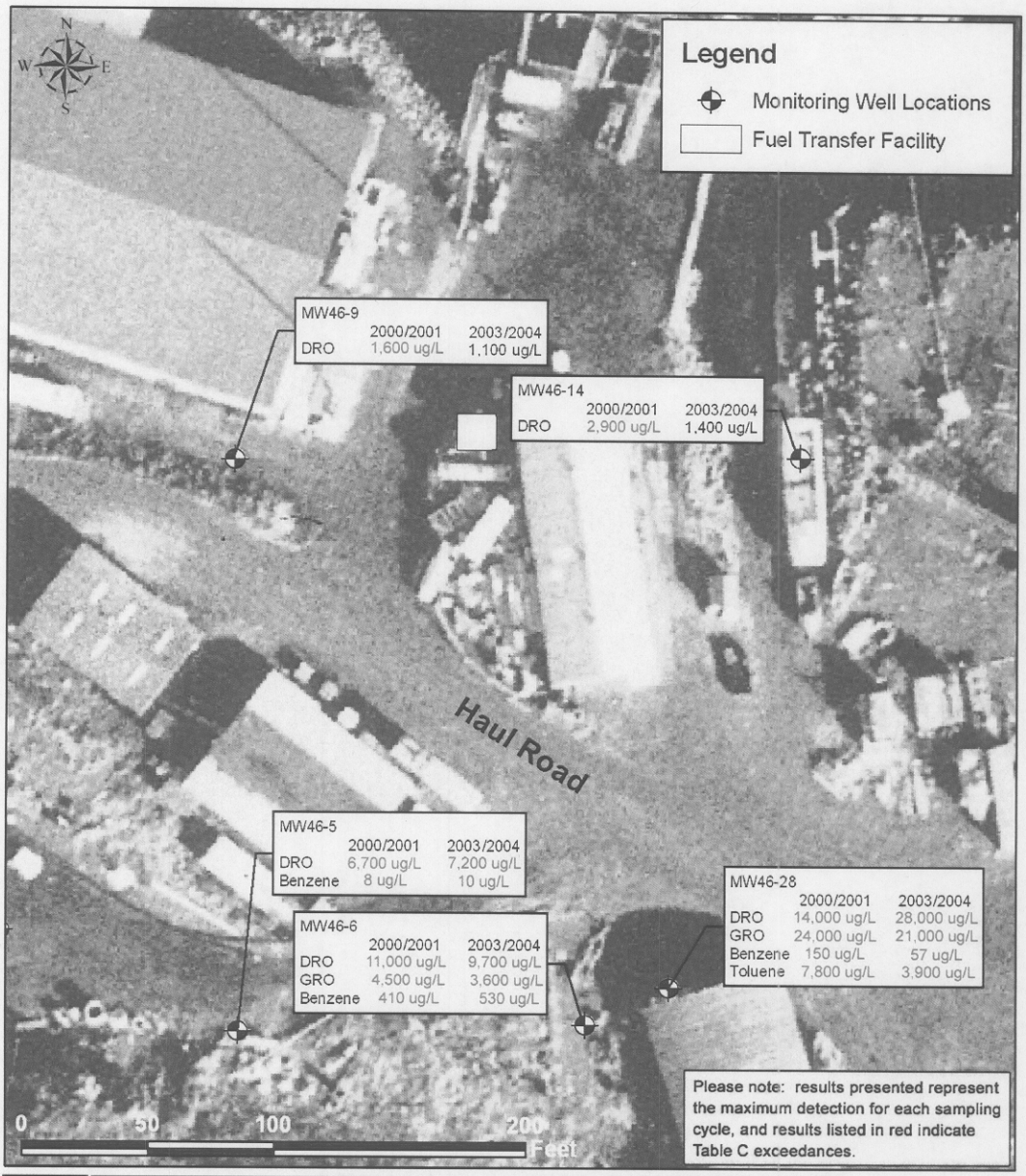

Figure 3	Groundwater Sampling Results West Dock Fuel Transfer Facility Site 51/TPA Site 9p St. Paul Island, Alaska	Sources: Monitoring Well Locations (NOAA GPS 2004), Aerial Photography (Aeromap US 1996).

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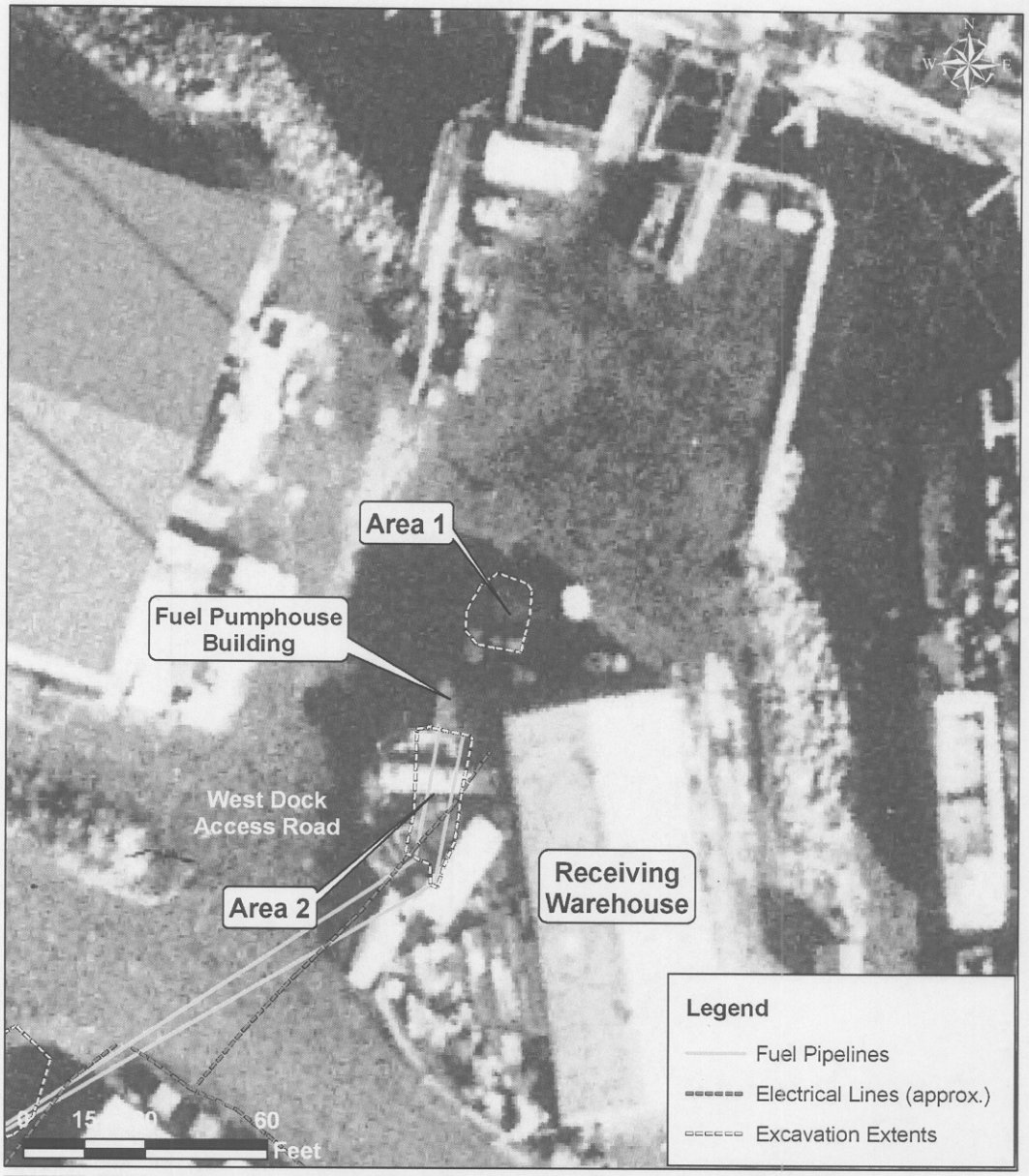

Figure 4	Areas of Excavation West Dock Fuel Transfer Facility Site 51/TPA Site 9p St. Paul Island, Alaska	Sources: Excavation Extents and utility locations (NOAA GPS 2003), Aerial Photo (Aeromap US 1996).

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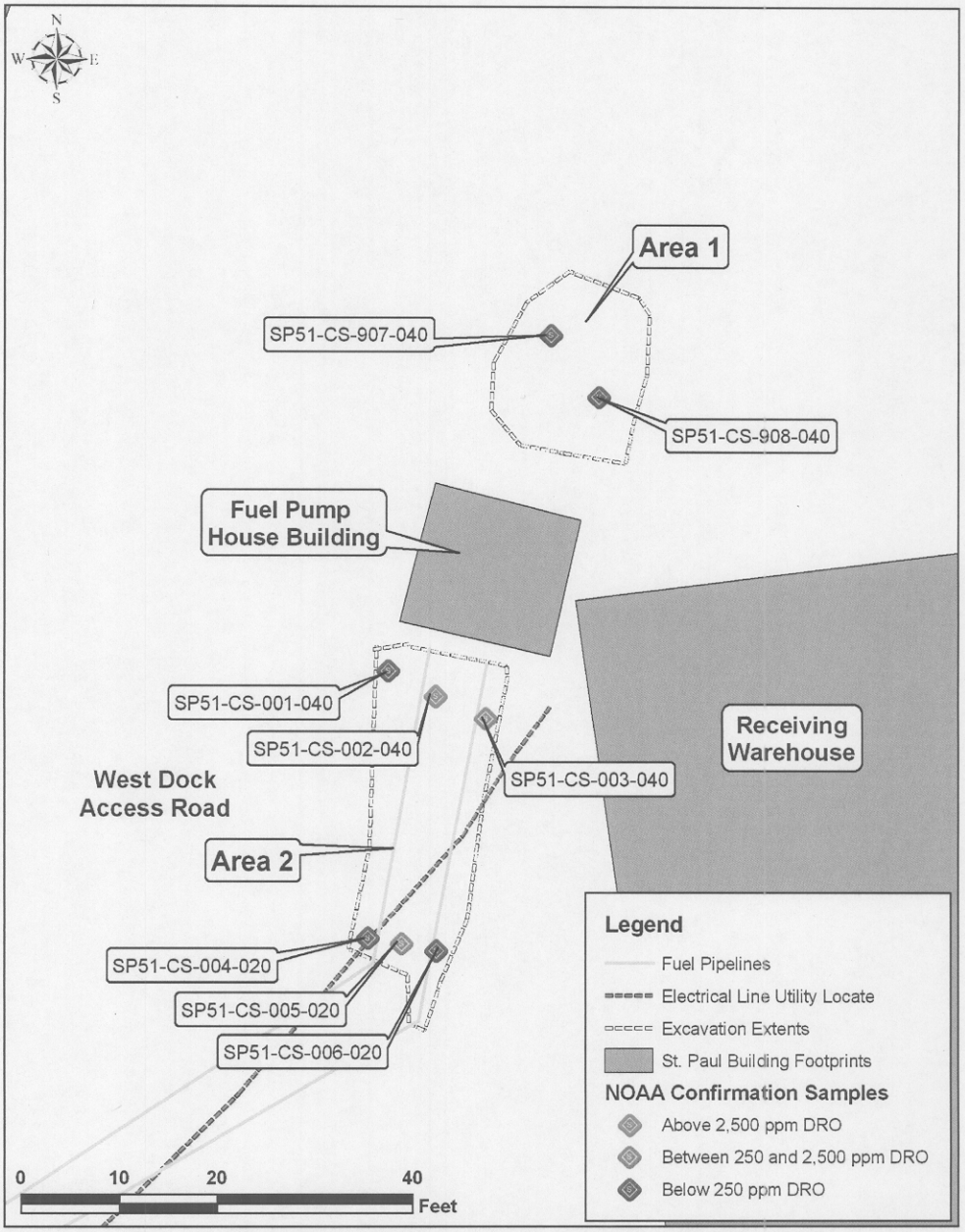

Figure 5	Sampling Location Map West Dock Fuel Transfer Facility Site 51/TPA Site 9p St. Paul Island, Alaska	Sources: Confirmation Samples, Excavation Extents, and Utility Locations (NOAA GPS 2003), Building Footprints (NOAA GIS 2004).

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