Request for Conditional Closure

Site: Decommissioned Power Plant (DPP), also known as Two Party Agreement (TPA; NOAA 1996) Site 9c and National Oceanic and Atmospheric Administration (NOAA) Site 18

Location: St. Paul Island, Alaska is approximately 800 miles southwest of Anchorage in the Bering Sea. On the island, the Decommissioned Power Plant is located in the City of St. Paul on the northern plain below Village Hill, on the southerly side of Haul Road (57° 7' 25.72" N latitude, 170° 16' 57.30" W longitude; Figure 1).

Legal Property Description: The structure and area of excavation are located in the northern portion of Tract 46, Township 35 south, Range 132 west, Section 25 of the Seward Meridian, Alaska, as shown on the dependent resurvey of a portion of the U.S. Survey No. 4943, Alaska, Tract "A", St. Paul Townsite, officially filed June 3, 1997 (Figure 2). The federal government currently owns the surface and subsurface estate of Tract 46.

Type of Release: Sources of contamination included fuel leaks and spills associated with aboveground storage tanks (ASTs), underground storage tanks (USTs), and fuel transfer pipelines.

History and Background:
The electrical power plant at this site operated from 1960 until its decommissioning in November 1998. The building measured 90 feet (ft) along its east/west axis, and 40 ft along its north/south axis (Hart Crowser 1997). Three ASTs and two 10,000-gallon USTs originally serviced the facility. In 1997, NOAA arranged to remove one UST and closed the other in place (Bristol 1997). The ASTs were not present on site at the time of the 2002 corrective action, though it is not known when or by whom they were removed.

Summary of Site Investigations:
In 1990, NOAA identified two 10,000-gallon USTs at the now decommissioned power plant. One UST was determined to be empty, and the other serviced the then-active power plant (Buckel 1990).

Ecology and Environment, Inc. (E&E) identified two 10,000-gallon UST tanks, UST No. 3 and UST No. 4, in the area of the southeast corner of the DPP building in a 1992 preliminary assessment. This assessment noted that 13 gallons of diesel fuel/water mix had been removed from UST No. 3, while UST No. 4 was still in use, though scheduled to be abandoned in early 1993 (E&E 1993).

Woodward-Clyde Consultants, Inc. (Woodward-Clyde) performed a site inspection at the DPP in 1993. Woodward-Clyde dug a trench along the west side of the power plant up to the northeast corner of the power plant's annex building to locate a drain line but did not encounter a line nor any indication of petroleum contamination. Woodward-Clyde took hand auger borings near the large power plant doors and a valve box on the east side of the building. The suite of laboratory analyses on samples from these locations did not include diesel-range organics (DRO), but Woodward-Clyde reported detecting a diesel odor in a sample collected along the east side of the

building. Woodward-Clyde determined that all analytes were well below human health risk-based concentrations (Woodward-Clyde 1994).

During a 1996 expanded site investigation, Hart Crowser, Inc. (Hart Crowser) collected samples from a test pit (TP-4) and hand auger borings (HA-2, HA-3, and HA-4) in the vicinity of the DPP (Hart Crowser 1997). With the exception of the location of HA-4, where refusal was encountered at 5.5 ft below ground surface (bgs), samples were collected to approximately 10 ft bgs. DRO was detected above its Alaska Department of Environmental Conservation (ADEC) Method Two soil cleanup level (18 AAC 75.341) in two samples collected from location HA-3; a sample collected from 0 to 0.5 ft bgs contained 2,600 miligrams/kilogram (mg/kg) DRO, and a sample collected from 10 to 10.5 ft bgs contained 900 mg/kg DRO.

CESI performed site investigation activities in the vicinity of the DPP January 25 through February 4, 1999 (CESI 1999). One emphasis of the investigation was obtaining water quality data from saltwater wells installed during the commercial fur-sealing days for process water. Free product was found in the west Decommissioned Power Plant well (WDPP), the east Decommissioned Power Plant well (EDPP), the west Old Sealing Plant well (WOSP), and the east Old Sealing Plant well (EOSP) (Figure 3). Of the wells, EDPP contained the most product, a viscous, paint-like, light non-aqueous phase liquid (LNAPL). A sample of the product contained 59,000 milligrams/liter (mg/L) DRO and 510,000 mg/L RRO. In groundwater samples collected from WDPP, WOSP, and EOSP (no groundwater sample was collected from EDPP), gasoline-range organics (GRO) exceeded the ADEC Table C cleanup level (1.3 mg/L) only in EOSP. DRO exceeded the cleanup level (1.5 mg/L) in all three groundwater samples. Data indicated that the RRO cleanup level was exceeded in samples from WDPP and WOSP; however, there is no ADEC approved method for analyzing RRO in groundwater. Groundwater salinity in the three wells varied from 4 to 14 parts per thousand.

In 2000 and continuing into 2001, Columbia Environmental Sciences, Inc. (CESI) conducted a site characterization (CESI 2001). Samples were collected at depth intervals at five locations about the DPP: DPP-WRC2, DPP-WRC4, SS46-2-2, DPPSB-2, and DPPSB-1. DRO was the only petroleum hydrocarbon detected above Method Two soil cleanup levels, with exceedances in two places. A sample collected from 2 to 3 ft bgs at location DPP-WRC4 contained 490 mg/kg DRO, and a sample collected from 11 to 12.5 ft bgs at DPPSB-1 contained 2,300 mg/kg DRO.

CESI (2001) again sampled the saltwater wells in October 2000, adding one additional well, pump house number 2 (PH2). CESI found DRO exceeding the ADEC Table C cleanup level in all five wells, with the highest concentration of 13 mg/L DRO detected in WOSP. GRO exceeded the Table C cleanup level in two wells, EOSP (3.5 mg/L) and WOSP (1.6 mg/L). Benzene was detected above its Table C cleanup level in every well except WDPP, with the highest concentration of 0.16 mg/L detected in WOSP.

CESI installed several groundwater monitoring wells (MW46-5, MW46-6, MW46-9, MW46-23, and MW46-28) at and around the DPP site (Figure 3). CESI sampled wells MW46-5 and MW46-6 once in 2000. CESI and IT Alaska Inc. (IT) sampled wells MW46-9, MW-23, and MW-28 five times, roughly quarterly, between September 2000 and September 2001 (CESI

2001, IT 2002). Groundwater analyses revealed DRO and benzene above ADEC Table C criteria in up gradient wells MW46-5, MW46-6, and MW46-28 (IT 2002). Additionally, GRO were detected above the Table C cleanup level in wells MW46-6 and MW46-28, and toluene was detected above the Table C cleanup level in MW46-28. In down gradient well MW46-9, DRO exceeded its Table C cleanup level. Tetrachloroethene, also known industrially as perchloroethylene (PCE), exceeded its Table C cleanup level during two sampling events at MW46-9, located adjacent to the Trident Seafoods facility and a former sewer line running from the DPP. The source of the PCE is unknown, and PCE was not considered part of this corrective action.

Tetra Tech EMI conducted groundwater monitoring in the vicinity of the DPP quarterly from October 2003 to July 2004. DRO were detected above the Table C cleanup level in four up gradient wells, MW46-30, MW46-5, MW46-6, and MW46-28. GRO, benzene, and toluene were also detected above Table C cleanup levels in some of these up gradient wells (Figure 3). In down gradient well MW46-9, the DRO concentration had decreased since 2000/2001 monitoring to a level below the Table C cleanup level.

Mitretek Systems (2002) evaluated the 2000-2001 groundwater data for the St. Paul Village area, which includes the DPP. 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 1996), NOAA had the option to cleanup to the less stringent State of Alaska cleanup level (0.5 mg/kg) 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 ft 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 ft 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:

In 1997, Bristol Environmental Services Corporation (Bristol) removed one of the 10,000-gallon USTs (UST No. 3; Facility Identification Number 3048), while closing the second UST (UST No. 4; Facility Identification Number 3048) in place. During UST No. 3 removal, Bristol removed 40 cubic yards (CY), of petroleum contaminated soil (PCS). The UST excavation measured 15 ft by 20 ft to a depth of 13 ft. DRO and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations measured in three soil samples collected below the UST at approximately 14 ft bgs ranged from non-detect to 120 mg/kg, and non-detect to 0.10 mg/kg, respectively. At UST No. 4, a soil sample was taken at 6 ft bgs adjacent to the fill/vent pipe along side the UST. Bristol found this sample to contain 7,400 mg/kg DRO and 0.98 mg/kg BTEX (Bristol 1997).

Corrective action activities at the DPP were conducted during two phases in 2002 (NOAA 2002a, 2002b, and 2004). Figures 4-10 provide photographic documentation of these activities.

Phase I included the excavation of PCS from two areas of concern (Figure 11). Area 1 was associated with the previously decommissioned in-place 10,000-gallon UST (UST No.4). Area 2 was associated with previous soil sample HA-3/S-1 containing DRO at 2,600 mg/kg. NOAA's contractor initiated Phase I activities on July 30, 2002 and completed activities on August 5, 2002.

The contractor removed approximately 260 CY of PCS from Area 1. The maximum excavation depth approached 15 ft. Boulders and fractured rock prohibited excavation to greater depths. The UST was found to be oriented east-west, with the majority of the tank situated below the DPP's concrete floor slab (Figure 6). The field engineer collected 15 project confirmation samples from the excavation floor and sidewalls. After completion of confirmation sampling, the excavation area was lined with visqueen and backfilled with clean soil.

The contractor removed approximately 8 CY of soil from Area 2. The excavation measured approximately 10 ft by 10 ft to a depth of approximately 2 ft bgs. A visual inspection and field screen sample of in-place soils gave no indication that the area contained additional contamination. Following the collection of a single confirmation sample from the Area 2 excavation floor, the site was backfilled and graded with clean soil.

Confirmation soil samples collected during Phase I and analyzed for residual-range organics (RRO), DRO, GRO, BTEX, polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) revealed two exceedances of the DRO Ten Times Rule cleanup level of 2,500 mg/kg (Table 1, Figure 12). One of these samples, SNP9CSS02, containing 6,220 mg/kg DRO was collected from the bottom of the Area 1 excavation, at refusal. The other sample, SNP9CSS13, containing 7,110 mg/kg DRO was a duplicate of SNP9CSS08 in which DRO was not detected. Soil from this location was further excavated during Phase II activities. No other cleanup level exceedances were detected in Phase I confirmation samples. [Note: PAH analytes in samples SNP9CSS01 and 02 were reported as ND with PQLs above cleanup levels.]

Phase II of the DPP corrective action proceeded based upon the results and findings of Phase I activities. After reviewing the preliminary analytical data and the extent of contamination

encountered during the Phase I, NOAA elected to remove the decommissioned 10,000-gallon UST (*i.e.*, UST No. 4) from the site along with any additional PCS encountered during removal (NOAA 2002b).

Phase II activities at the DPP began on November 6, 2002 with the demolition of the west portion of the DPP building overlying the concrete floor slab and UST. Demolition included the removal of approximately 15 ft by 90 ft of the southern portion of the building and approximately 15 ft by 60 ft of the building foundation and floor slab. The contractor transported wood building debris to the city landfill for incineration. Concrete debris removed from the site was staged on the concrete slab of the former DPP Annex located immediately west of the DPP building. Other debris was either salvaged by local community members, or staged at the NOAA Garco building on Tract 50 for final disposition or recycling. Sumps within the concrete building slab were cleaned of water, sludge, and debris before demolition of the pad.

The contractor removed and stockpiled the clean backfill material applied following Phase I activities. The contractor then removed PCS and loaded it into dump trucks for transport to the Blubber Dump PCS stockpile. Pipes and pipe appurtenances encountered during the first three to four vertical feet of excavation were removed when possible. Piping that terminated below the concrete building slab could not be removed, and was drained of fluids when necessary and crimped on the end. In addition, near the eastern limits of the excavation, a valve vault with abandoned piping was removed.

Soils were removed from both sides of the tank to approximately mid-tank (4 ft below the top of the tank) to provide a platform to stand on while facilitating the removal of the UST's contents. At this time, it was determined that the tank contained only several cubic yards of sand with water constituting the remaining volume. The tank appeared in good condition with no major deterioration or defects. A small hole (approximately 18 inches by 18 inches) had been cut into the top eastern end of the tank at the time of its in-place closure. This hole had not been previously sealed and therefore allowed water to enter the tank over time. The contractor pumped more than 9,000 gallons of water from the UST into a portable tank for transport to the Blubber Dump PCS stockpile for disposal. After removing the water from the UST, a series of cuts were made in the tank in order for the excavator to remove the remaining sands from inside. Sands removed from the tank were transported to the Blubber Dump PCS stockpile for future treatment and disposal.

NOAA coordinated the use of the Central Bering Sea Fisherman's Association (CBSFA) crane to remove the tank from the excavation on November 14, 2002. Following cleaning, the UST was cut into manageable pieces, and in July 2003, it was shipped off island for recycling in Seattle, Washington.

During Phase II activities, the contractor removed approximately 160 CY of PCS from the excavation along the south side of the DPP up to the concrete slab of the remaining structure. The field engineer collected eight confirmation samples from the excavation floor and walls. After confirmation samples were collected, the excavation was backfilled with clean soil and restored to the surrounding grade.

The eight confirmation samples collected at the end of Phase II activities and analyzed for DRO, RRO, GRO, BTEX, PAHs, and PCBs revealed three exceedances of the DRO Ten Times Rule cleanup level of 2,500 mg/kg (Table 1, Figure 12). Further excavation was not feasible at the location of each of these exceedances. Sample SNP9CSS39, containing 5,080 mg/kg DRO, was taken from the bottom of the excavation, at refusal. Sample SNP9CSS44, containing 8,280 mg/kg DRO, was collected at the east excavation sidewall near the valve vault where utility lines precluded excavation. Finally, sample SNP9CSS45, containing 4,120 mg/kg DRO, was taken at the north excavation sidewall, under the DPP footings. Total xylenes were detected above the cleanup level of 78 mg/kg in sample SNP9CSS40, with a concentration of 84.7 mg/kg. This sample was collected along the north excavation sidewall, under the DPP footings where soil could not be further excavated. No other cleanup level exceedances were detected.

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, to the maximum extent practicable, at the Decommissioned Power Plant, TPA Site 9c/Site 18 in accordance with the Agreement and that ADEC grant a conditional closure not requiring further remedial action from NOAA. NOAA understands ADEC will/may require additional containment, investigation, or cleanup if subsequent information indicates that the level of contamination that remains does not protect human health, safety, or welfare, or the environment.

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For the National Oceanic and Atmospheric Administration

John Lindsay
NOAA, Pribilof Project Office

1/31/05
Date

Approvals: In accordance with Paragraph 59 of the Two Party Agreement, this is to confirm that all corrective action has been completed to the maximum extent practicable at the Decommissioned Power Plant, TPA Site 9c/Site 18 in accordance with the Agreement and that no further remedial action is required as a part of this conditional closure granted by ADEC.

For the Alaska Department of Environmental Conservation

Louis Howard
Alaska Department of Environmental Conservation
Remedial Project Manager

2/11/05
Date

Tables and Figures

Table 1. Soil Analytical Data Summary for Petroleum Hydrocarbons, Benzene, Toluene, Ethylbenzene, and Xylenes (mg/kg) at the Decommissioned Power Plant, TPA Site 9c/Site 18

		Diesel Range Organics	Residual Range Organics	Gasoline Range Organics	Benzene	Ethylbenzene	o-Xylene	p & m -Xylene	Toluene
ADEC Method Two Cleanup Levels (mg/kg)		*250*	*10,000*	*300*	*0.02*	*5.5*	*78*[a]	*78*[a]	*5.4*
Alternative Cleanup Levels (mg/kg)[b]		*2,500*	*NA*	*1400*[c]	*0.5*[d]	*NA*	*NA*	*NA*	*54*
Sample ID	**Sample Type**								
SNP9CSS19	Borrow Source	ND (23.5)	26.3	ND (5.12)	ND (0.0256)	ND (0.102)	ND (0.102)	ND (0.102)	ND (0.102)
SNP9CSS20	Borrow Source	ND (24.8)	41.2	ND (4.09)	ND (0.0204)	ND (0.0818)	ND (0.0818)	ND (0.0818)	ND (0.0818)
SNP9CSS13	Duplicate of SNP9CSS8	7110	ND (1210)	12.7	0.0382	ND (0.0766)	0.228	0.348	0.179
SNP9CSS15	Duplicate of SNP9CSS14	214	60.7	ND (3.18)	ND (0.0159)	0.0872	0.0979	0.326	0.09
SNP9CSS01	Excavation Confirmation	1660	ND (136)	61.5	ND (0.0238)	0.305	0.156	0.399	ND (0.0951)
SNP9CSS02	Excavation Confirmation	6220	ND (251)	13	ND (0.0191)	ND (0.0764)	0.0767	ND (0.0764)	ND (0.0764)
SNP9CSS03	Excavation Confirmation	ND (24.9)	ND (24.9)	ND (4.72)	ND (0.0236)	ND (0.0944)	ND (0.0944)	ND (0.0944)	ND (0.0944)
SNP9CSS04	Excavation Confirmation	176	ND (22.9)	ND (4.22)	ND (0.0211)	ND (0.0844)	ND (0.0844)	ND (0.0844)	ND (0.0844)
SNP9CSS05	Excavation Confirmation	ND (22.7)	34.9	ND (3.59)	ND (0.0179)	ND (0.0718)	ND (0.0718)	ND (0.0718)	ND (0.0718)
SNP9CSS06	Excavation Confirmation	65.8	515	ND (2.34)	ND (0.0117)	ND (0.0468)	ND (0.0468)	ND (0.0468)	ND (0.0468)
SNP9CSS07	Excavation Confirmation	ND (23.8)	42.3	ND (4.14)	ND (0.0207)	ND (0.0828)	ND (0.0828)	ND (0.0828)	ND (0.0828)
SNP9CSS08	Excavation Confirmation	ND (22.6)	ND (22.6)	ND (4.36)	ND (0.0218)	ND (0.0873)	ND (0.0873)	ND (0.0873)	ND (0.0873)
SNP9CSS10	Excavation Confirmation	ND (21.7)	ND (21.7)	ND (3.81)	ND (0.0191)	ND (0.0763)	ND (0.0763)	ND (0.0763)	ND (0.0763)
SNP9CSS11	Excavation Confirmation	ND (23.4)	ND (23.4)	ND (3.57)	ND (0.0179)	ND (0.0714)	ND (0.0714)	ND (0.0714)	ND (0.0714)
SNP9CSS12	Excavation Confirmation	ND (22.8)	47.6	ND (3.8)	ND (0.019)	ND (0.0759)	ND (0.0759)	ND (0.0759)	ND (0.0759)
SNP9CSS14	Excavation Confirmation	182	51.9	5.46	ND (0.0217)	0.167	0.19	0.648	0.171
SNP9CSS16	Excavation Confirmation	ND (21.8)	ND (21.8)	ND (3.46)	ND (0.0173)	ND (0.0693)	ND (0.0693)	ND (0.0693)	ND (0.0693)
SNP9CSS39	Excavation Confirmation	5080	ND (253)	86.4	ND (0.0298)	0.162	1.99	0.451	ND (0.119)
SNP9CSS40	Excavation Confirmation	1670	843	332	0.0433	3.07	5.39	9.12	0.735
SNP9CSS41	Excavation Confirmation	1740	ND (243)	132	ND (0.0174)	0.177	2.6	0.628	0.173
SNP9CSS42	Excavation Confirmation	1540	ND (239)	140	ND (0.0209)	0.161	2.48	0.578	0.128
SNP9CSS43	Excavation Confirmation	60.7	175	7.11	ND (0.0218)	ND (0.0871)	0.129	0.0933	0.0934
SNP9CSS44	Excavation Confirmation	8280	ND (1090)	107	ND (0.0367)	0.541	2.04	2.64	ND (0.147)
SNP9CSS45	Excavation Confirmation	4120	ND (1030)	226	ND (0.0534)	0.434	5.71	1.35	ND (0.214)
SNP9CSS46	Excavation Confirmation	ND (20.9)	ND (20.9)	ND (3.69)	ND (0.0185)	ND (0.0738)	ND (0.0738)	ND (0.0738)	ND (0.0738)
SNP9CSS17	In-Place Fill	ND (23.4)	26.7	ND (3.65)	ND (0.0183)	ND (0.0731)	ND (0.0731)	ND (0.0731)	ND (0.0731)
SNP9CSS18	In-Place Fill	ND (22.9)	24.6	ND (3.45)	ND (0.0173)	ND (0.069)	ND (0.069)	ND (0.069)	ND (0.069)
SNP9CSS28-015	In-Place Fill	ND (23.3)	ND (23.3)	ND (3.44)	ND (0.0172)	ND (0.0688)	ND (0.0688)	ND (0.0688)	ND (0.0688)
SNP9CSS29-015	In-Place Fill	ND (23.1)	ND (23.1)	ND (3.02)	ND (0.0151)	ND (0.0605)	ND (0.0605	ND (0.0605)	ND (0.0605)
SNP9CSS30-015	In-Place Fill	ND (23.1)	25.4	ND (2.85)	ND (0.0143)	ND (0.057)	ND (0.057)	ND (0.057)	ND (0.057)
SNP9CSS31-015	In-Place Fill	ND (22.3)	ND (22.3)	ND (3.01)	ND (0.0151)	ND (0.0603)	ND (0.0603)	ND (0.0603)	ND (0.0603)
SNP9CSS32-015	In-Place Fill	ND (23)	25.3	ND (3.17)	ND (0.0158)	ND (0.0633)	ND (0.0633)	ND (0.0633)	ND (0.0633)
SNP9CSS33-015	In-Place Fill	ND (23.2)	28.7	ND (3.37)	ND (0.0168)	ND (0.0673)	ND (0.0673)	ND (0.0673)	ND (0.0673)
SNP9CSS34	In-Place Fill	ND (23.5)	31.1	ND (4.24)	ND (0.0212)	ND (0.0847)	ND (0.0847)	ND (0.0847)	ND (0.0847)
SNP9CSS35	In-Place Fill	ND (24.7)	27.8	ND (4.83)	ND (0.0241)	ND (0.0965)	ND (0.0965)	ND (0.0965)	ND (0.0965)
SNP9CSS36	In-Place Fill	ND (25)	39.1	ND (3.2)	ND (0.016)	ND (0.064)	ND (0.064)	ND (0.064)	ND (0.064)
SNP9CSS37	In-Place Fill	ND (24.9)	40.3	ND (4.65)	ND (0.0232)	ND (0.0929)	ND (0.0929)	ND (0.0929)	ND (0.0929)
SNP9CSS38	In-Place Fill	ND (24.8)	39.2	ND (3.12)	ND (0.0156)	ND (0.0623)	ND (0.0623)	ND (0.0623)	ND (0.0623)
SNP9CSS21	Sand in UST	2870	ND (255)	11	ND (0.0134)	0.211	0.117	0.398	ND (0.0535)
SNP9CSS23-015	Stockpile Samples	860	641	ND (2.89)	ND (0.0145)	ND (0.0578)	ND (0.0578)	0.0658	ND (0.0578)
SNP9CSS24-015	Stockpile Samples	619	374	ND (3.67)	ND (0.0184)	ND (0.0734)	ND (0.0734)	ND (0.0734)	ND (0.0734)
SNP9CSS25-015	Stockpile Samples	391	251	ND (4.1)	ND (0.0205)	ND (0.0819)	ND (0.0819)	ND (0.0819)	ND (0.0819)
SNP9CSS26-015	Stockpile Samples	384	240	ND (3.19)	ND (0.0159)	ND (0.0638)	ND (0.0638)	ND (0.0638)	ND (0.0638)
SNP9CSS27-015	Stockpile Samples	601	274	ND (3.31)	ND (0.0166)	ND (0.0662)	ND (0.0662)	ND (0.0662)	ND (0.0662)
SNP9CSS47	Sump Sludge Drum Char.	3330	6790	ND (6.39)					
SNP9CSS48	Sump Sludge Drum Char.	1160	2940	ND (4.24)					

[a] Cleanup level is for total xylenes; therefore, o-xylene and p&m-xylene combined must meet the cleanup level.

[b] Unless otherwise noted, the alternative cleanup level is based on the "Ten Times Rule" discussed in Title 18 of the Alaska Administrative Code 75, "Oil and Hazardous Substances Pollution Control Regulations," amended through October 28, 2000, sections 75.345 and 75.350.

[c] Cleanup level based on the most stringent value associated with ingestion and inhalation pathways.

[d] Under the Two Party Agreement, NOAA is required to comply with the 1991 ADEC cleanup level for benzene (0.5 mg/kg); however, NOAA has attempted to remove benzene to within the current ADEC Method Two cleanup level (0.02 mg/kg) when possible.

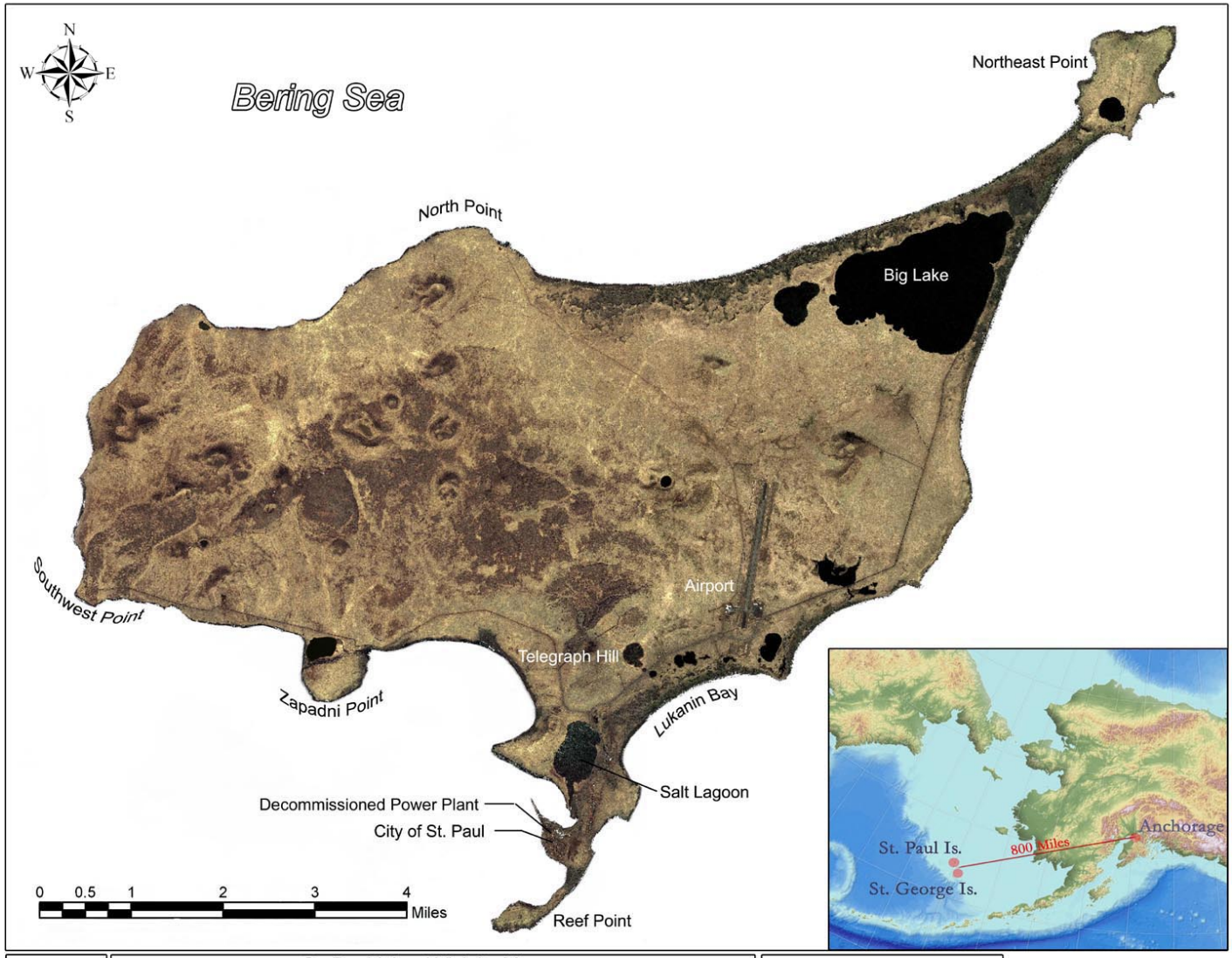

Figure 1	St. Paul Island Vicinity Map Location of the Decommissioned Power Plant NOAA Site 18/TPA Site 9c St. Paul Island, Alaska	Source: Ikonos Satellite Imagery, 2001

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Figure 2	Legal Property Description Map Decommissioned Power Plant NOAA Site 18/TPA Site 9c St. Paul Island, Alaska	Sources: BLM Tracts (BLM MTPs 1983), TPA 9c Boundary (NOAA GIS 2004), Aerial Photo (Aeromap US 1996).	Pribilof Islands Restoration Project

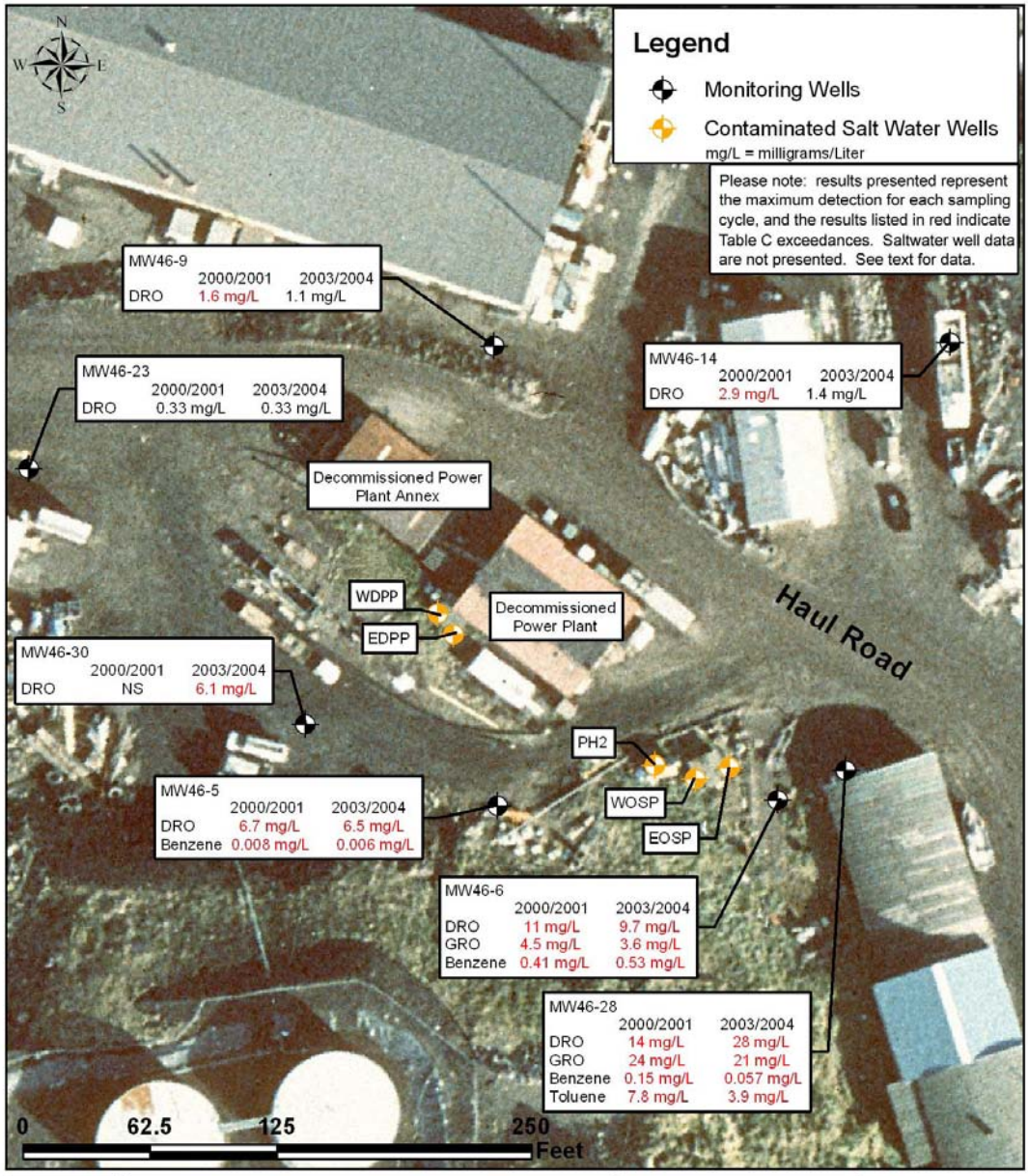

Figure 3	Groundwater Sampling Results Decommissioned Power Plant Site 18/TPA Site 9c St. Paul Island, Alaska	Sources: Monitoring Well Locations (NOAA GPS 2004), Aerial Photography (Aeromap US 1996).

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Figure 4. Decommissioned Power Plant

Figure 5. Excavation of Area 1, Phase I

Figure 6. Underground storage tank beneath the Decommissioned Power Plant

Figure 7. Demolition of the south side of the Decommissioned Power Plant

Figure 8. Removal of the Decommissioned Power Plant's concrete foundation

Figure 9. Underground storage tank removal

Figure 10. Decommissioned Power Plant site restored to grade at the end of Phase II

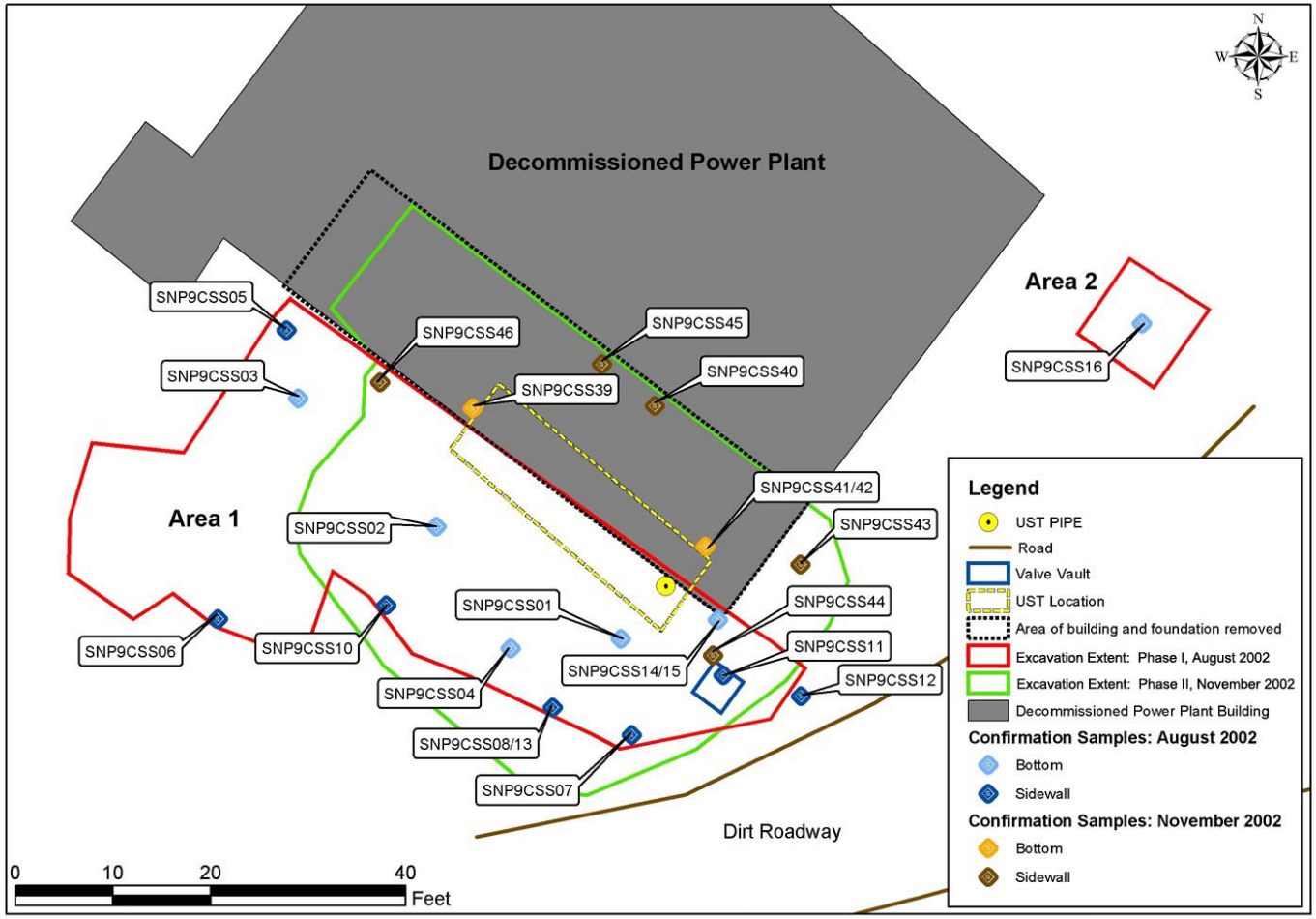

Figure 11	Site Excavation Map Decommissioned Power Plant NOAA Site 18/TPA Site 9c St. Paul Island, Alaska	Source: NOAA Pribilof Islands Project GIS, 2002.

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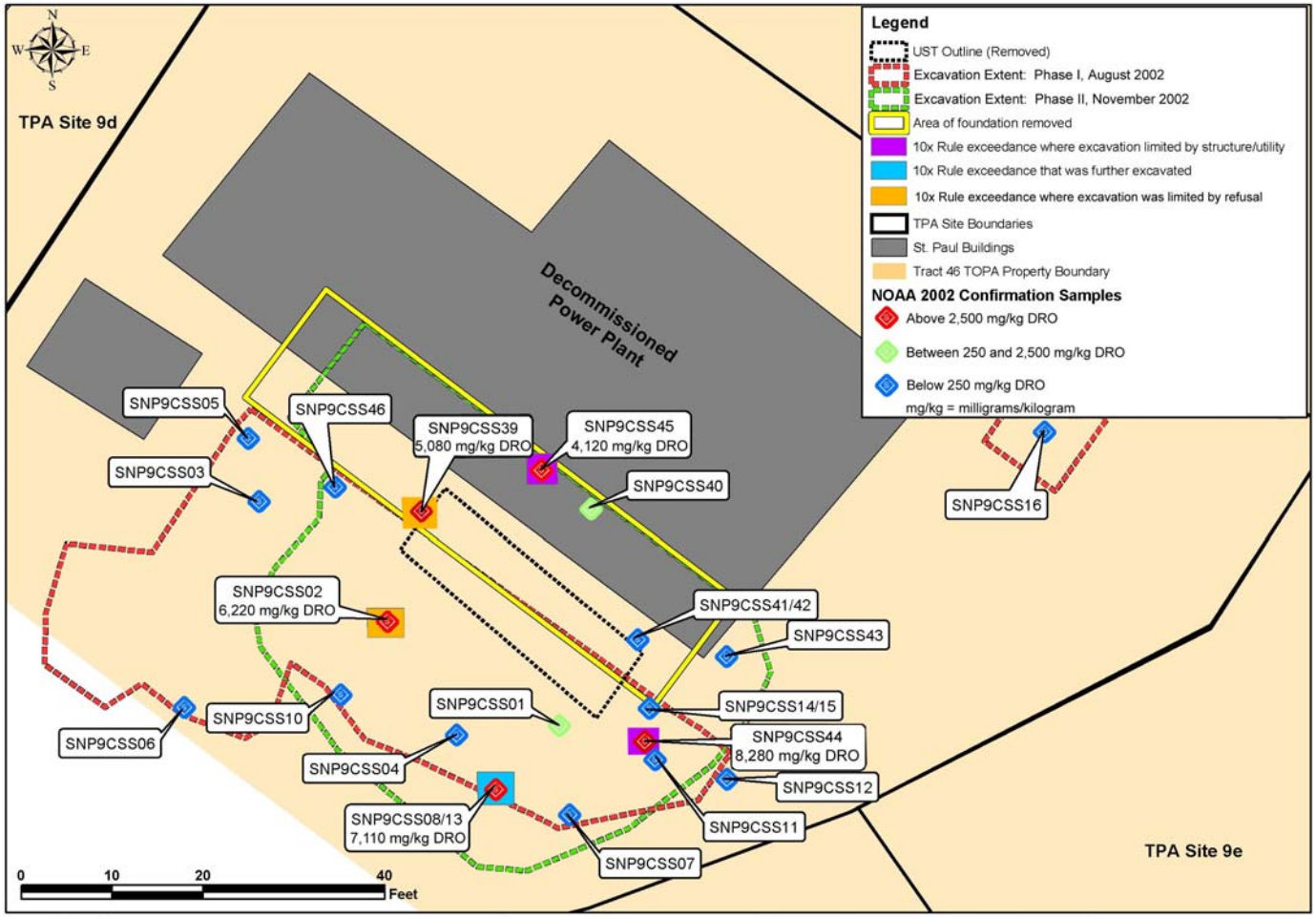

Figure 12	Confirmation Sample Results Decommissioned Power Plant NOAA Site 18/TPA Site 9c St. Paul Island, Alaska	Sources: Excavation Extents, UST Location, Foundation Removed, and Confirmation Samples (NOAA GPS 2002), Building locations, TOPA Boundary, and TPA Site Boundary (NOAA GIS 2004).

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