

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

RECEIVED

NOV 15 2004

DEPT. OF ENVIRONMENTAL
CONSERVATION

Request for Conditional Closure

Site:

The site is known as St. Paul Landfill Cell A, Two-Party Agreement (TPA; NOAA Site 5b, and as National Oceanic and Atmospheric Administration (NOAA) Site 6.

Location:

St. Paul Island, Alaska is approximately 800 miles southwest of Anchorage in the Bering Sea. The St. Paul Landfill is approximately 1.5 miles northeast of the City of St. Paul (Figure 1). The St. Paul municipal solid waste (MSW) landfill currently is comprised of three disposal cells, A, B, and C, found within two properties owned by different entities. Cells A (2.374 acres) is within the property called the Ataqaq Subdivision (Figure 2).

Legal Property Description:

The legal description for Cell A is: Township 35 South, Range 131 West, Section 17, of the Seward Meridian, Alaska as shown on the plat of rectangular survey officially filed May 14, 1986 (Figure 2). The City of St. Paul is the surface estate owner of Cell A and the greater Ataqaq Subdivision. The Aleut Corporation is the subsurface estate owner.

Type of Release:

Cell A was used primarily to dispose of construction debris. Petroleum-contaminated soil (PCS) has been found at the site, and drums containing petroleum wastes have been excavated from within the site. No other release of contaminants has been documented at the site.

History and Background:

The landfill area is believed to have been used as the primary landfill for the Island of St. Paul since the 1940s. Cell A was purportedly used for the disposal of construction and demolition debris, municipal solid waste, and an unknown quantity of drummed petroleum wastes. Drums and petroleum contaminated soil were removed by both Colombia Environmental Sciences, Inc. (CESI) and Nortech Environmental & Engineering Consultants (Nortech) in the summer of 2000, at which time Cell A was described as no longer active (CESI 2001a). In October 2000, Foster Wheeler Environmental Corporation (Foster Wheeler) constructed a sand and scoria cap measuring 120 by 155 feet in the central portion of Cell A (Figure 2) to provide the City of St. Paul a location to store large scrap items. The cap was constructed with an 18-inch layer of sand covered by a 12-inch layer of scoria (Foster Wheeler 2000). ADEC (2001) provided NOAA with a No Further Action designation for only the area covered by the pad on Cell A.

In a closure plan dated April 2, 2002, NOAA proposed to close Cell A in its entirety (Polarconsult 2002). The closure plan was approved by ADEC on August 7, 2002 (ADEC 2002). On June 30, 2003, NOAA submitted a Draft Corrective Action Plan for closure of the landfill (NOAA 2003a), which contained Addendum 1, proposing certain changes to the original closure plan, including the substitution of a boulder barrier around the perimeter of Cell A instead of a chain link fence.

RECEIVED

NOV 19 2004

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

During the summer of 2003, NOAA and ADEC agreed to modify the required removal of PCS at the site (NOAA 2003b), after NOAA proposed to remove PCS only to a depth of 2 feet below ground surface, due to the following reasons:

- The long term use of the site as a landfill resulted in a potentially random distribution of petroleum waste disposal locations throughout the landfills active life, resulting in a great difficulty of characterizing the landfill and finding all petroleum wastes potentially disposed within.
- The Ataqan Subdivision will continue to be used by the City of St. Paul as a permitted MSW disposal facility, including the operation of a burn box and the disposal of the ashes it generates.
- The facility is unlikely to ever be used for residential purposes, and therefore, it is unlikely that residential exposure will occur at the site.
- Given that residential exposure is not likely to occur, site cleanup levels should reflect exposure of site workers via the ingestion and inhalation pathways, rather than the much lower cleanup levels of the migration to groundwater pathway.
- The disposal of MSW excavated from the side slopes to the top of Cell A, and the application of a sand and scoria cap covered the one known area of PCS in Cell A with several feet of soil.

ADEC suggested that NOAA remove PCS to a depth of 5 feet (ft) below ground surface (bgs), but agreed to allow the excavation of PCS only to a depth of 2 ft bgs subject to the potential installation of additional groundwater monitoring wells in the area of PCS contamination.

Summary of Site Investigations:

ADEC investigated waste disposal practices on St. Paul Island including the St. Paul Landfill, and reported in 1983 that there were many drums of petroleum and other wastes disposed at the landfill area (Harmon 1983).

NOAA reported in 1990 that they had conducted an environmental compliance survey, and noted 27 apparently empty drums disposed in Cell A (Buckel 1990).

Between August and October 1999, Tetra Tech conducted site characterization activities at Cell A, which included the collection of soil, sediment, and groundwater samples (Figure 3). Analytical data for soil samples indicated the presence of PCS with diesel-range organic compounds (DRO) and residual-range organic compounds (RRO) at concentrations above cleanup levels at two locations (05SS10 and 05SS17) within Cell A (Figure 3) that corresponded with an area of drums identified during the Tetra Tech 1999 investigation (Tetra Tech 2000). Analytes in neither groundwater nor sediment samples exceeded cleanup levels.

During the summer of 2000, Nortech conducted an interim removal action by removing more than 50 buried drums from various areas in the landfill area, and 45 cubic yards (CY) of soil from the south end of Cell A where Tetra Tech (2000) previously identified drums (Nortech 2001); the removal included the soil associated with sample 05SS10 taken by Tetra Tech in 1999. The excavation extent is shown in Figure 4.

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

In a separate interim removal action conducted by CESI in 2000, CESI removed several buried drums and an additional 45 CY of PCS from the south end of Cell A in an area that overlapped the Nortech removal action (see inset in Figure 4). Soil samples collected by CESI following PCS removal from Cell A (shown on Figure 4 as SNPLFIR-1 through SNPLFIR-9) confirmed that no contaminants remained above cleanup levels (CESI 2001a).

NOAA did not conduct a removal action at the second landfill location (05SS17) where soil contamination of DRO (771 mg/kg) and RRO (11,000 mg/kg) exceeded action levels because of the presence of concrete construction debris (Figures 3 and 4).

[Note: Figures 2 and 3 in NOAA's corrective action plan (NOAA 2003a) incorrectly show a CESI confirmation sample (SNPLFIR-7) as exceeding the DRO and RRO cleanup levels after the two removal actions discussed above. NOAA subsequently examined the hard copies of the laboratory reports and found that the sample results were non detect for these constituents at detection limits of 10 and 50 mg/kg, respectively (CESI 2001a).]

NOAA contractors conducted quarterly groundwater monitoring from June 2000 to September 2001 and from October 2003 to July 2004, including sampling 16 monitoring wells in the landfill area, 2 of which (MWSNPLF-9 and HC-5) are directly down gradient of Cell A (Figure 5). The results are summarized below.

During 2000-2001 quarterly sampling events, DRO was not detected above the ADEC Table C cleanup level of 1,500 ug/l in the 12 wells sampled (MWSNPLF 1, MWSNPLF 2, MWSNPLF 4 through MWSNPLF 9, and HC-2 through HC-5) with one exception. During the last quarter, the sample from well MWSNPLF-1 indicated the presence of DRO at 4,200 µg/l, (Figure 5), along with GRO, benzene, and 13 other VOCs. According to NOAA's contractor, IT Alaska Inc., this sample was part of a "highly suspect analytical data package and should be viewed with caution" (IT Alaska Inc. 2002). The groundwater samples from the same well during earlier quarters did not exceed the cleanup levels. NOAA observed the City of St. Paul MSW burn crew staged their igniter materials (gasoline and fuel oil) in close proximity to this well prior to and during the sampling event.

During the 2003-2004 sampling, NOAA contractors sampled only five wells because seven of the original twelve wells had been decommissioned to allow construction of the City of St. Paul's municipal solid waste burn box pad and ash disposal cell. None of the samples from these wells exceeded the Table C cleanup levels, including those from MWSNPLF-1, the only well at the landfill ever to yield a sample that exceeded these cleanup levels. This data supports the contention that the contamination found in MWSNPLF-1 was due to lab error or cross contamination, and not to the presence of contamination in the well. Later in 2004, an eighth well in the vicinity of the landfill was decommissioned (MWSNPLF-8), and four new monitoring wells were installed (MWSNPLF 10 through MWSNPLF 13). These new wells have not yet been sampled.

In summary, groundwater monitoring results for the St. Paul landfill have consistently shown that the groundwater does not contain constituents exceeding the Table C cleanup levels.

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

Summary of Applied Cleanup Levels:

The State of Alaska provides TPA oversight through the Alaska Department of Environmental Conservation (ADEC). Under the TPA, NOAA is required to comply with State of Alaska regulations that were in effect in 1991 (NOAA 1996, ADEC 1991); however, with ADEC agreement, NOAA has chosen to follow more current regulations whenever possible. Generally, NOAA employed ADEC Method Two soil cleanup criteria, discussed at 18 AAC 75.341(c) (ADEC 2000). For benzene, the less stringent State of Alaska cleanup level (0.5 mg/kg) in effect in 1991 was applied to the site (ADEC 1991).

ADEC uses 15 ft bgs to define subsurface soil to which residents will have a reasonable potential for exposure through the inhalation or ingestion pathways (ADEC 2000). Therefore, NOAA is not obligated to excavate contaminated soil occurring at depths deeper than 15 ft to address the inhalation and ingestion pathways. Due to unique circumstance of the site discussed above, ADEC approved a waiver to this requirement, allowing NOAA to halt excavation at 2 ft bgs provided additional area groundwater monitoring wells were installed and monitored at the site.

Summary of Corrective and Closure Actions:

Corrective action and closure activities at Cell A included the re-contouring of side slopes to meet ADEC slope requirements (maximum 3 to 1, horizontal to vertical) and to facilitate the placement of additional cover material without encroaching on an adjacent wetland area (Figure 6). During side slope contouring operations, NOAA uncovered a total of 56 fifty-five gallon drums containing variable amounts of tar and petroleum products in the northeast portion of Cell A; an area where NOAA previously removed drums (Nortech 2001; Figure 6). The drums were removed, placed in salvage drums, or secured in tarp-covered, open-top conex containers, and ultimately shipped for off-island disposal to Onyx Environmental Services LLC, Vancouver, Washington. In addition, NOAA transported approximately 18 CY of PCS from this area to the short-term PCS stockpile at Tract 42.

NOAA's contractor collected two confirmation samples during 2003 corrective action activities at Cell A (Tables 1 and 2, Figure 6). The samples were analyzed for the following constituents:

- BTEX by U.S. Environmental Protection Agency (EPA) SW-846 (EPA 1996) Method 8021B
- DRO by Method AK102
- GRO by Method AK101
- RRO by Method AK103
- PAHs by EPA SW-846 (EPA 1996) Method 8270C Selected Ion Monitoring

The two confirmation samples collected from the bottom of the buried drum excavation in the northeast portion of Cell A found concentrations of all contaminants below the ADEC Method Two cleanup levels (Figure 6). Laboratory reporting limits were below ADEC Method Two cleanup levels for all contaminants except benzene. For benzene, reporting limits of 0.03 mg/kg or lower were achieved, which is above the current ADEC Method Two cleanup level of 0.02 mg/kg, but below the 1991 cleanup level of 0.5 mg/kg.

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

One waste sample was collected from the tar contents of drums removed from Cell A and Cell B. The drums had been consolidated in an open topped conex container when sampled, so it is unclear from which Cell (A or B) the drum sample originated, but the materials appeared identical. This sample was analyzed for the same constituents listed above, as well as for PCBs using EPA SW-846 (EPA 1996) Method 8082. The waste sample contained the following contaminants at concentrations above ADEC Method Two cleanup levels: benzene at 1.7 mg/kg, ethylbenzene at 6 mg/kg, GRO at 510 mg/kg, and DRO at 1,600 mg/kg. All other contaminants, including PCBs, were below ADEC Method Two cleanup levels (Tables 1, 2, and 3). Laboratory reporting limits were below ADEC Method Two cleanup levels for all contaminants except benzo(a)pyrene and dibenzo(a,h)anthracene. For both of these contaminants, reporting limits of 2.5 mg/kg exceeded the ADEC Method Two cleanup level of 1.0 mg/kg.

During site contouring, NOAA removed sand material previously placed on the Cell A side slopes as necessary to meet regulatory slope requirements. This excess sand (2,304 CY) was either relocated to low-lying depressions on Cell A or was transported (750 CY) to the Tract 42 short-term PCS stockpile. NOAA placed some of this material over the location of Sample 05SS17, the only area still exceeding the cleanup level for DRO and RRO as discussed above. This cover material placement resulted in the area about Sample 05SS17 being buried with several feet of soil, in addition to the 2-ft thick cap subsequently applied to the site.

Following completion of contouring operations, NOAA placed sufficient sand and scoria cover material over the portions of Cell A not previously capped by Foster Wheeler (Foster Wheeler 2000) to provide a 24 inch site closure cap. NOAA confirmed final side slope measurements using the Trimble Total Station® 5700 GPS. Side slopes varied from a maximum of 3.7:1 to a minimum of 4.2:1 (Tetra Tech 2004). NOAA used large boulders to construct a barrier around the perimeter of Cell A. NOAA seeded and applied fertilizer to the Cell A side slopes in the spring of 2004. By the end of the 2004 summer, native grasses nearly covered the slopes.

Other Closure Activities:

NOAA previously submitted a closure report for Cells A, B, and C to ADEC (Tetra Tech 2004). NOAA will address groundwater monitoring at the landfill as a part of an island groundwater monitoring plan scheduled for submittal to ADEC during the winter of 2004/2005.

Recommended Action:

In accordance with paragraph 59 of the Two Party Agreement (NOAA 1996), NOAA requests written confirmation that NOAA completed all appropriate corrective and closure actions, to the maximum extent practicable, at the St. Paul Landfill Cell A, TPA Site 5b, NOAA Site 6, in accordance with the Agreement and that ADEC grant a conditional closure that will not require further remedial action from NOAA. ADEC will 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.

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

References:

Alaska Department of Environmental Conservation (ADEC). 1991. Interim Guidance for Non-UST Contaminated Soil Cleanup Levels. Contaminated Sites Program. July 17.

ADEC. 2000. Title 18 of the *Alaska Administrative Code* 75, 18 AAC 75, Articles 3 and 9. Oil and Hazardous Substances Pollution Control Regulations. State of Alaska. Effective date January 30, 2003.

ADEC. 2001. Closure Approval, Portion of Cell A, St. Paul Island TPA Site 5. Letter from Heather Stockard February 8.

ADEC 2002. Certified Mail # 7001 2510 0002 7773 2912 Re: Approval for Saint Paul Landfill Closure Plan, #0225-PR001. Letter from Leslie F. Simmons, ADEC Solid Waste Program Coordinator, Southcentral and Western Alaska to John Lindsay, U.S. Department of Commerce, National Oceanic and Atmospheric Administration. August 7.

Buckel, S. 1990. Environmental Compliance Survey Report, Pribilof Islands, Alaska. NOAA Facilities and Logistics Division, Western Administrative Support Center.

Colombia Environmental Sciences, Inc. (CESI). 2001a. Final Interim Removal Action Report, St. Paul Island, Alaska, Drum Dump, Cell A of the Former Landfill. March 28.

CESI. 2001b. Draft Groundwater Characterization Report. March 15.

U.S. Environmental Protection Agency (EPA). 1996. *Test Methods for Evaluating Solid Waste*. EPA/SW-846. Third Edition and Updates. December

Foster Wheeler Environmental Corporation 2000. Landfill Pad Construction Report, Delivery Order 77, PCS Remediation, St. Paul Island, Pribilof Islands, Alaska. November 7.

Harmon, C. H. 1983. Field and Project Report, Waste Disposal St. Paul Island. State of Alaska, Department of Environmental Conversation. File No. 10-1-1983.

IT Alaska Corporation. 2002. Draft Annual Groundwater Monitoring Report 2001, St. Paul Island, Alaska. March.

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. 2003a. Draft Corrective Action Plan St. Paul Landfill Closure. June 30

NOAA. 2003b. Record of Email originating from Greg Gervais of NOAA PPO, sent October 14, 2003, responded to by Louis Howard of ADEC on the same day.

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

NOAA. 2004. Draft Closure Report, Site 6/TPA Site 5b – St. Paul Landfill Cell A, Site 7/TPA Site 5c – St. Paul Landfill Cell B (Drum Dump), Site 8/TPA Site 5d – St. Paul Landfill Cell B (Solid Waste). Advance Copy, internal only, July 30.

Nortech Environmental and Engineering Consultants (Nortech). 2001. Site Cleanup Report – Initial Draft, St. Paul Landfill Drums and Debris Removal (Two-Party Agreement Site 5). April 12.

Polarconsult Alaska, Inc. (Polarconsult). 2002. Landfill Closure Plan St. Paul Landfill St. Paul Island, Alaska. April 2.

Tetra Tech EM Inc. 2004. Draft Closure Report Site 6/TPA Site 5b – St. Paul Landfill Cell A Site 7/TPA Site 5c – St. Paul Landfill Cell B (Drum Dump) Site 8/TPA Site 5d – St. Paul Landfill Cell B (Solid Waste) St. Paul Island, Alaska. October 28.

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

For the National Oceanic and Atmospheric Administration



John Lindsay
NOAA, Pribilof Project Office

11/10/04
Date

Approvals: In accordance with Paragraph 59 of the Two Party Agreement, this is to confirm that all corrective action has been completed to the maximum extent practicable at the St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6, 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

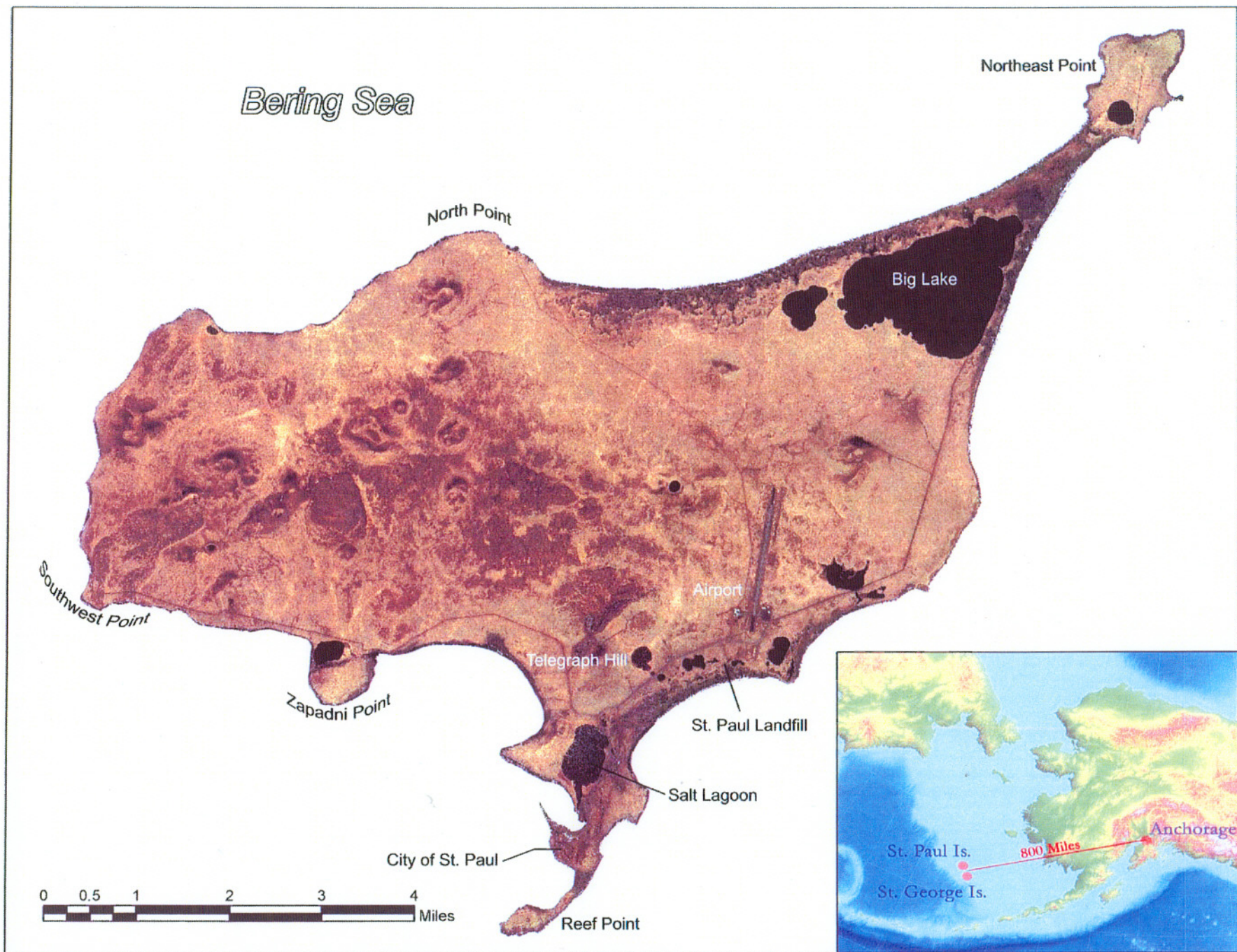


Louis Howard
Alaska Department of Environmental Conservation
Remedial Project Manager

Nov 15, 2004
Date

Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska

FIGURES



<p>Figure 1</p>	<p>St. Paul Island Vicinity Map St. Paul Landfill Cell A NOAA Site 6/TPA Site 5b St. Paul Island, Alaska</p>
---------------------	---

Source: Ikonos Satellite Imagery, 2001



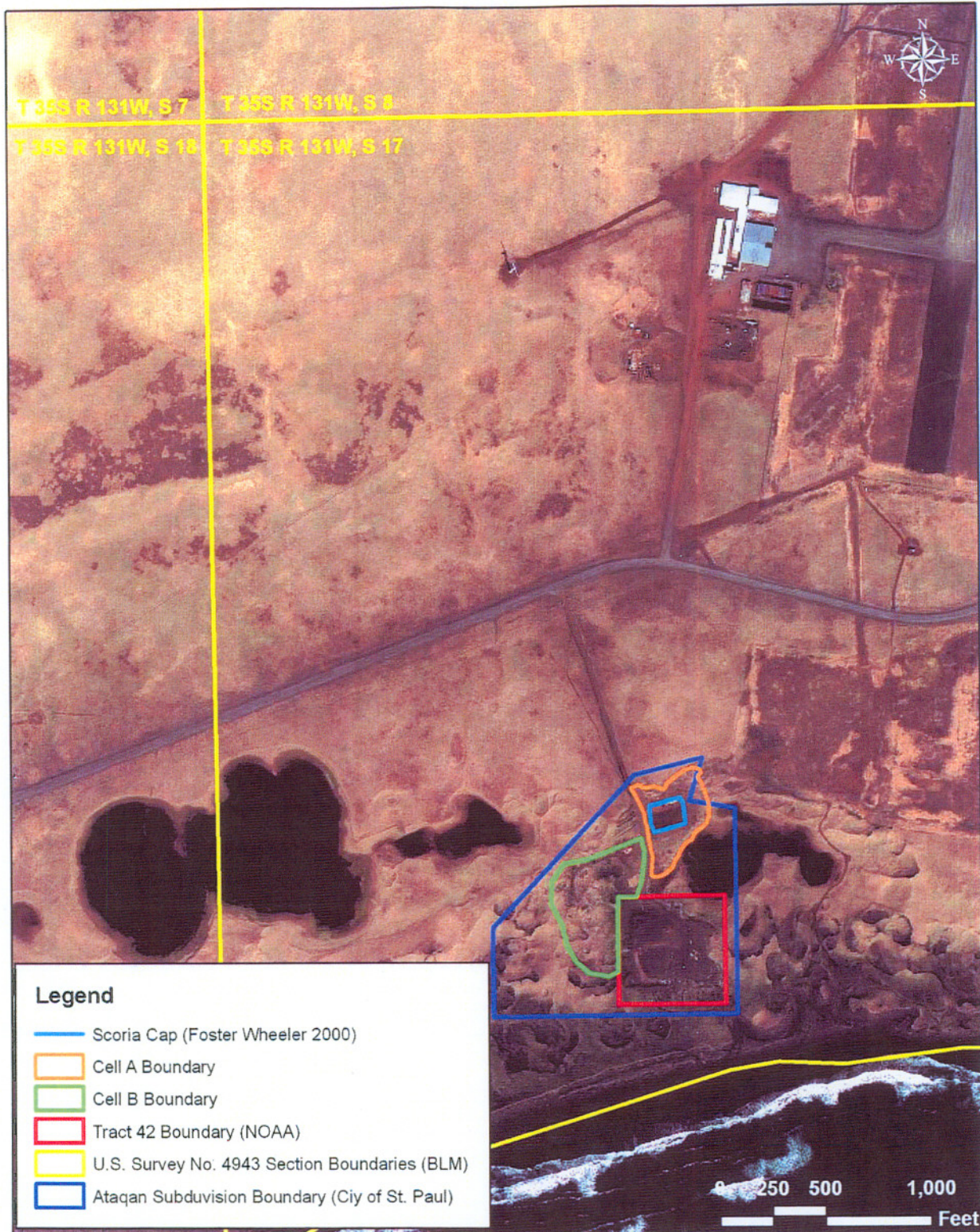


Figure
2

Legal Property Description Map
St. Paul Landfill Cell A
NOAA Site 6/TPA Site 5b
St. Paul Island, Alaska

Sources: Tract 42 Boundary and Land Survey Sections (BLM MTPs 1983), Ataqaq Subdivision Boundary (Polarconsult 1997), Cell A Boundary (NOAA GIS 2004), Satellite Imagery (Ikonos 2001).



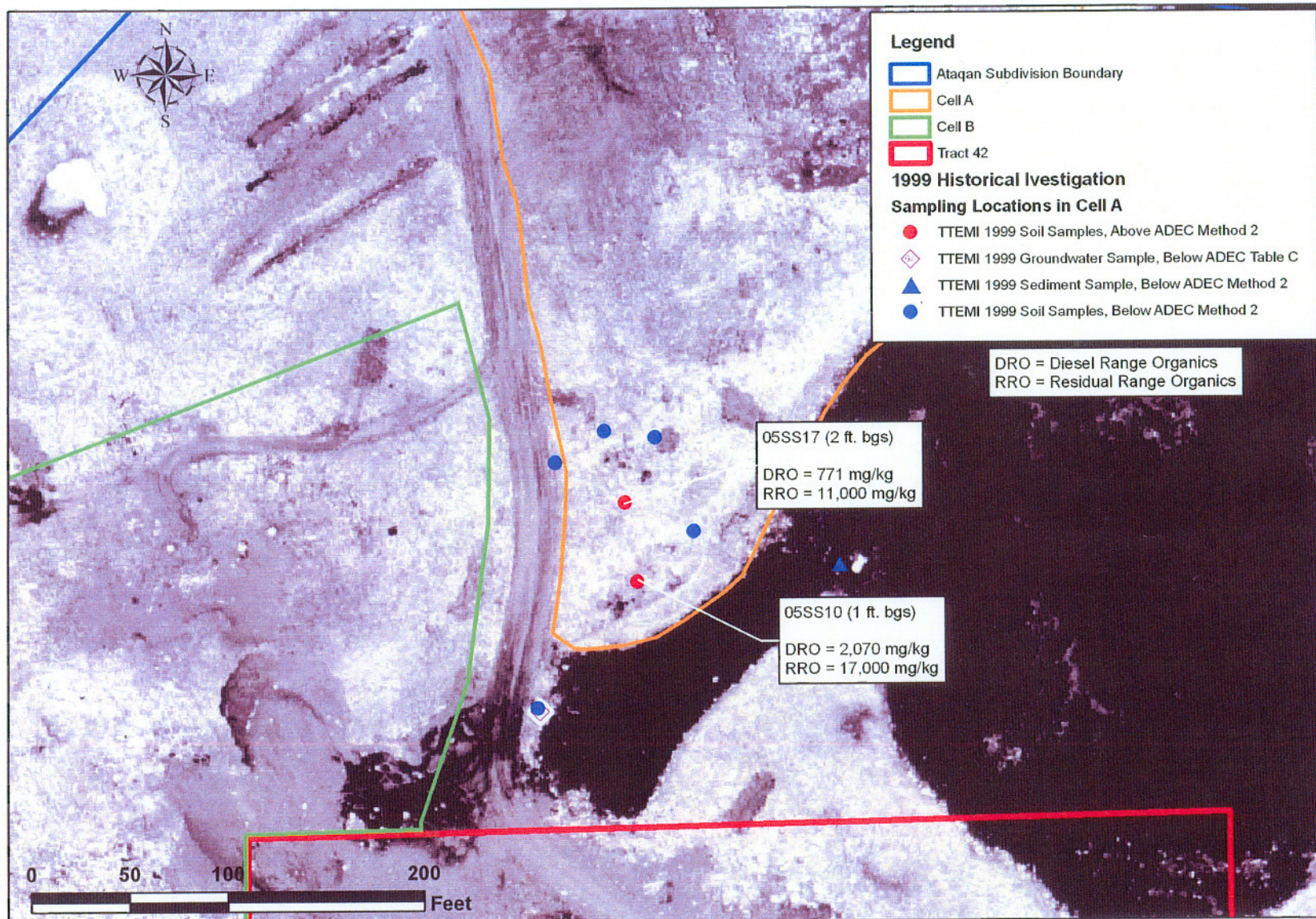
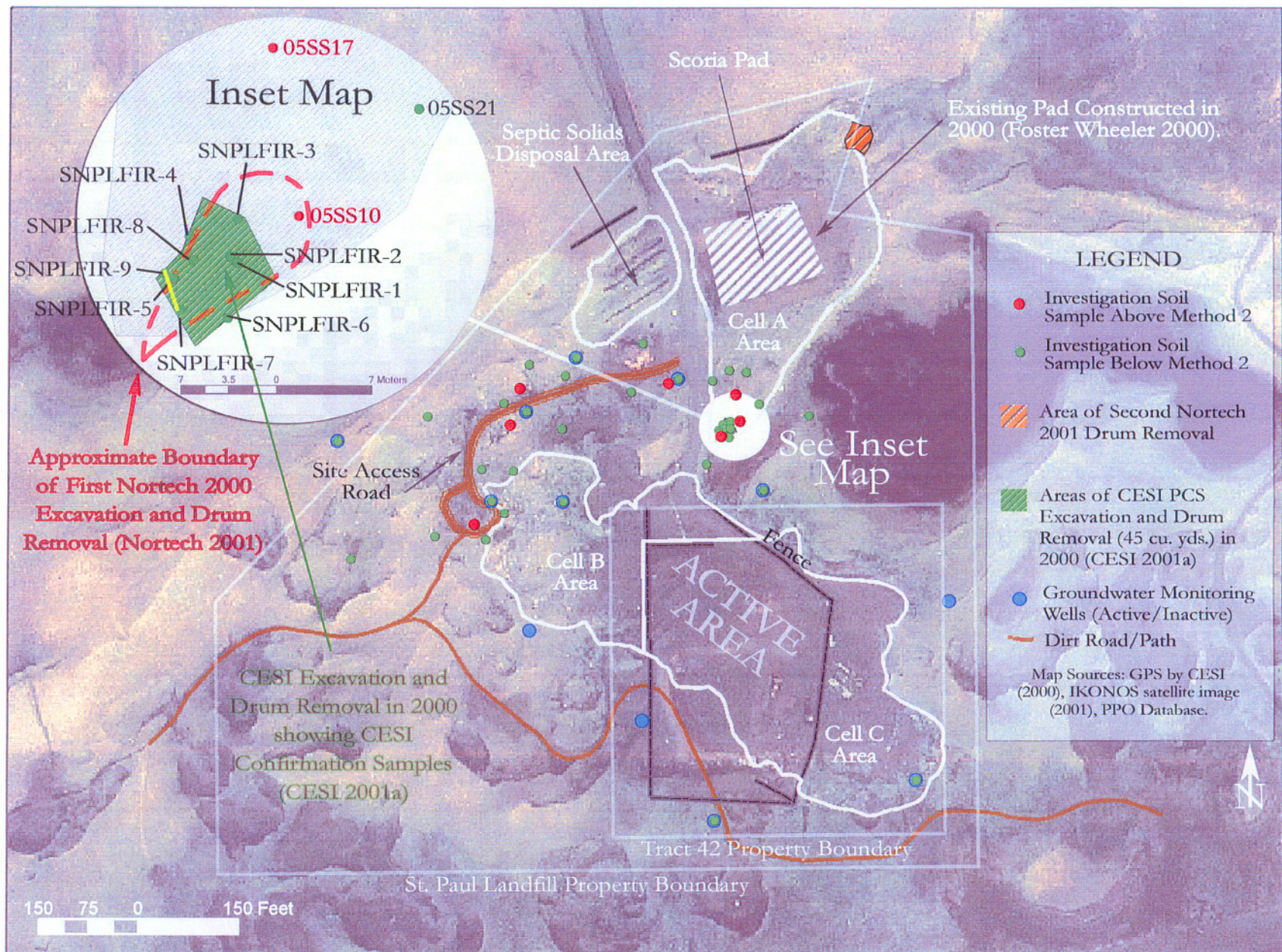


Figure
3

Historical Sampling Results
St. Paul Landfill Cell A
NOAA Site 6/TPA Site 5b
St. Paul Island, Alaska

Sources: Ataqan Subdivision Boundary (Polarconsult 1997), Cell Boundaries (NOAA GIS 2004), Tract 42 Boundary (BLM MTPs 1983), Historical Sampling Locations and results (Pribilof Database 2004), Aerial Photo (Davis 2000).





Figure

4

Previous Remedial Actions
 St. Paul Landfill Cell A
 NOAA Site 6/TPA Site 5b
 St. Paul Island, Alaska

Sources: NOAA PPO Database,
 Satellite Imagery (Ikonos 2001).



Please note: results presented represent the maximum detection for each sampling cycle, and results listed in red indicate Table C exceedances.

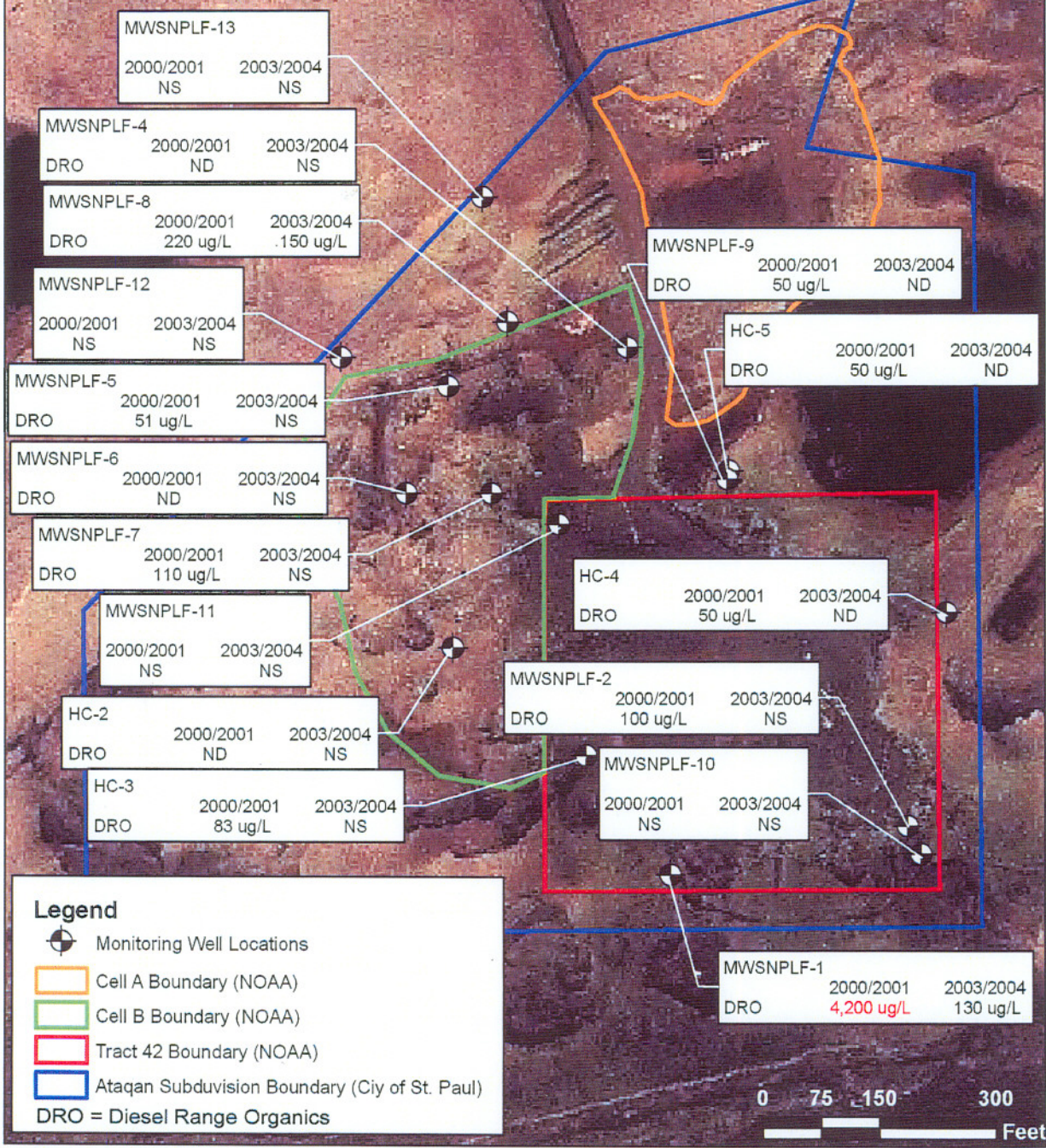


Figure 5

Groundwater Sampling Results
St. Paul Landfill Cell A
NOAA Site 6/TPA Site 5b
St. Paul Island, Alaska

Sources: Tract 42 Boundary (BLM MTPs 1983), Ataqaq Subdivision Boundary (Polarconsult 1997), Cell B Boundary (NOAA GIS 2004), Well Locations (NOAA GPS 2004), Satellite Imagery (Ikonos 2001).



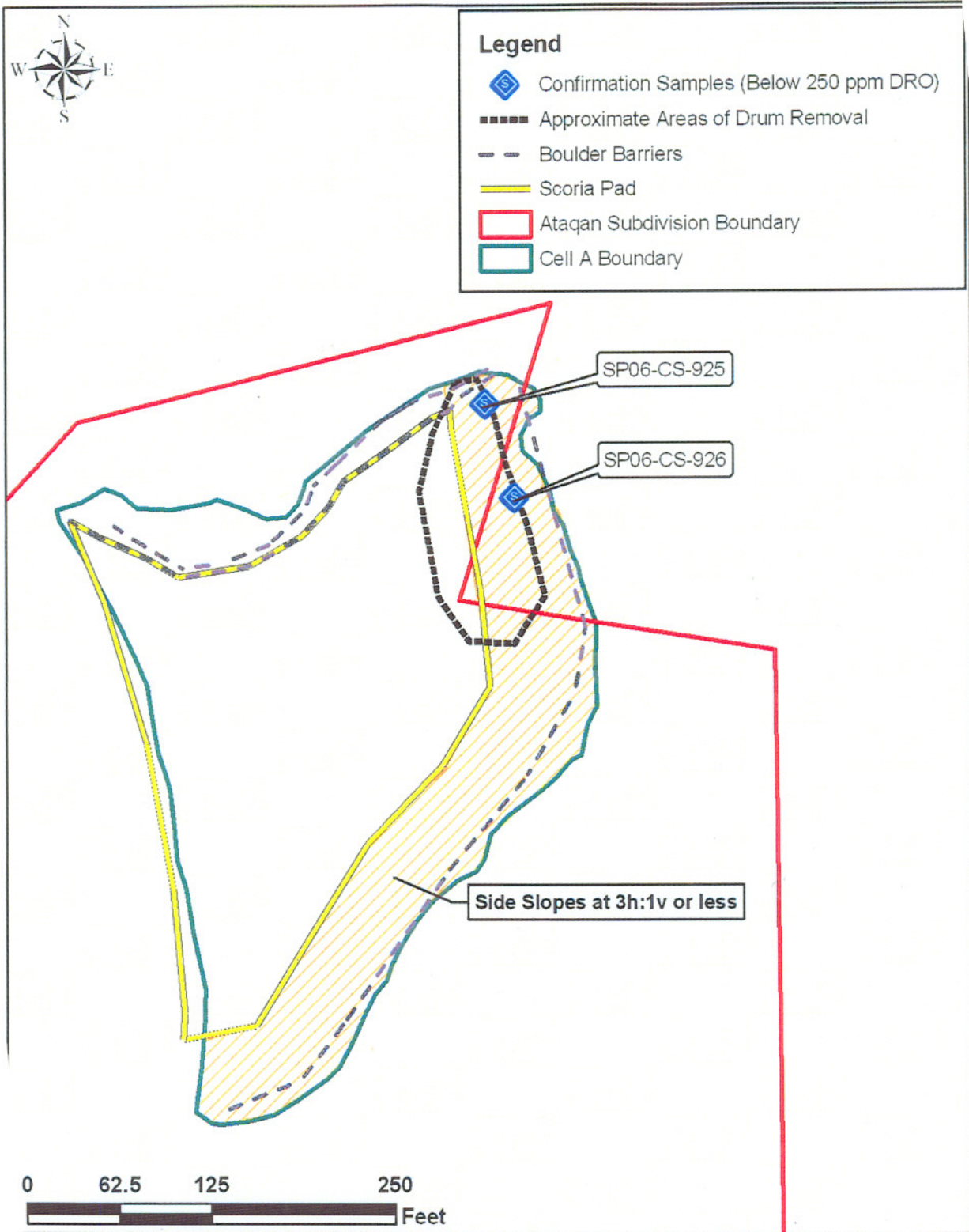


Figure
6

Sampling Location Map
St. Paul Landfill Cell A
Site 6/TPA Site 5b
St. Paul Island, Alaska

Sources: Excavation Areas, Scoria Pad, and Confirmation Sample Locations (NOAA GPS 2003), Ataqaq Subdivision Boundary and Cell A Boundary (NOAA GIS 2004).



**Request for Conditional Closure
St Paul Landfill Cell A, TPA Site 5b, NOAA Site 6
St. Paul Island, Alaska**

TABLES

TABLE 1

ANALYTICAL DATA SUMMARY - BTEX, GRO, DRO, AND RRO
ST. PAUL LANDFILL CELL A
ST. PAUL ISLAND, ALASKA
(Page 1 of 2)

Sample Number	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Gasoline-range Organics (mg/kg)	Diesel-range Organics (mg/kg)	Residual-range Organics (mg/kg)
Cell A Confirmation Samples									
SP06-CS-925 ^a	10/09/03	--	0.02	0.03	0.09	0.13	22	200 J	2,100 J
SP06-CS-926 ^a	10/09/03	--	0.03 U	0.03 U	0.03 U	0.09 U	2 U	59 J	300 J
Waste Sample									
SP07-CS-927 ^b	10/24/03	--	1.7 J	3.7 J	6.0 J	11 J	510 J	1,600	7,500
Trip Blank Samples									
Trip blank	09/04/04	--	0.02 U	0.02 U	0.02 U	0.02 U	1 U	--	--
Trip blank	09/17/03	--	0.02 U	0.02 U	0.02 U	0.02 U	1 U	--	--
<i>ADEC Method Two Cleanup Level^c</i>			0.02 ^d	5.4	5.5	78	300	250	10,000

TABLE 1

ANALYTICAL DATA SUMMARY - BTEX, GRO, DRO, AND RRO
ST. PAUL LANDFILL CELL A
ST. PAUL ISLAND, ALASKA

(Page 2 of 2)

Notes

bold	Indicates a concentration exceeding soil cleanup level. Although reporting limits for benzen sometimes exceeded the ADEC Method Two cleanup level, no reporting limits exceeded the 1991 cleanup level of 0.5 mg/kg identified under the TPA.
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
J	The analyte was positively identified, but the numerical value is an estimated concentration.
mg/kg	Milligram per kilogram
--	Not analyzed
NA	Not available
PCS	Petroleum-contaminated soil
RRO	Residual-range organic compounds
TPA	Two-Party Agreement
U	The analyte was analyzed for, but not detected above the sample reporting limit.
a	Sample collected from the buried drum excavation in the northeast portion of Cell A.
b	Sample collected from tar material identified in drums removed from Cell A and Cell B.
c	Cleanup level is obtained 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.
d	Under the TPA, NOAA is required to comply with the 1991 ADEC cleanup level for benzene (0.5 mg/kg); however, whenever possible, NOAA has attempted to remove all contamination above the current ADEC Method Two cleanup level (0.02 mg/kg).

TABLE 2

ANALYTICAL DATA SUMMARY - POLYNUCLEAR AROMATIC HYDROCARBONS
ST. PAUL LANDFILL CELL A
ST. PAUL ISLAND, ALASKA
(Page 1 of 1)

Sample Number	Sample Date	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)	Benzo(a)anthracene (mg/kg)	Chrysene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Benzo(a)pyrene (mg/kg)	Indeno(1,2,3-cd)pyrene (mg/kg)	Dibenzo(a,h)anthracene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
Cell A Confirmation Samples																		
SP06-CS-925 ^a	10/09/03	--	0.056	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.073	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
SP06-CS-926 ^a	10/09/03	--	0.007	0.005 U	0.005 U	0.005 U	0.009	0.005 U	0.007	0.009	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Waste Sample																		
SP07-CS-927 ^b	10/24/03	--	38	2.5 U	2.5 U	2.5 U	4.2	2.5 U	2.5 U	3.5	2.5 U	8	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
<i>ADEC Method Two Cleanup Level^c</i>			43	NA	210	270	NA	4,300	NA	1,500	6	620	11	110	1	11	1	NA

Notes

bgs Below ground surface
 mg/kg Milligram per kilogram
 -- Not analyzed
 NA Not available
 PCS Petroleum-contaminated soil
 U The analyte was analyzed for, but not detected above the sample reporting limit.

^a Sample collected from the buried drum excavation in the northeast portion of Cell A.
^b Sample collected from tar material identified in drums removed from Cell A and Cell B.
^c Duplicate of sample number SP07-SS-910.
^d Cleanup level is obtained from Title 18 of the *Alaska Administrative Code* 75 *Oil and Hazardous Substances Pollution Control

TABLE 3

ANALYTICAL DATA SUMMARY - POLYCHLORINATED BIPHENYLS
ST. PAUL LANDFILL CELL A
ST. PAUL ISLAND, ALASKA
 (Page 1 of 1)

Sample Number	Sample Depth (feet bgs)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1016 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Aroclor 1262 (mg/kg)
Drum Contents Confirmation Samples									
SP07-CS-927 ^a	--	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
<i>ADEC Method Two Cleanup Level^b</i>		<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>

Notes

bgs Below ground surface
 mg/kg Milligram per kilogram
 -- Not analyzed
 NA Not available
 U The analyte was analyzed for, but not detected above the sample reporting limit.

a Sample collected from tar material identified in drums removed from Cell A and Cell B.
 b Cleanup level is obtained 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.