Request for Conditional Closure

Site:

The site is known as St Paul Landfill Cell B, Two-Party Agreement (TPA, NOAA 1996) Site 5d, and as National Oceanic and Atmospheric Administration (NOAA) Site 8.

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 was arbitrarily divided into three areas or cells by NOAA in 2000, for discussion and closure planning purposes. Cells A and B are currently located on property known as the Ataqan Subdivision, owned by the City of St. Paul. Cell B occupies approximately 3.949 acres (Figure 2). Cell C is located within Tract 42, a 5.78 acre parcel owned by NOAA.

Legal Property Description:

The legal description for Cell B 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 B and the greater Ataqan Subdivision. The Aleut Corporation is the subsurface estate owner.

Type of Release:

Cell B, located north and west of Tract 42, contained primarily MSW associated with historical disposal activities on St. Paul Island. Several drums containing petroleum wastes have been excavated from within Cell B, but these are considered as part of Site 7/TPA Site 5c, St. Paul Landfill Cell B (Drum Dump). Site 7/TPA Site 5c will be addressed in a separate document. No other release of contaminants has been documented.

History and Background:

The landfill area has been used as the primary landfill for the Island of St. Paul since the 1940s (CESI 2001a). Cell B was described as inactive in the Site Characterization Report (Tetra Tech 2000), with much of the area used for the disposal of all types of "residential, commercial, and industrial wastes…" as well as exposed and partially buried drums containing petroleum wastes, and lead acid batteries. Beginning in 1990, NOAA assessed the nature and extent of contamination at the site as described below in the Summary of Site Investigations. NOAA removed the majority of drums in 1994 when 774 of them were taken from the area and shipped off site for disposal (Oil Spill Consultants 1995). Following this, NOAA agreed in the TPA to close the landfill. (NOAA 1996).

In a closure plan dated April 2, 2002, NOAA proposed to close Cell B by relocating all the solid waste into Cell C, a parcel owned by NOAA (Polarconsult 2002). The closure plan was approved by ADEC on August 7, 2002 (ADEC 2002). On June 30, NOAA submitted a Draft Corrective Action Plan for closure of the landfill (NOAA 2003).

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 5 groups of drums along the unmaintained access road into the north end of the landfill (Cell B) (CESI 2001a, Buckel 1990).

In September and October 1992, NOAA contractor Harding Lawson Associates (HLA) conducted a Phase I environmental assessment that included an inventory and characterization of approximately 650 drums located at the landfill, mostly in or near Cell B. The assessment identified the presence 191 drums of concern, which were assigned to the following groups: solid grease (1 drum); nonflammable oil and water mixtures (174 drums); flammable oil and water mixtures (8 drums); water (4 drums); non-flammable mixtures of antifreeze, oil, and water (1 drum); and polychlorinated biphenyls (PCB) at concentrations greater than 50 parts per million (3 drums) (HLA 1993). Following this assessment, NOAA staged all drums on site pending future decisions. Subsequently, NOAA directed Ecology and Environment, Inc. (E&E) to prepare a preliminary assessment report that included the data generated by HLA (E&E 1992).

In 1993 and 1994, NOAA contractor Woodward-Clyde Consultants, Inc. (Woodward-Clyde) conducted a site inspection at the landfill that included the segregation of drums located at Cell B. Observations made during the inspection noted leaking and deteriorated drums, soil staining, and a strong petroleum odor. Many of the drums were determined empty. Soil samples collected by Woodward-Clyde from depths up to 5 feet below ground surface (bgs) indicated the presence of volatile organic compounds, semi-volatile organic compounds, polynuclear aromatic hydrocarbons (PAH), and metals; however, these contaminants were present at concentrations below ADEC Method Two cleanup levels. In addition, analytical data for sediment and surface water samples collected from the pond in the eastern portion of the landfill did not identify any contaminants of concern (Woodward-Clyde 1994).

During the fall of 1994, NOAA contractor Oil Spill Consultants collected 774 drums from the St. Paul Landfill area and disposed them off island (Oil Spill Consultants 1995). The project report does not specify the locations of these drums within the greater landfill area.

Between August and October 1999, NOAA contractor Tetra Tech conducted site characterization activities at Cell A and Cell B, which included the collection of soil, sediment, and groundwater samples. Analytical data for soil samples indicated the presence of petroleum contaminated soil (PCS) with diesel-range organic compounds (DRO) and residual-range organic compounds (RRO) at concentrations above cleanup levels at 3 locations in and near the north end of Cell B corresponding with areas of drums identified during previous investigations (Tetra Tech 2000).

During the spring and summer of 2000, NOAA contractor Nortech conducted excavations and removals of buried drums during three different field visits (Nortech 2001). Nortech removed approximately 50 buried drums from Cells A and B during the initial visit, then removed an

unspecified number of buried drums in the following two visits. During this fieldwork, Nortech also dug 25 test trenches to delineate the extent of the areas of solid waste disposal.

In 1996, NOAA contractor Hart Crowser, Inc. (Hart Crowser) installed five monitoring wells at the landfill, including two in the vicinity of Cell B. Although analytical data for groundwater samples collected from these wells indicated the presence of toluene and lead, these compounds were not present at concentrations above cleanup levels. Hart Crowser concluded that landfill operations were not significantly impacting groundwater quality (Hart Crowser 1996).

During the summer of 2000, NOAA contractor CESI installed nine groundwater monitoring wells in the vicinity of Cell B; the wells were screened in both the upper and lower aquifers. Although analytical data for groundwater samples collected from the landfill revealed the presence of DRO, the data did not identify any contaminants at concentrations above cleanup levels (CESI 2001b).

NOAA contractors conducted quarterly groundwater monitoring from June 2000 to September 2001 (IT 2002) and from October 2003 to July 2004 (report scheduled to be submitted in November or December 2004) including as many as 12 monitoring wells in the landfill area, most of which are upgradient, within, or downgradient of, Cell B (Figure 3). 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 ug/l, (Figure 3), 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. The City of St. Paul MSW burn crew staged their igniter materials in close proximity to this well prior to and during the sampling event.

During the 2003-2004 sampling, only five wells were sampled by NOAA 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, NOAA decommissioned an eighth well in the vicinity of the landfill (MWSNPLF-8), and installed four new monitoring wells (MWSNPLF 10 through MWSNPLF 13). Results from sampling of these wells is not yet published.

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.

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. The waste in Cell B was known to cover an irregular area at varying depths. NOAA agreed to consolidate the wastes to the active landfill area within the NOAA owned Tract 42 to minimize the impact on the area, and to then cap the Tract 42 landfill in compliance with ADEC solid waste management regulations in 18 AAC 60 (ADEC 2003).

The objective for Cell B (Solid Waste) TPA Site 5d, NOAA Site 8 was simply to remove deposits of MSW, relocating it to Tract 42 for proper landfilling. Cleanup of contaminated soil was not an objective for Site 8, so there are no applicable soil cleanup levels.

Summary of Corrective and Closure Actions:
NOAA initiated closure activities in Cell B by excavating and relocating MSW to Tract 42 (Figure 4). NOAA excavated all MSW from Cell B and relocated it to within an area set back 50-feet inside the boundary of Tract 42 (Figure 5). NOAA excavated test pits throughout Cell B in order to determine the extent of MSW, which was identified at depths up to 8 feet bgs in various areas. NOAA used excavators and dump trucks to load and transport MSW to Tract 42. Upon placement, NOAA shaped and compacted the MSW in approximately 18-inch lifts using a bulldozer and vibratory compactor. NOAA initially placed the MSW in the southeast corner of Tract 42, and placement continued along the southern boundary of this area to the southwest corner as lifts were completed. When NOAA encountered large objects including concrete and boulders that could not be incorporated into Tract 42, they were segregated and staged separately to avoid interference with the removal and placement of MSW.

Cell B closure activities also included the removal and relocation of MSW from between the Tract 42 boundary and the 50 foot setback line and a small area outside the northern boundary of Tract 42, beneath the access road (Figure 5). Activities in this area required that NOAA remove and reconstruct the existing access road using approximately 1,298 CY of sand obtained from sand dunes located primarily in the southwest portion of the Ataqan Subdivision with approval from the City of St. Paul, and approximately 114 CY of scoria obtained from the portion of the Telegraph Hill quarry owned by NOAA.

During closure activities, NOAA removed a total of approximately 13,560 CY of MSW from Cell B and relocated it to within the 50-foot setback area at Tract 42.

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 action, to the maximum extent practicable, at the St Paul Landfill Cell B (Solid Waste), TPA Site 5d, NOAA Site 8, in accordance with the Agreement and that ADEC grant a conditional closure that will not require further remedial action from NOAA.

References:

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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.

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For the National Oceanic and Atmospheric Administration

John Lindsay
NOAA, Pribilof Project Office

2/2/05
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 St Paul Landfill Cell B (Solid Waste), TPA Site 5d, NOAA Site 8, 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

FIGURES

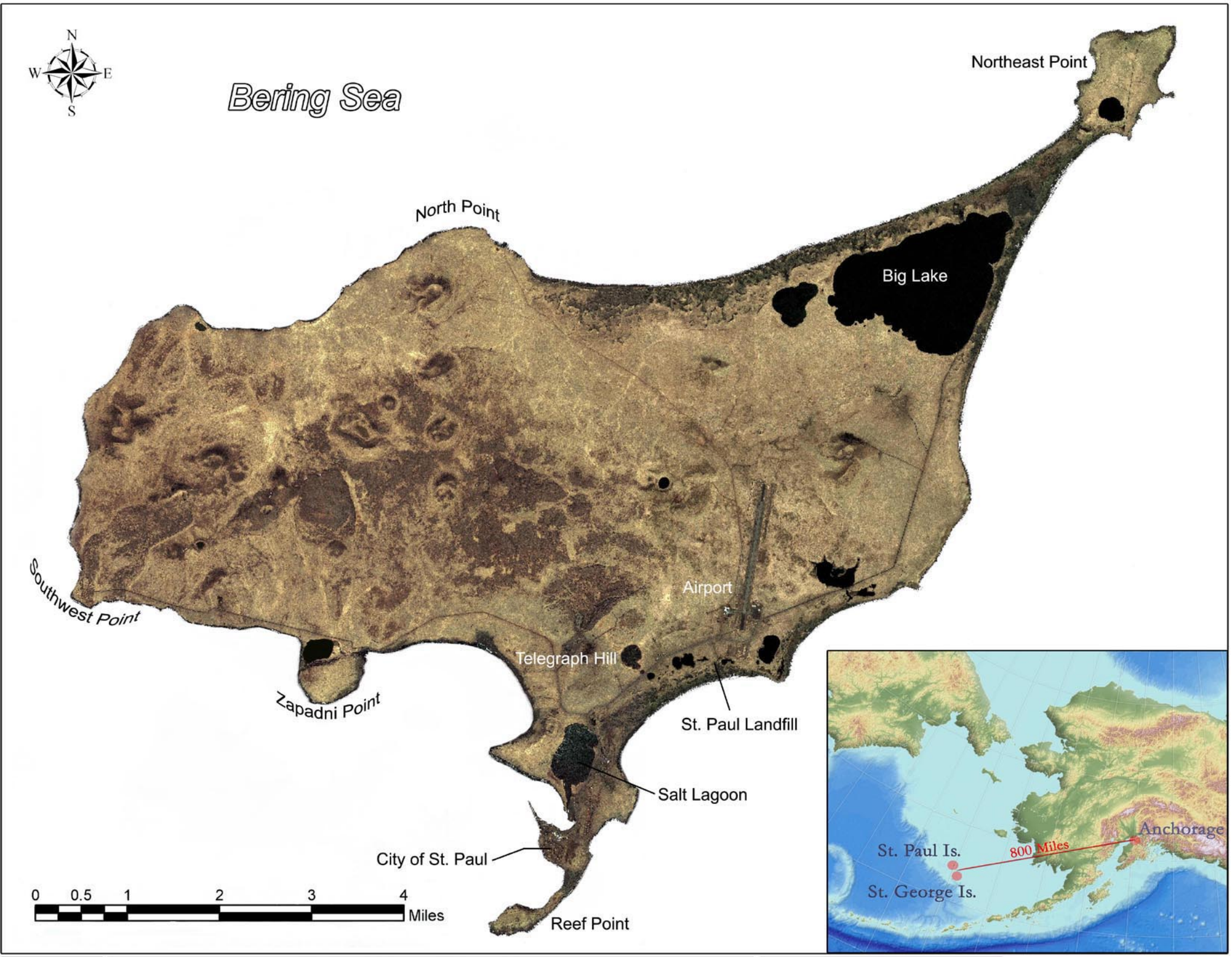

Figure 1	St. Paul Island Vicinity Map St. Paul Landfill Cell B (Solid Waste) NOAA Site 8/TPA Site 5d St. Paul Island, Alaska	Source: Ikonos Satellite Imagery, 2001	Pribilof Islands Restoration Project

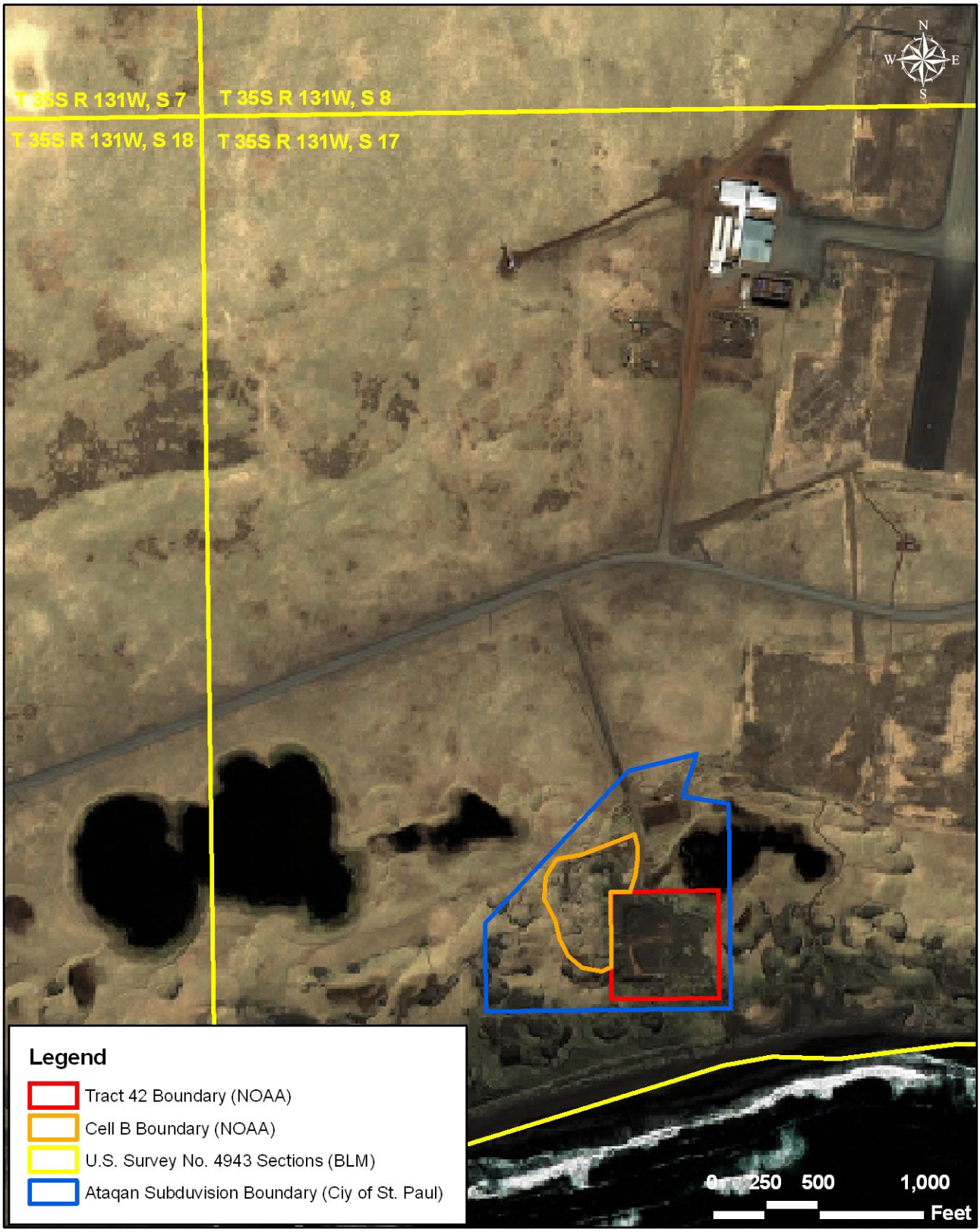

Figure 2	Legal Property Description Map St. Paul Landfill Cell B(Solid Waste) NOAA Site 8/TPA Site 5d St. Paul Island, Alaska	Sources: Tract 42 Boundary and Land Survey Sections (BLM MTPs 1983), Ataqan Subdivision Boundary (Polarconsult 1997), Cell B Boundary (NOAA GIS 2004), Satellite Imagery (Ikonos 2001).

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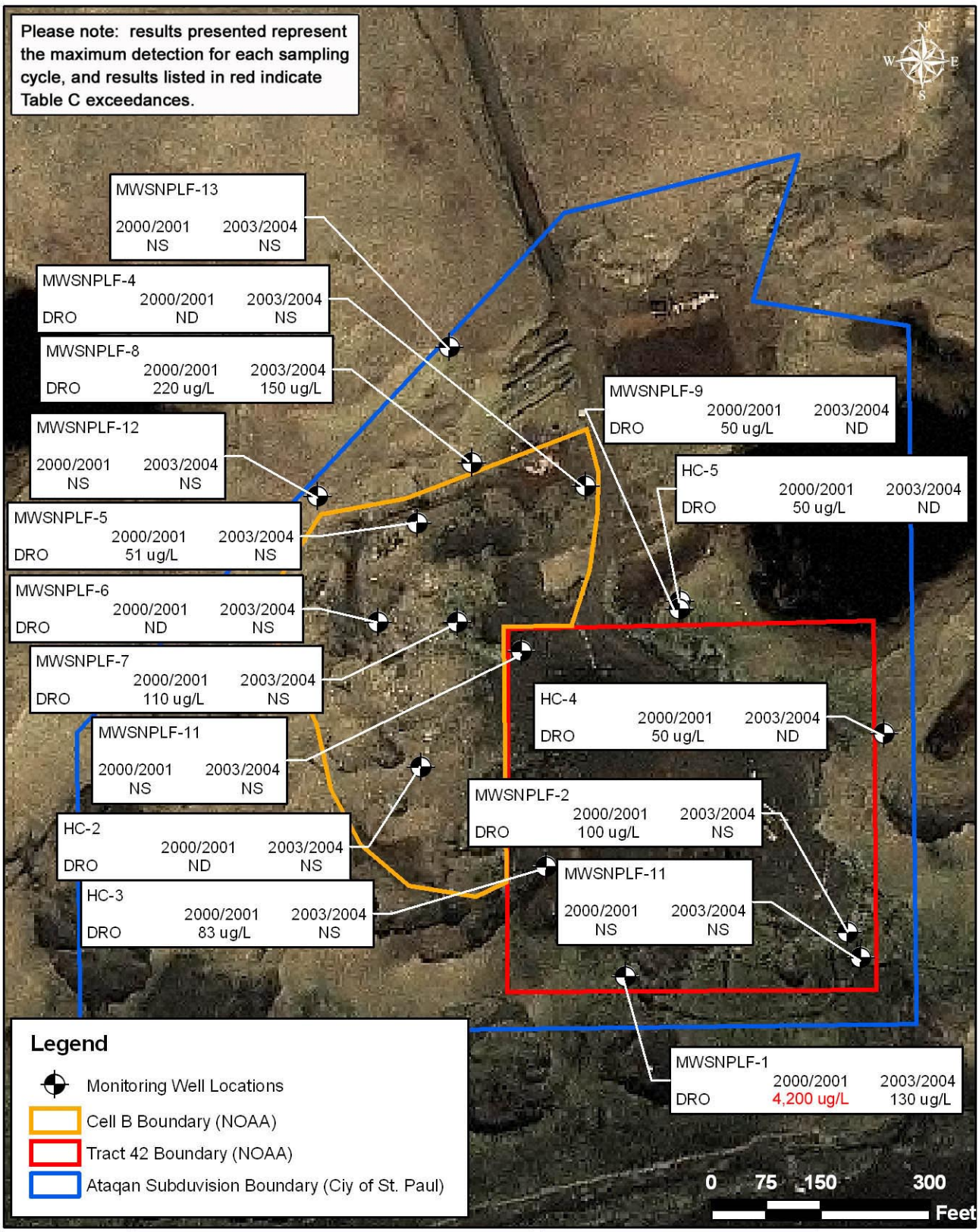

Figure 3

Groundwater Sampling Results
St. Paul Landfill Cell B (Solid Waste)
NOAA Site 8/TPA Site 5d
St. Paul Island, Alaska

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

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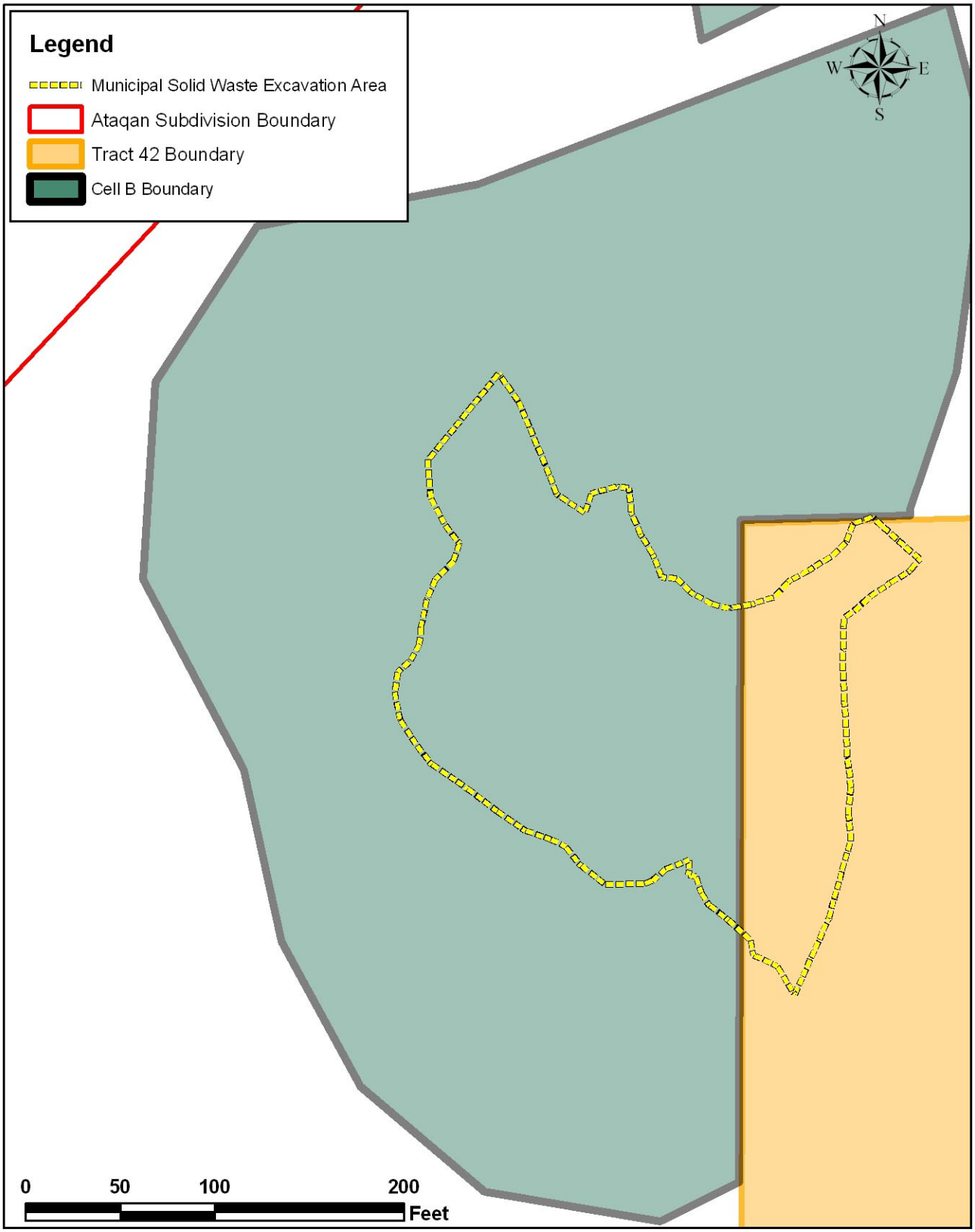

Figure 4	MSW Excavation Area in Cell B St. Paul Landfill Cell B (Solid Waste) Site 8/TPA Site 5c St. Paul Island, Alaska	Sources: Excavation Areas, (NOAA GPS 2003), Ataqan Subdivision Boundary and Cell B Boundary (NOAA GIS 2004), Tract 42 Boundary (BLM MTPs 1983).

Pribilof Islands Restoration Project

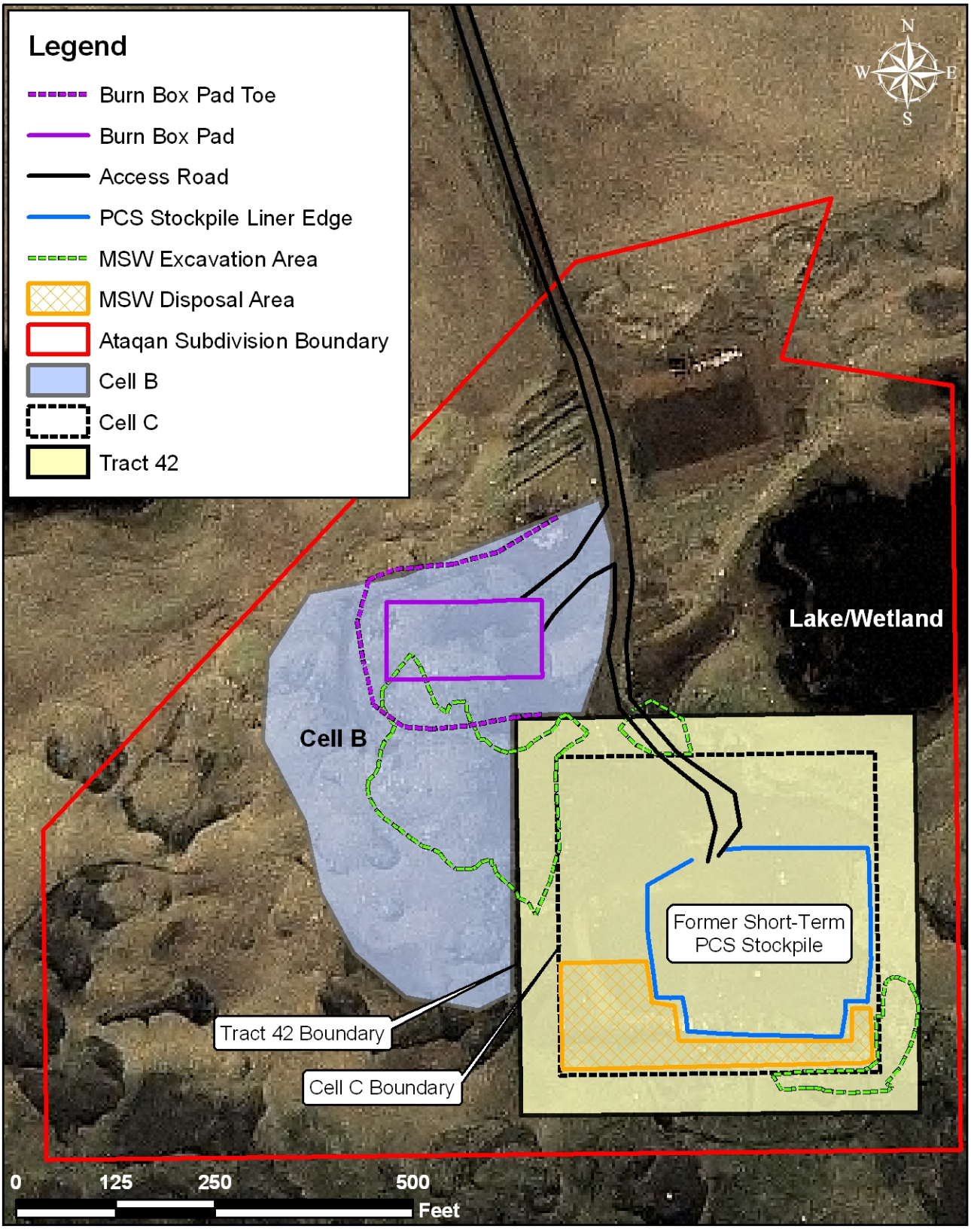

Figure 5	MSW Relocation Area in Cell C St. Paul Landfill Cell B (Solid Waste) NOAA Site 8/TPA Site 5d St. Paul Island, Alaska	Sources: Excavation Areas, Burn Box Pad, Access Road, Stockpile Locations, Cell C, and Tract 42 (NOAA GPS 2003) Ataqan Subdivision Boundary (NOAA GIS 2004), Satellite Imagery (Ikonos 2001).

Pribilof Islands Restoration Project