Decision Document
Diesel Tank (SS010)

FINAL

Point Lonely SRRS, Alaska

Prepared By

United States Air Force
Pacific Air Forces Command
611 CES, Alaska

August 2008

PART 1: THE DECLARATION

SITE NAME AND LOCATION: This Environmental Restoration Program (ERP) site is known as the Diesel Tank, SS010. It is located at Point Lonely Short Range Radar Station (SRRS), located adjacent to the Beaufort Sea (Figure 1-1). The Alaska Department of Environmental Conservation (ADEC) Record Key number for this site is 199731X106201 and it is located at 70°54'33.14" N latitude, 153°14'24.66" W longitude (these coordinates represent the location of sample SS10SS01-1.5, which is at the approximate center of the site). The Point Lonely SRRS is not listed on the National Priorities List (NPL).

STATEMENT OF BASIS AND PURPOSE: This decision document presents the U.S. Air Force's (USAF's) decision that no action is necessary at SS010 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). No CERCLA action is being proposed or selected because no CERCLA hazardous substances are present. This decision document was developed in accordance with the Defense Environmental Restoration Program (DERP), 10 United States Code (USC) 2701, consistent with CERCLA, 42 USC 9601 (et seq.); Executive Order 12580, 52 Federal Register 2923, and to the extent practicable, with Title 40, Part 300 of the Code of Federal Regulations (CFR): National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Releases at SS010 are solely petroleum products, and under CERCLA 101 (14) and (33), petroleum products, including any fraction or derivatives of crude oil, are excluded from the definitions of hazardous substances, pollutants or contaminants. Therefore, the site is being addressed in accordance with State of Alaska laws and regulations.

This decision is based on the Administrative Record file for this site. The Administrative Record can be accessed by contacting the Community Relations Coordinator at (907) 552-4506 or (800) 222-4137. A web site with some documents is available at: http://www.adminrec.com/PACAF.asp?Location=Alaska.

The CERCLA lead agency addressing SS010 is the USAF and the support agency is the ADEC. The USAF and the State of Alaska, through the ADEC, agree with the decision of no further action (NFA) under CERCLA. The U.S. Environmental Protection Agency (USEPA) has deferred regulatory authority at Point Lonely SRRS to the ADEC.

DESCRIPTION OF THE SELECTED REMEDY UNDER CERCLA: No remedy has been proposed or selected under CERCLA, as releases at the site are excluded from the CERCLA definitions of hazardous substances, pollutants, or contaminants.

STATUTORY DETERMINATIONS: Because only fuel and related substances are associated with this site, no action is required under CERCLA. Petroleum is excluded from the definition of hazardous substances and pollutants and contaminants under 42 USC § 9601 (14) and (33). Releases of petroleum and related substances identified at SS010 are being addressed in accordance with State of Alaska laws and regulations.

DESCRIPTION OF THE SELECTED REMEDY UNDER STATE LAW: The risk attributed to the concentrations of petroleum and related substances detected at SS010 has been determined to be insignificant to human health and the environment in its present location. The

detected substances were all below risk-based thresholds established by ADEC for residential land use.

No contaminants remain above ADEC Method Two soil cleanup levels for the Arctic Zone (18 Alaska Administrative Code (AAC) 75.341, Tables B1 and B2). These cleanup standards meet the risk management standards of 18 AAC 75.325 (h), (i.e., the risk from hazardous substances does not exceed a cumulative carcinogenic risk of 1 in 100,000 and a cumulative non-carcinogenic hazard index of 1.0). The site conditions are protective of human health under all current and projected site uses, including unrestricted residential land use.

Therefore, no further investigation or cleanup is required or proposed under 18 AAC 75. However, in accordance with 18 AAC 75.325 (i), approval shall be obtained from ADEC prior to disposing of or transporting soil from Site SS010.

AUTHORIZING SIGNATURE: These signatures document the USAF and ADEC approval of the remedy selected in this Decision Document for the Diesel Tank (SS010) at Point Lonely SRRS, Alaska.

This decision may be reviewed and modified in the future if new information becomes available which indicates the presence of contamination or exposure that may cause a risk to human health or the environment.

8/29/08

JOHN HALVERSON
DOD Cleanup Unit Lead
Federal Facilities Environmental Restoration
Alaska Department of Environmental Conservation

Date

27 AUG 2008

BRENT A. JOHNSON
Colonel, USAF
Commander, 611th Air Support Group

Date

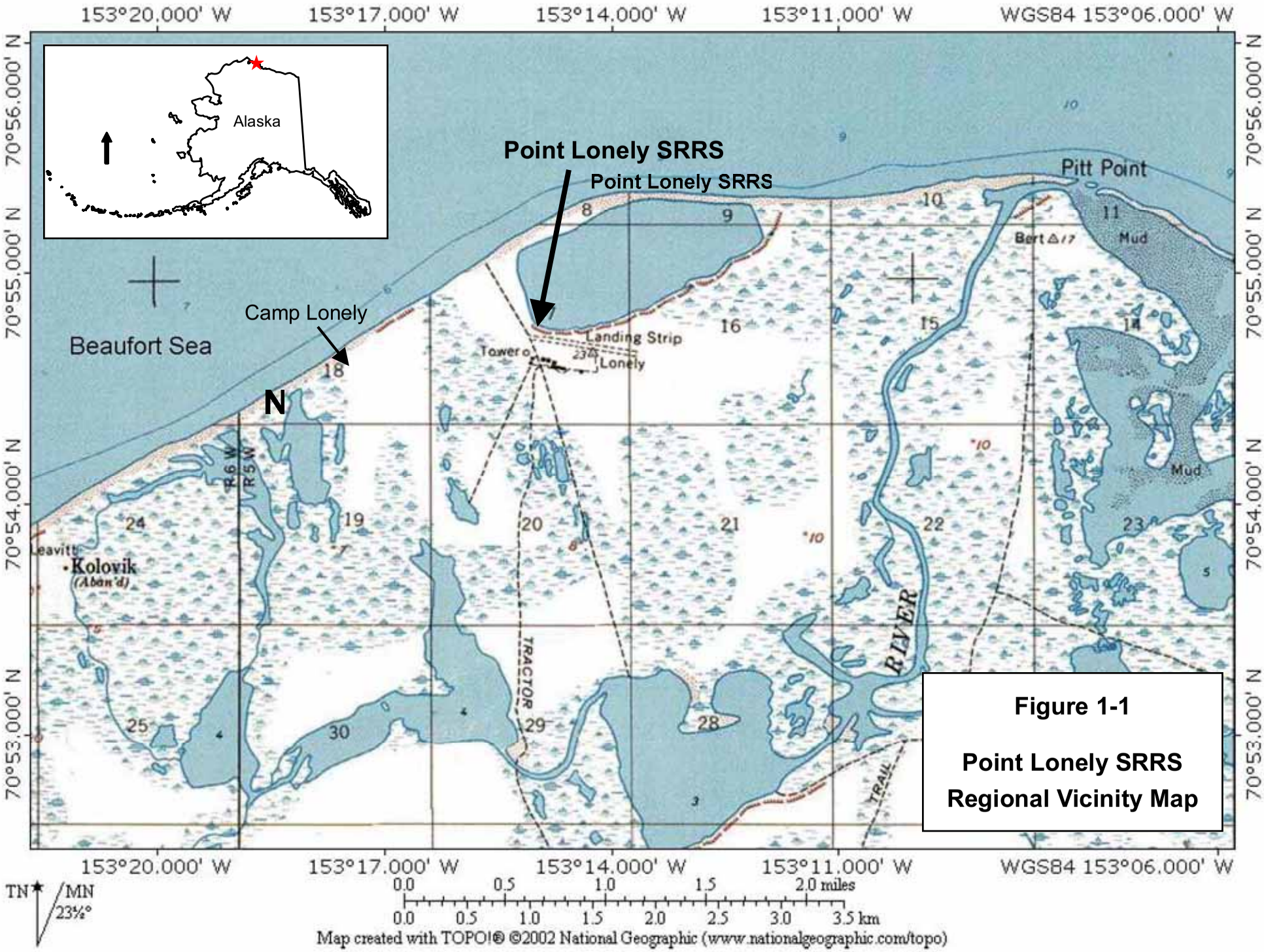

Figure 1-1

Point Lonely SRRS
Regional Vicinity Map

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PART 2: THE DECISION SUMMARY

SITE NAME, LOCATION, AND DESCRIPTION: The area is designated as SS010, the former location of a 20,000-gallon diesel fuel tank. SS010 is part of Point Lonely SRRS (Figure 1-1). It is on the south side of the main gravel pad. The site currently consists of a gravel containment area and a pumphouse located west of the berm. Vegetated wetlands surround the site to the south. The tank supports and the related piping connecting to the pumphouse are still present. The piping will be inspected during Clean Sweep operations in order to verify there is no product present. Product, if present, will be removed and the pipeline will be capped and marked as out-of-use. A high-density polyethylene liner covered with approximately 3-4 inches of gravel is located within the containment berm. Based on reviews of aerial photos, the 20,000 gallon aboveground storage tank was removed from the site between 1981 and 1992.

Groundwater is not a viable current or future source of drinking water at Point Lonely SRRS because the site is underlain by 650 to 1,330 feet of continuous permafrost and does not contain a reliable year-round high quality aquifer above the permafrost. Tundra ponds are present immediately adjacent and east of the bermed containment area and a thin saturated zone (active zone) was encountered in most of the soil borings at the site.

SITE HISTORY AND ENFORCEMENT ACTIVITIES: Point Lonely SRRS, also known as POW-1, was operated as an auxiliary Distant Early Warning Line Station beginning in 1953. The high frequency radio was activated in 1953 and continued to be active until 1989. In 1993, the Point Lonely installation was converted over to a SRRS, which operated until 2005. The radar system consisted of a radar structure, support buildings, a helicopter landing area, and an airstrip used for landing fixed wing aircraft. The SRRS was unmanned except for periodic maintenance visits. There are no plans to reactivate the radar station at Point Lonely. The inactive structures at Point Lonely SRRS are scheduled for demolition in 2008 under the USAF Clean Sweep Program.

The overall cleanup strategy for Point Lonely SRRS includes the following:

- Source reduction and implementation of remedies consistent with the USAF's limited presence at the site.
- Cleaning up of soil contamination to 18 AAC 75.341 Method Two cleanup levels for the Arctic Zone [hereafter, Method Two will refer to 18 AAC 75.341 (c) and (d), Tables B1 and B2 for the Arctic Zone].
- Cleaning up petroleum soil concentrations to 18 AAC 75.341 Method One cleanup levels for the Arctic Zone [hereafter, Method One will refer to 18 AAC 75.341, Table A2] at sites considered to have a high susceptibility to coastal erosion.

SS010 is one of twelve sites located at the Point Lonely SRRS (Figure 2-1). Past activities potentially resulting in contaminant release at the Point Lonely SRRS include:

- Spills during the transfer of fuels in and out of storage tanks;
- Leaks from fuel lines, drums, and tanks;

- Spills or leaks of fuel, lubricants, or solvents during vehicle and equipment maintenance activities;
- Spills or leaks from transformers or other electrical equipment containing polychlorinated biphenyls (PCBs); and
- Disposal of wastes and other discarded material containing hazardous substances.

Some of the contaminants encountered during investigations at Point Lonely SRRS are benzene, toluene, ethylbenzene, and total xylenes compounds (BTEX); diesel range organics (DRO); gasoline range organics (GRO); polynuclear aromatic hydrocarbons (PAHs); PCBs; petroleum, oil and lubricants (POLs); residual range organics (RRO); semi-volatile organic compounds (SVOCs); metals; and volatile organic compounds (VOCs). Most of these contaminants are the result of fuel or oil spills.

The selected remedy of NFA under CERCLA and no cleanup under State of Alaska laws and regulations for SS010 fits into the overall site management plan since there are no chemicals or contaminants of concern (COCs) at the site and no remedial action is necessary in order to fulfill the overall objectives.

SS010 was investigated in 1993 and 2005. Studies and reports providing details can be found in the Administrative Record file or the Information Repository. SS010 investigations and actions are summarized or documented in the 1993 and 2005 RI reports (ICF 1996; HCG 2006), and in the proposed plan (USAF 2007).

COMMUNITY PARTICIPATION: A proposed plan (USAF 2007) that presented the cleanup alternatives and remedies proposed by the USAF for Point Lonely SRRS was submitted for public review at a public meeting in Barrow on December 13, 2007. The public comment period for the Proposed Plan was December 13, 2007 to January 11, 2008. A Proposed Plan update for site LF007 was submitted for public review on February 21, 2008. The public comment period for LF007 was extended to March 6, 2008. Both written and verbal comments were received on the Proposed Plan. Some comments were general with regard to the Point Lonely SRRS while others were site specific.

A list of comments specific to the Diesel Tank (SS010) are provided in Table A-1 of Appendix A. Public comments and the USAF's responses to those comments are contained in Appendix A.

Additional community involvement activities for Point Lonely SRRS include Restoration Advisory Board (RAB) meetings. Point Lonely SRRS is part of the Barrow RAB, which typically meets quarterly. A mailing list of interested parties is maintained and updated regularly by the Air Force Community Relations Coordinator. The administrative record for the Point Lonely SRRS contains the information used to support this decision and is accessible to the public. A website with some documents is also available to the public at: http://www.adminrec.com/PACAF.asp?Location=Alaska. An information repository for the Point Lonely SRRS is located in Barrow and is managed by the Barrow RAB co-chair, Tommy Brower III. The most recent Management Action Plan was published in 2002 (USAF 2002) and is part of the Administrative Record.

SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION: The site is not part of an operable unit. There are 12 sites at Point Lonely (Figure 2-1) being addressed under the USAF ERP; however, there is no anticipated migration of contaminants or chemical interaction between SS010 and the other sites. Response actions at this site will not affect response actions at any other site.

The overall cleanup strategy for the installation includes source reduction and implementing remedies that are consistent with the USAF's limited presence at the site. Consistent with these strategies, ADEC Method Two cleanup levels have been deemed appropriate for inland ERP sites. For sites considered to have a high probability of erosion, petroleum hydrocarbon ADEC Method One cleanup levels are considered appropriate. SS010 is located sufficiently inland that it is not considered threatened by coastal erosion.

SITE CHARACTERISTICS: Remedial Investigations (RIs) have been performed at SS010 in 1993 and 2005 (ICF 1996; HCG 2006). Results for contaminants with detections are summarized in Tables 2-1 (soil sample results) and 2-2 (sediment and surface water sample results). Sample locations and results from the 2005 RI are shown on Figure 2-2.

Soil, sediment and surface water samples were collected during the 1993 RI. The results indicated that the site was contaminated with compounds associated with diesel fuel. Soil samples were focused outside the bermed area and focused on possible migration pathways. The maximum sediment concentrations of GRO and DRO were 380 and 900 milligrams per kilogram (mg/Kg), respectively, collected at the southwest corner of the bermed area. The baseline risk assessment concluded the risk posed to human health or ecological receptors was minimal. The site was recommended for NFA due to the low contaminant concentrations and minimal risk.

During the 2005 RI, soil, sediment, and surface water samples were collected to evaluate the current site conditions and risk. Samples were analyzed for fuel related compounds. Soil samples were collected within the bermed containment area at multiple depths, and outside the containment area to assess migration pathways. The maximum DRO and RRO concentrations detected in soil were 2,510 and 572 mg/Kg, respectively. BTEX and PAH levels were low or nondetectable in soil samples. Surface water samples contained very low to nondetectable levels of BTEX and PAHs indicating there was no adverse effects to surface water. The sediment samples directly southwest of the pumphouse exceeded National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQuiRT) permissible exposure limits (PELs) [NOAA 1999] for acenaphthene, fluorene, naphthalene, and total PAHs. However, the PELs were for marine environments, and the only aquatic habitat at the site is shallow freshwater ponds. The contaminants detected in the sediments posed no significant risk as they were attributed to historical rather than current migration. The site was recommended for NFA.

There are no COCs at SS010 that require cleanup under CERCLA or 18 AAC 75. No CERCLA hazardous substances are present. No contaminants exceed Method Two cleanup levels for the Arctic Zone. These cleanup levels are protective of human health and the environment, including surface water, under current and future site conditions. The residual levels of petroleum hydrocarbons present in the soil should remain in place and degrade over time. The petroleum hydrocarbons have a low potential of migration. The site is not susceptible to erosion, and sampling has proven the current site conditions are protective of surface water. ADEC has

indicated that the remedial investigation report, which covers SS010, has met the requirements of State regulations. No additional investigation of SS010 is necessary.

STATUTORY AUTHORITY FINDING: Only fuel and related substances are associated with this site. No action is necessary under CERCLA because petroleum is excluded from the definition of hazardous substances and pollutants and contaminants under 42 USC § 9601 (14) and (33). Releases of petroleum and related substances at SS010 will be addressed in accordance with State of Alaska laws and regulations, as discussed in Part 1 (see page 1-2).

REFERENCES:

Alaska Department of Environmental Conservation (ADEC). 2006. *18 AAC 70 Water Quality Standards* December 28.

Hoefler Consulting Group (HCG) 2006. *Remedial Investigation Report for Twelve Sites, Point Lonely Short Range Radar Station, Alaska.* Prepared for the USAF. October.

ICF Technology, Inc. (ICF). 1996. *Remedial Investigation and Feasibility Study, Point Lonely Radar Installation, Alaska.* April.

National Oceanic and Atmospheric Administration (NOAA). 1999. *Screening Quick Reference Tables (SQuiRT)*. September.

United States Air Force (USAF), 2007. *Proposed Plan for Twelve ERP Sites at Point Lonely Short Range Radar Station.* December.

USAF. 2002. *United States Air Force 611th Air Support Group; 611th Civil Engineering Squadron Elmendorf, AFB Alaska; Management Action Plan Point Lonely Short Range Radar Station, Alaska.* July.

Table 2-1 SS010 Summary of Soil Sample Results

Media	Analyte	Screening Criteria		1993 RI/FS Maximum Concentration[3,4]	2005 RI/FS Maximum Concentration[3,4]	2005 RI/FS Frequency of Detections[5]
		18 AAC 75 Method Two Cleanup Level (Arctic Zone)[1]	18 AAC 75 1/10 Method Two Cleanup Level[2]			
Soil (mg/Kg)	**Fuels[6]**					
	GRO	1,400	NA	ND (2 J)	8.17	3/3
	DRO	12,500	NA	ND (150)	2,510 M	14/14
	RRO	13,700	NA	ND (300)	572	10/14
	VOCs					
	Toluene	180	18	ND (0.02)	0.0106 F	1/3
	Ethylbenzene	89	8.9	ND (0.02)	0.0341	2/3
	Xylene (total)	81	8.1	0.2 J	0.13	3/3
	PAHs					
	1-Methylnapthalene	5,500	550	NS	2.29 M	3/3
	2-Methylnapthalene	2,740	274	NS	0.638 M	3/3
	Acenaphthene	8,200	820	NS	0.0277	2/3
	Fluoranthene	5,500	550	NS	0.00687 F	1/3
	Fluorene	5,500	550	NS	0.0413 M	3/3
	Naphthalene	180	18	NS	0.445 M	2/3
	Phenanthrene	41,000	4,100	NS	0.0156	2/3
	Pyrene	4,100	410	NS	0.00412 F	1/3

Notes

1- Lowest value of ingestion or inhalation shown from 18 AAC 75.341, Tables B1 and B2, referred to as "Method Two Cleanup Levels" for the Arctic Zone.

2 - This value corresponds to one-tenth the Method Two Cleanup level. Per 18 AAC 75.340(k), a chemical $\geq$ this value must be included in cumulative risk calculations. This requirement is not applicable to GRO, DRO, RRO and lead.

4- 1993 data taken from the *Final RI/FS, Vol. 1, Point Lonely Radar Installation, Alaska* (ICF 1996).
2005 data taken from the *Final RI/FS Study Report for 12 Sites, Point Lonely SRRS, Alaska* (HCG 2006).

5- The frequency of detections is the number of times the analyte was detected in the samples collected at the site. Frequencies do not include replicate samples collected.

6- Methods used in 1993 were GRPH, DRPH and RRPH, which are comparable to current AK Methods for GRO, DRO and RRO.

Data Flags

F	Estimated quantity below the PQL
J	Estimated value
M	Matrix effect
NA	Not Applicable
ND	Compound not detected
NS	Not Sampled

Abbreviations

AAC	Alaska Administrative Code
BTEX	Benzene, toluene, ethylbenzene, and xylene
DRO	Diesel Range Organics
GRO	Gasoline Range Organics
mg/Kg	milligrams per kilogram
PAH	Polynuclear Aromatic Hydrocarbons
PQL	Practical Quantitation Limit
RI/FS	Remedial Investigation/Feasibility Study
RRO	Residual Range Organics
SRRS	Short Range Radar Station
VOC	Volatile Organic Compounds

Bold and shaded indicates an exceedance of ADEC Method Two cleanup levels.
Shaded indicates an exceedance of one-tenth ADEC Method Two cleanup levels for the Arctic Zone.

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Table 2-2 SS010 Summary of Surface Water and Sediment Sample Results

Media	Analyte	Screening Criteria			1993 RI/FS Maximum Concentration[4,5]	2005 RI/FS Maximum Concentration[4,5]	2005 RI/FS Frequency of Detections[6]
		NOAA SQuiRT for Freshwater Sediment[1]	18 AAC 70 Alaska Water Quality Standards[2]	NOAA SQuiRT for Freshwater[3]			
Sediment (mg/Kg)	**Fuels[7]**						
	GRO	--	NA	NA	380 J	NS	NA
	DRO	--	NA	NA	900 J	NS	NA
	VOCs						
	Benzene	--	NA	NA	0.1 J	ND (0.00497)	0/2
	Toluene	--	NA	NA	ND (0.5 J)	0.0485 F	1/2
	Ethylbenzene	--	NA	NA	ND (0.5 J)	0.0383 F	1/2
	Xylene (total)	--	NA	NA	0.1 J	0.152	2/2
	1,3,5-Trimethylbenzene	--	NA	NA	0.284	NS	NA
	PAH						
	1-Methylnapthalene	--	NA	NA	NA	29.6 M	2/2
	2-Methylnapthalene	(0.201)[8]	NA	NA	ND (0.250)	43.1 M	2/2
	Acenaphene	(0.089)[8]	NA	NA	ND (0.250)	1.74	2/2
	Fluoranthene	2.355	NA	NA	ND (0.250)	0.099 F	1/2
	Fluorene	(0.144)[8]	NA	NA	ND (0.250)	1.63 M	1/2
	Naphthalene	(0.391)[8]	NA	NA	ND (0.250)	28.4 M	1/2
	Phenanthrene	0.515	NA	NA	ND (0.250)	0.279	1/2
	Pyrene	0.875	NA	NA	ND (0.250)	0.0697 F	1/2
Surface Water (µg/L)	**VOCs**						
	Xylene (total)	NA	10,000	13	ND (9 J)	0.655 F	1/2
	1,2-Dichloroethane	NA	5	20,000	2 B	NS	NA
	TAH	NA	10	--	ND (9 J)	0.655 F	1/2
	PAH	--					
	1-Methylnapthalene	NA	--	--	ND (10)	0.0214 F	1/2
	TAqH	NA	15	--	ND (10)	0.655 F	2/2

Notes

1- NOAA SQuiRT value is the probable effects level (PEL) for freshwater (NOAA 1999).
2- 18 AAC 70 Maximum Contaminant Level (MCL) values are from the Table I. Drinking Water Primary MCLs, adapted from 18 AAC 70.020b and referenced from the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances*, dated May 13th, 2003. (ADEC 2006).
3- NOAA SQuiRT values shown for fresh water criteria continuous concentration (CCC) unless otherwise indicated (NOAA 1999). Criteria maximum concentration (CMC) shown if no CCC available.
4- Highest detected values shown. If the compound was nondetect in all samples, "ND" is shown with the highest PQL in parentheses.
5- 1993 data taken from the *Final RI/FS, Vol. 1, Point Lonely Radar Installation, Alaska* (ICF 1996).
2005 data taken from the *Final RI/FS Study Report for 12 Sites, Point Lonely SRRS, Alaska* (HCG 2006).
6- The frequency of detections is the number of times the analyte was detected in the samples collected at the site. Frequencies do not include replicate samples collected.
7- Methods used in 1993 were GRPH, DRPH and RRPH, which are comparable to current AK Methods for GRO, DRO and RRO.
8- Probable effects level (PEL) for marine sediment (NOAA 1999).

Data Flags

"--"	Screening criteria does not exist for this compound
B	Compound detected in blank
F	Estimated quantity below the PQL
J	Estimated value
M	Matrix effect
NA	Not Applicable or Not Analyzed
ND	Compound not detected
NS	Not Sampled

Abbreviations

µg/L	Micrograms per Liter	PAH	Polynuclear Aromatic Hydrocarbons
AAC	Alaska Administrative Code	PQL	Practical Quantitation Limit
DRO	Diesel Range Organics	RI/FS	Remedial Investigation/Feasibility Study
GRO	Gasoline Range Organics	SQuiRT	Screening Quick Reference Tables
MCL	Maximum Contaminant Level	SRRS	Short Range Radar Station
mg/Kg	milligrams per kilogram	VOC	Volatile Organic Compounds
NOAA	National Oceanic and Atmospheric Administration		
TAH	Total Aromatic Hydrocarbons (TAH = Total of BTEX components)		
TAqH	Total Aqueous Hydrocarbons (TAqH = Total PAH + TAH)		

Shaded indicates an exceedance of the NOAA SQuiRT screening criteria.
Bold and Shaded indicates an exceedance of 18 AAC 70.

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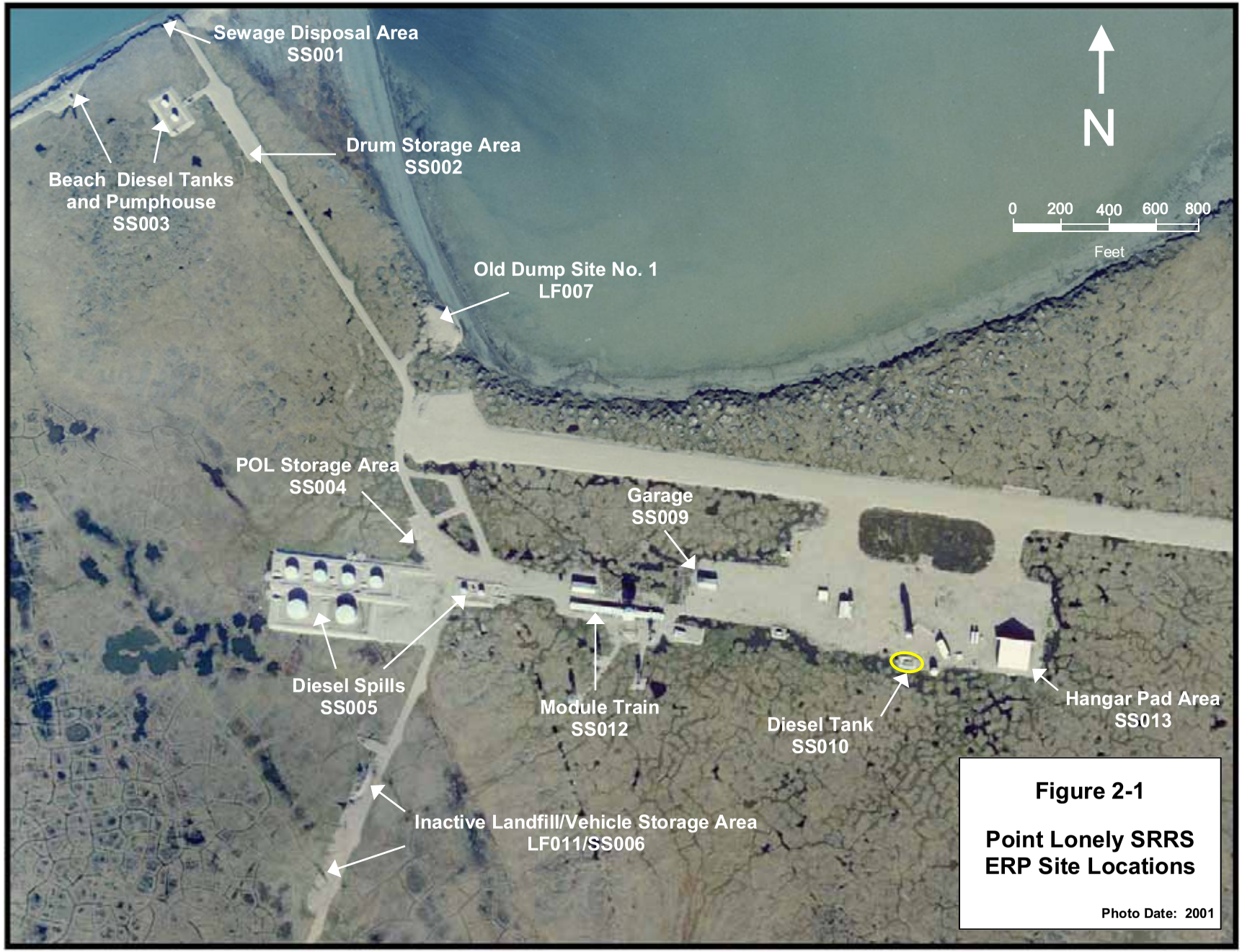
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SS001
Drum Storage Area
SS002
Beach Diesel Tanks
and Pumphouse
SS003
N
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Feet
Old Dump Site No. 1
LF007
POL Storage Area
SS004
Garage
SS009
Diesel Spills
SS005
Module Train
SS012
Diesel Tank
SS010
Hangar Pad Area
SS013
Inactive Landfill/Vehicle Storage Area
LF011/SS006
Figure 2-1
Point Lonely SRRS
ERP Site Locations
Photo Date: 2001

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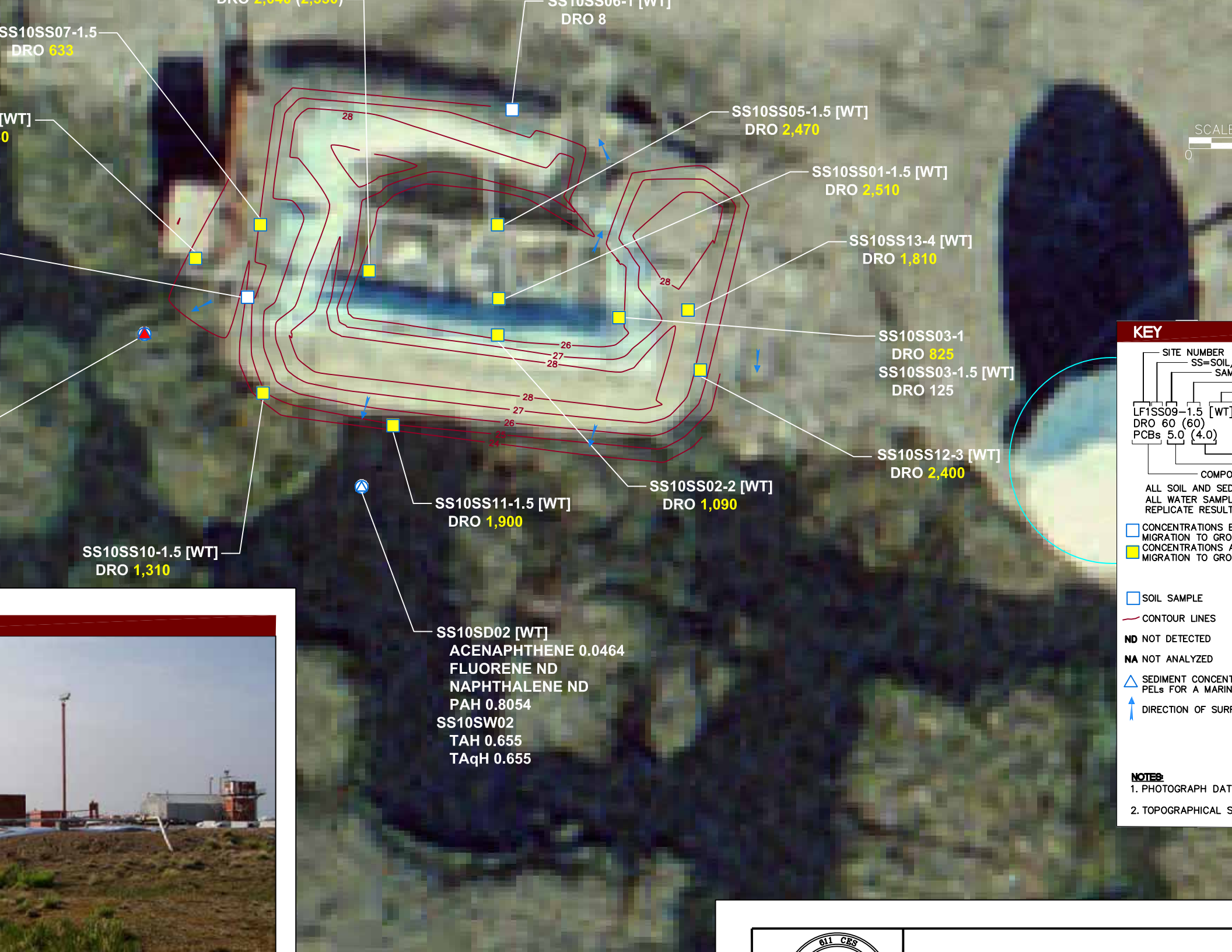
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DRO 633
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DRO 8
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DRO 1,810
SS10SS03-1
DRO 825
SS10SS03-1.5 [WT]
DRO 125
SS10SS12-3 [WT]
DRO 2,400
SS10SS02-2 [WT]
DRO 1,090
SS10SS11-1.5 [WT]
DRO 1,900
SS10SS10-1.5 [WT]
DRO 1,310
28
27
26
SS10SD02 [WT]
ACENAPHTHENE 0.0464
FLUORENE ND
NAPHTHALENE ND
PAH 0.8054
SS10SW02
TAH 0.655
TAqH 0.655
SCALE
0
KEY
SITE NUMBER
SS=SOIL,
SAM
LF1SS09–1.5 [WT]
DRO 60 (60)
PCBs 5.0 (4.0)
COMPO
ALL SOIL AND SED
ALL WATER SAMPL
REPLICATE RESULT
CONCENTRATIONS E
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CONCENTRATIONS A
MIGRATION TO GRO
SOIL SAMPLE
CONTOUR LINES
ND NOT DETECTED
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1. PHOTOGRAPH DAT
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