

**United States Army
Corps of Engineers**

Formerly Used Defense Sites Program

Declaration of Project Closure Decision & No Department of Defense Action Indicated Report

Containerized Hazardous, Toxic, or Radioactive Waste
(CON/HTRW)
Jago River Drum Site
Project # F10AK000704
Manning Point DEW Line
North Slope, Alaska

FINAL

August 2012

F10AK000704_07.12_0500_a
200-1e

Prepared By:

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JBER, Alaska 99506-0898



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TABLE 1 JAGO RIVER DRUM SITE SOIL SAMPLE ANALYTICAL RESULTS

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DECLARATION OF PROJECT CLOSURE DECISION
For
FORMERLY USED DEFENSE SITE CON/HTRW PROJECT
MANNING POINT DEW LINE (F10AK000704)
NORTH SLOPE, ALASKA

STATEMENT OF BASIS

Authority for the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) for Containerized Hazardous, Toxic, or Radiological Waste (CON/HTRW) projects is derived from the Defense Environmental Restoration Program, 10 USC 2701-2707. The decision to closeout this CON/HTRW project is based on the results of the removal action conducted in 2010. The No Department of Defense Action Indicated (NDAI) Report summarizes these activities.

SITE DESCRIPTION AND HISTORY

The Manning Point Distant Early Warning (DEW) Line Station Formerly Used Defense Site (FUDS) is located on Alaska's North Slope approximately 6 miles southeast of Kaktovik, Alaska on the Beaufort Sea coast at 70° 07' 01" N latitude and 143° 19' 21.6" W longitude (Figure 1-1). The Manning Point DEW Line Station served as a former staging area for the Barter Island DEW Line Station. Manning Point was used from approximately 1953 to 1957 and was abandoned in 1957. There was no follow-on use of the land.

Previous restoration activities completed at Manning Point include removal of 55-gallon petroleum, oil, and lubricant (POL) drums and debris. Under the CON/HTRW (02) project approved on 07 June 1990, a total of 11,140 drums, 55 tons of miscellaneous debris, 844 gallons of POL, 55 supersacks of rust and rusty soil, and 1 drum of sludge were removed from Manning Point and Barter Island sites during the 1997-1998 field seasons. The CON/HTRW (02) project achieved project closeout on 30 September 2003. A HTRW (03) project was approved concurrently with the CON/HTRW (02) project to address potential POL contaminants remaining in soil, sediment, and surface water from releases of the containerized debris. The HTRW (03) project achieved project closeout on 24 April 2008 after 2004 sampling results indicated all contaminants of concern were below the Alaska Department of Environmental Conservation (ADEC) cleanup levels for the soil, sediment, and surface waters (USACE, 2007).

Abandoned drums at the mouth of the Jago River, located 5 miles east of Manning Point Dew Line Station, were reported by the Kaktovik community. Coastal storms had re-deposited drums at the mouth of the Jago River from the Manning Point site prior to drum removal activities in 1997-98. The US Environmental Protection Agency (USEPA) conducted a preliminary site assessment in 2001 and estimated 800, 55-gallon drums scattered across the delta of the Jago River (EPA, 2002).

A CON/HTRW (04) project (Jago River Drum Site) was approved on 18 August 2004 to address the removal of drums from the mouth of the Jago River. Lands associated with both the Manning Point DEW Line Station and its sub-site, Jago River Drum Site, are managed by U.S. Fish and Wildlife Service (USF&WS) and the Kaktovik-Inupiat Corporation (KIC).

In October 2009, Jacobs Engineering Group Inc. personnel accessed the site via helicopter and landed at three locations with concentrated drum debris along the Jago River Delta to collect photographs, drum location global positioning system (GPS) coordinates, and to investigate drums for identifying labels, markings, and contents. Approximately 400, 55-gallon remnant drums were observed scattered within an approximate 4 square mile area of the Jago River Delta. Petroleum, Oil, and Lubricant (POL) products were the only known contaminants at the site (JEG, 2009).

DESCRIPTION OF THE SELECTED REMEDY AND IMPLEMENTATION

Drum removal and disposal was the selected remedy for the Jago River Drum Site. Implementation of the selected remedy took place between August 2 and September 3, 2010. The total number (1,468) of 55-gallon drums, 750 gallons of POL/water mixture, and one 5-gallon bucket of POL stained soil was removed and properly disposed. Former drum locations, which coincide with soil sample locations, are shown on Figures 1-5.

All of the confirmation soil samples collected at Jago River Drum Site were below the Alaska Department of Environmental Conservation (ADEC) Method 2 Arctic Zone cleanup levels. Specifically, during the course of fieldwork field screening samples were collected at 1,468 locations and analyzed with a photoionization detector (PID). A total of 11 confirmation soil samples were collected based on elevated PID levels.

DECLARATION

In accordance with the DERP-FUDS, the U.S. Army Engineer District, Alaska, has completed all CON/HTRW activities required at the Manning Point DEW Line FUDS, North Slope, Alaska. The site is now clear of eligible CON/HTRW and we conclude that no further CON/HTRW actions are required at this site.

This project closure document has been prepared and approved by the undersigned in accordance with the FUDS Program Policy, ER 200-3-1, 10 May 2004.

 Date 24 AUG 12


Christopher D. Lestochi

Colonel, Corps of Engineers

District Commander

REVIEW AND CONCURRENCE

The State of Alaska, through the Department of Environmental Conservation, agrees this project closure is consistent with state cleanup requirements. The decision may be reviewed and modified in the future if new information becomes available that indicates the presence of waste that may cause unacceptable risk to human health or the environment.



John Halverson
Department of Defense Environmental Program Manager

Date 8/27/2012

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NO DEPARTMENT OF DEFENSE ACTION INDICATED REPORT

Formerly Used Defense Site CON/HTRW Project Manning Point DEW Line (F10AK000704) North Slope, Alaska

1. INTRODUCTION

The Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) authorizes the cleanup of contamination resulting from past military activities at sites no longer owned by the Department of Defense (DoD). A containerized hazardous, toxic, and radioactive waste (CON/HTRW-04) project was authorized for the Jago River Drum Site of the Manning Point Distant Early Warning (DEW) Line in 2004.

Environmental site visits were conducted at the Jago River drum site in 2001 and 2009. Specifically, in 2001 up to 800 drums were observed at the site; in 2009, approximately 400 drums were observed at the site (JEG, 2009). The CON/HTRW project is being recommended for Project Closure and No DoD Action Indicated (NDAI) status based on the results of the recent 2010 removal action (Marsh Creek, 2011).

The U.S. Army Corps of Engineers (USACE) is an agent for the DoD and has been assigned the responsibility of coordinating activities at FUDS sites. This Project Closure Decision Declaration and NDAI Report are issued by the USACE, the lead agency for the Manning Point DEW Line FUDS.

2. SUMMARY OF SITE CONDITIONS

2.1 Site Location and History

The Former Manning Point Distant Early Warning (DEW) Line Station Formerly Used Defense Site (FUDS) is located on Alaska's North Slope approximately 6 miles southeast of Kaktovik, Alaska on the Beaufort Sea coast at 70° 07' 01" N latitude and 143° 19' 21.6" W longitude (Figure 1). The Manning Point DEW Line Station served as a former staging area for the Barter Island DEW Line Station. Manning Point was used from approximately 1953 to 1957 and was abandoned in 1957. There was no follow-on use of the land.

Previous restoration activities completed at Manning Point include removal of 55-gallon petroleum, oil, and lubricant (POL) drums and debris. Under the CON/HTRW (02) project approved on 07 June 1990, a total of 11,140 drums, 55 tons of miscellaneous debris, 844 gallons of POL, 55 supersacks of rust and rusty soil, and 1 drum of sludge were removed from Manning Point and Barter Island sites during the 1997-1998 field seasons. The CON/HTRW (02) project achieved project closeout on 30 September 2003. A HTRW (03) project was approved concurrently with the CON/HTRW (02) project to address potential POL contaminants remaining in soil, sediment, and surface water from releases of the containerized debris. The

HTRW (03) project achieved project closeout on 24 April 2008 after the 2004 sampling results indicated all contaminants of concern were below the Alaska Department of Environmental Conservation (ADEC) cleanup levels for the soil, sediment, and surface waters (USACE, 2007).

Abandoned drums at the mouth of the Jago River, located 5 miles east of Manning Point Dew Line Station, were reported by the Kaktovik community. Coastal storms had re-deposited drums at the mouth of the Jago River from the Manning Point site prior to drum removal activities in 1997-98. The US Environmental Protection Agency (USEPA) conducted a preliminary site assessment in 2001 and estimated 800, 55-gallon drums scattered across the delta of the Jago River (EPA, 2002).

A CON/HTRW (04) project (Jago River Drum Site) was approved on 18 August 2004 to address the removal of drums from the mouth of the Jago River. Lands associated with both the Manning Point DEW Line Station and its sub-site, Jago River Drum Site, are managed by U.S. Fish and Wildlife Service (USF&WS) and the Kaktovik-Inupiat Corporation (KIC).

The Jago River Drum Site lies in the Coastal Plain Province of Alaska, which rises from the Beaufort Sea southward to approximately 750 feet (ft) in altitude. The coastal plain has a rolling to flat landscape with minimal topographic relief (Gallant, 1995). This ecological region is characterized by arctic climatic conditions with very low mean annual temperatures. Permafrost-driven pingos along with ice-wedge polygons, streams, lakes, ponds, and frost boils create the only topography of the area. In summer, permafrost exists approximately 2-feet below ground surface, with active zone pore water present on the top of the permafrost. Soils in the region are poorly drained except along streams and rivers. The vegetation in this eco-region is classified as wet graminoid herbaceous tundra, dominated by grasses with some sedges, and various herbaceous species.

In October 2009, Jacobs Engineering Group Inc. personnel accessed the site via helicopter and landed at three locations with concentrated drum debris along the Jago River Delta to collect photographs, drum location global positioning system (GPS) coordinates, and to investigate drums for identifying labels, markings, and contents. At each location, drums were inventoried to estimate the number of drums present. There were no intact drums found during this inspection. The entire river delta was visually inspected via helicopter to estimate the number of drums in the area. Approximately 400, 55-gallon remnant drums were observed scattered within an approximate 4 square mile area of the Jago River Delta. Petroleum products were the only previously known contaminants at the site (JEG, 2009).

2.2 Removal Activities

During summer 2010, Marsh Creek, LLC removed all drums, drum liquids, and associated (petroleum, oil and lubricant) (POL)-contaminated soil from the site (Marsh Creek, 2011). Field activities took place between August 2 and September 3, 2010. The total number of drums, gallons of drum liquids, and volume of POL-contaminated soil removed and disposed included 1,468 drums, 750 gallons of POL/water mixture, and 1, 5-gallon bucket of soil, respectively. Former drum locations, which coincide with soil sample locations, are shown on Figures 1-5.

Drums were transported via helicopter from the site to Kaktovik, Alaska where they were cleaned and crushed. Approximately 69,750 pounds of scrap metal was transported to Fairbanks, Alaska for recycling. The drum liquids and POL-contaminated soil were transported to Emerald, Inc. in Fairbanks, Alaska for treatment.

Following drum removal, soil beneath each drum was field screened for total volatile organic compounds using a photoionization detector (PID). Eleven samples indicated elevated headspace. As a result, a total of 11 confirmation soil samples were submitted to an analytical laboratory and analyzed for diesel range organics, residual range organics (DRO/RRO), gasoline range organics (GRO), and benzene, toluene, ethylbenzene, and total xylenes (BTEx). All results were below ADEC Method Two Arctic Zone cleanup levels (12,500 milligrams per kilogram [mg/Kg] DRO, 13,700 mg/Kg RRO, 1,400 mg/Kg GRO, 200 mg/Kg benzene, 11,000 mg/Kg toluene, 13,700 mg/Kg ethylbenzene, and 27,400 mg/Kg xylenes)(Table 1). Maximum concentrations were 6,650 mg/Kg DRO, 2,210 mg/Kg RRO, 229 mg/Kg GRO, 0.113 mg/Kg benzene, 3.15 mg/Kg toluene, 6.79 mg/Kg ethylbenzene, and 41.94 mg/Kg total xylenes.

3. CONCLUSION

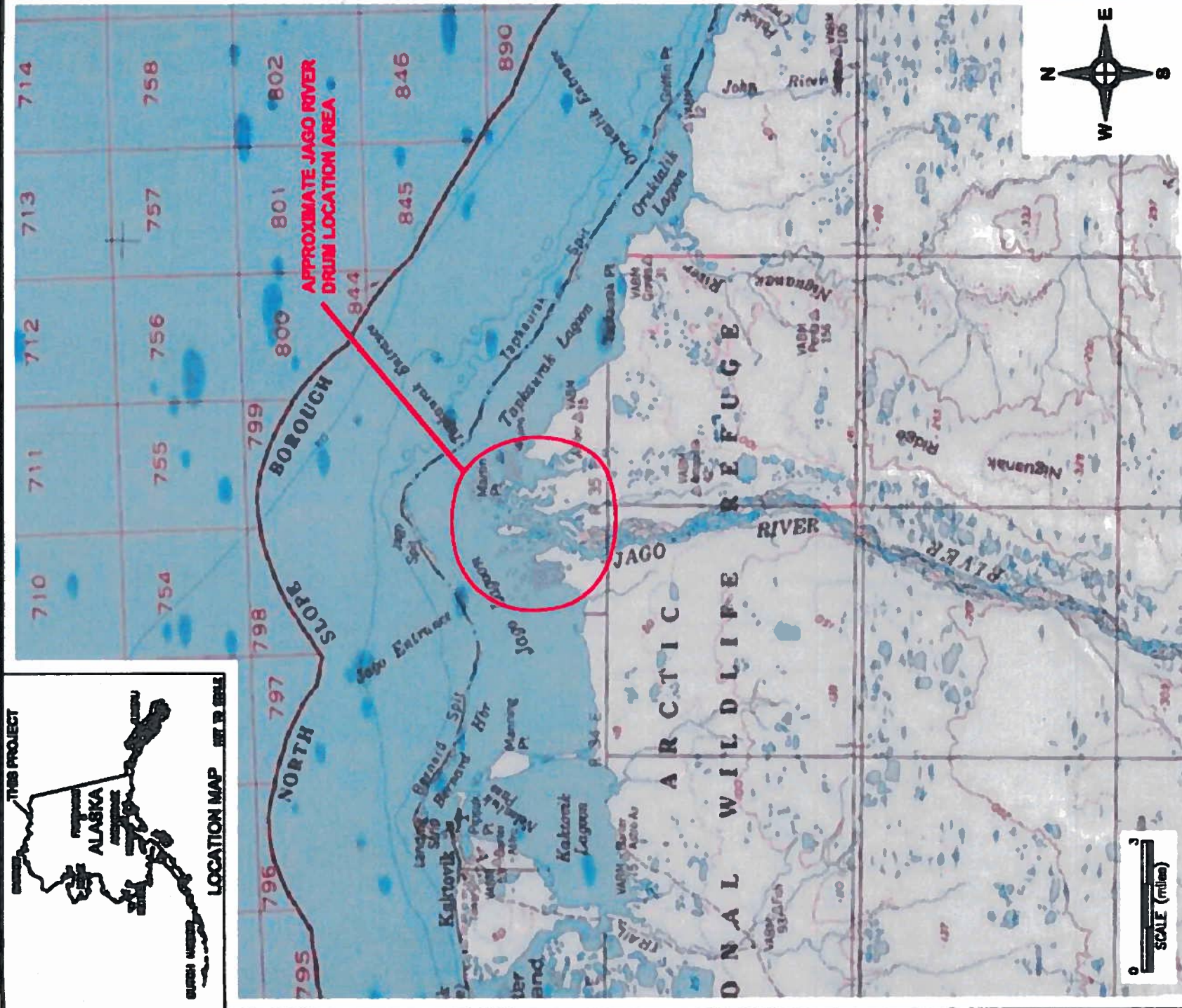
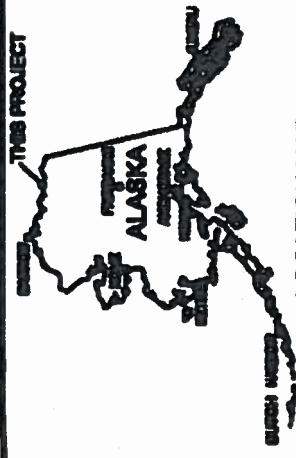
The objective of the DERP-FUDS Program is to reduce, in a timely, cost-effective manner, the risk to human health and safety and the environment resulting from past DoD activities. The POL drums, drum liquids, and associated contaminated soil were removed during 2010 so they no longer pose a threat to human health and the environment. This CON/HTRW project at the Manning Point DEW Line site is being recommended for Project Closure and NDAI.

4. REFERENCES

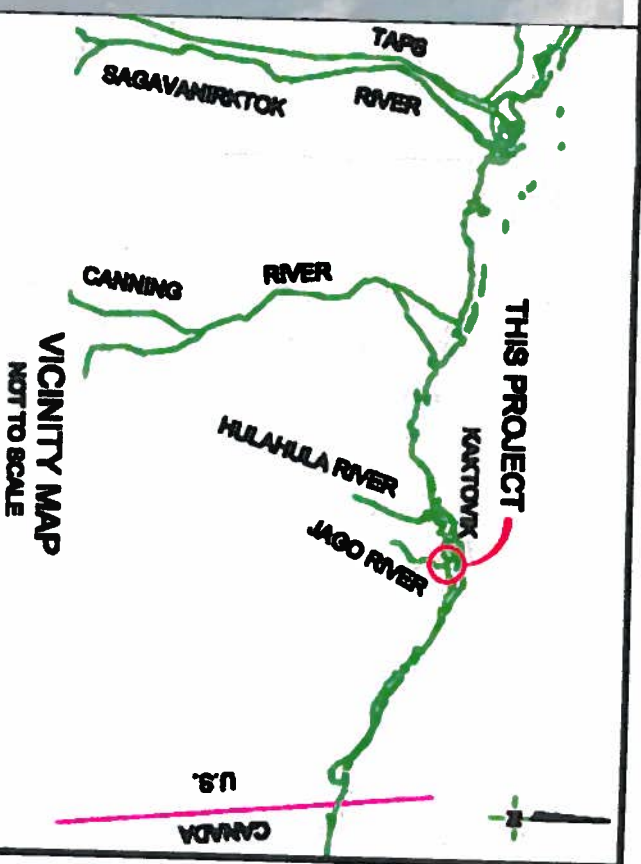
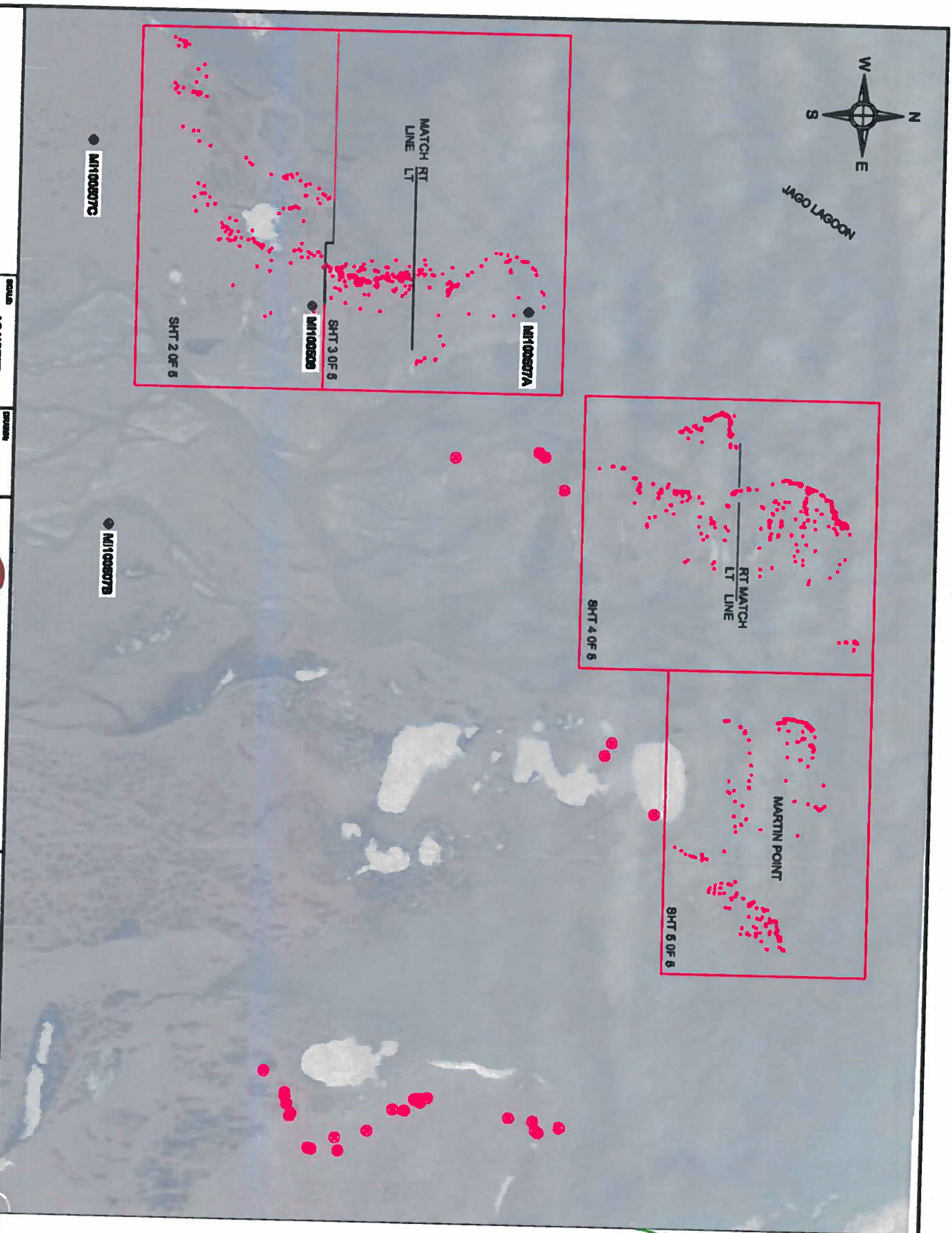
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- JEG, 2009, Final Site Inspection Report, Formerly Used Defense Sites Preliminary Site Inspections, Brownlow Point, Nuvagapak Point DEW Line Station, Jago River Drum Site, Lake Peters, and Juniper Creek, North Slope, Alaska, December. FRMD#F10AK000704_01.09_0500_a.
- Marsh Creek, LLC, 2011, Manning Point Property, Jago River Drum Project F10AK0007-04, FINAL Removal Action Completion Report, November. FRMD#F10AK000704_07.08_0500_p.
- US Army Corps of Engineers (USACE), 2004, Engineer Regulation (ER) 200-3-1, Formerly Used Defense Sites (FUDS) Program Policy, 10 May

USACE, 2007, No DoD Action Indicated Report, Formerly Used Defense Sites, Property
F10AK0007, Project 03 (HTRW), Manning Point DEW Line Staging Area, North Slope
Borough, Alaska. 7 September. FRMD#F10AK000703_07.12_0500_a.

ATTACHMENT A
FIGURES



Map created with TOPOG and used with permission © 2004 National Geographic		Map created with TOPOG and used with permission © 2004 National Geographic	
OWNER WME	Location and Vicinity Map		FIGURE 1-1
CHECKED JED	USACE		DATE 6-2010
PROJECT NO. UA-0031-1002	Jago River Drums		SCALE AS SHOWN
		North Slope, ALASKA	
		Marsh Creek, LLC 2000 East 88th Ave. Anchorage, Alaska 99507 (907) 268-0060 www.marshcreekllc.com	
		MARSHCREEK	

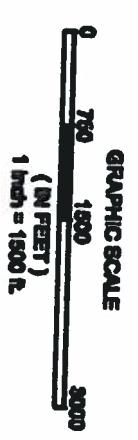




- LEGEND**
- JG-D1460 SAMPLE AND DRUM LOCATION
 - #5 X 30" REBAR (CONTROL POINT)

- NOTES:**
1. DATE OF SURVEY: AUGUST 06, & 07-02, 2010.
 2. FIELD BOOK: MI10-05 PG. 5-14.
 3. DATUM IS NAD83, ALASKA STATE PLANE ZONE 2.
 4. THIS DATA IS SUPPLIED FOR GRAPHIC INFORMATION ONLY.
 5. THIS PHOTO IS GEO-REFERENCED (REFERENCE NOTES).
 6. AERIAL PHOTOGRAPH SOURCE: 2010 DIGITAL GLOBE, (GOOGLE EARTH) IMAGRY DATE JUNE 18, 2002.

CONTROL POINT TABLE - NAD 83 ZONE 2 US FEET				
POINT	NORTH	EAST	ELEV	DESC
5	6,687,382.19	1,478,487.64	21.02	MI100608
6	6,689,686.43	1,478,488.02	17.37	MI100607A
7	6,684,401.61	1,479,778.11	12.83	MI100607B
8	6,684,087.17	1,474,078.82	11.16	MI100607C

ALL CONTROL POINTS ARE 8/8" REBAR

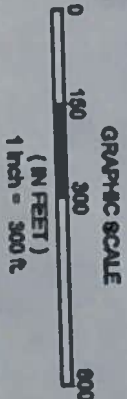


AS NOTED		DESIGNED			
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION		F.R. BELL			
PROJECT NO: UA-0804-1002		DESIGNED BY: JED			
					
Marsh Creek, LLC 2000 East 86th Avenue, Suite 100 Anchorage, Alaska 99507 (907) 258-0050 www.marshcreekllc.com					
					
BOHMER & ASSOCIATES 501 WEST ANCHORAGE BLVD ANCHORAGE, ALASKA 99501					
SOIL SAMPLE AND DRUM LOCATIONS			DATE: 1 OF 5		
USACE			DATE: 11-20-11		
JAGO RIVER DRUM SITE REMOVAL ACTION					
KAKTOVIK - NORTH SLOPE, ALASKA					



MATCHLINE SHEET 3.1T

MI100608



LEGEND

- JG-D-1600 SAMPLE AND DRUM LOCATION
- 65 X 35" REBAR (CONTROL POINT)

DATE	AS NOTED	DATE	BY
7/1/11	7/1/11	7/1/11	F.R. BELL
PROJECT NO.	UA-0831-1002	DESIGNED BY	JED



MARSHCREEK

Marsh Creek, LLC
2000 East 66th Avenue, Suite 100
Anchorage, Alaska 99507
(907) 288-0030
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ENGINEERING & LAND SURVEYING
671 WEST PRINCETON AVE
ANCHORAGE, ALASKA 99501

SOIL SAMPLE AND DRUM LOCATIONS

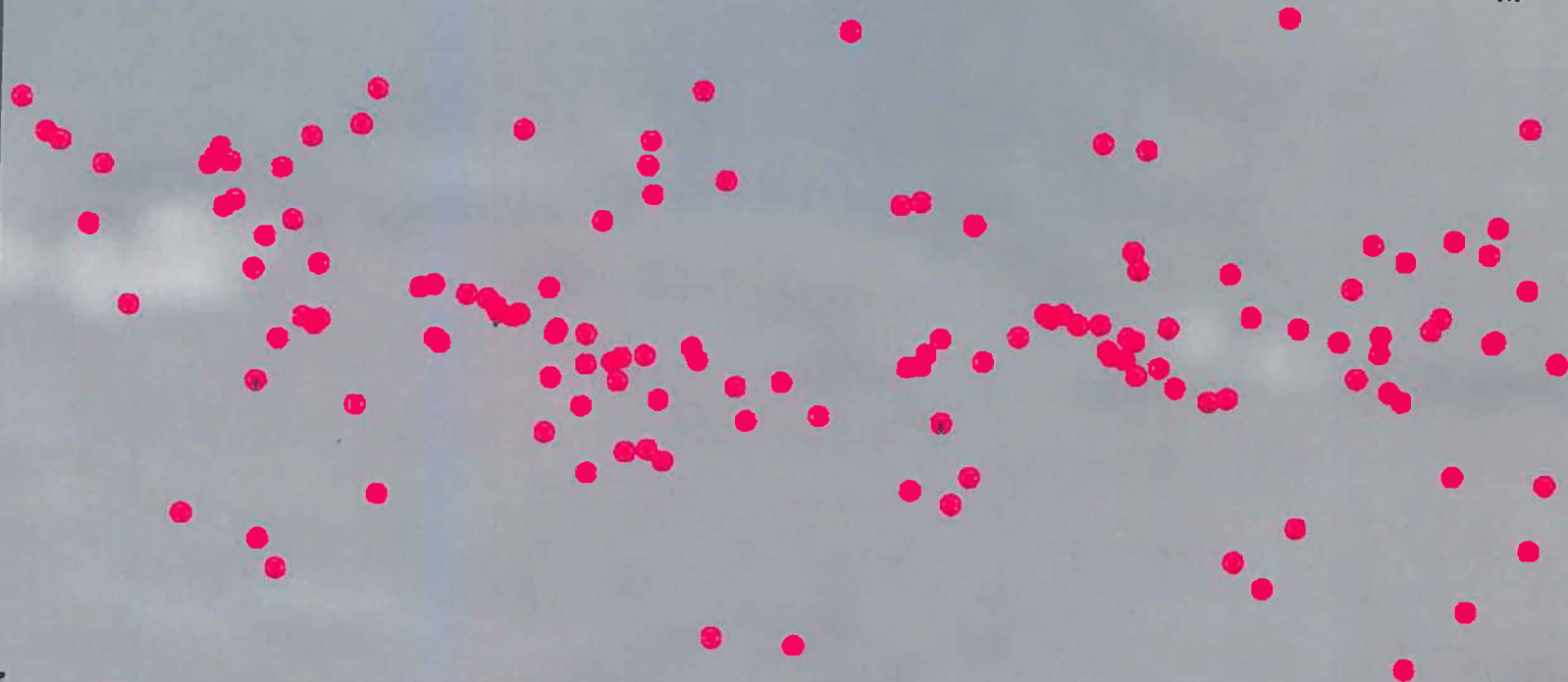
USACE
JAGO RIVER DRUM SITE REMOVAL ACTION
KAKTOVIK - NORTH SLOPE, ALASKA

2

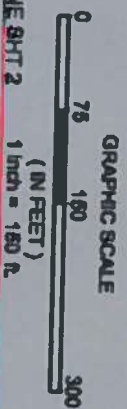
2 of 6
11-5011



MATCH LINE THIS SHOT LT



MATCH LINE SHOT 2



LEGEND

- JG-01460 SAMPLE AND DRUM LOCATION
- 66 X 50" REBAR (CONTROL POINT)
- DRUM CLUSTER LOCATION

SCALE AS NOTED

THIS DRAWING IS AT FULL SIZE

PROJECT NO. UA-0031-1002

DESIGNED BY JED

DATE: 11-2011

PROJECT NO. UA-0031-1002

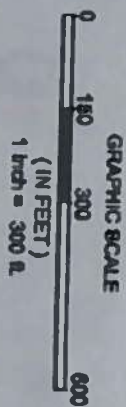
DESIGNED BY JED

DATE: 11-2011

PROJECT NO. UA-0031-1002

DESIGNED BY JED

MATCH LINE THIS SHOT RT



SOIL SAMPLE AND DRUM LOCATIONS

USACE

JAGO RIVER DRUM SITE REMOVAL ACTION

KATOVIK - NORTH SLOPE, ALASKA

DATE: 11-2011

3

3 of 5

11-2011

11-2011

11-2011



JG-D1117
THRU
JG-D1130

JG-D1115
THRU
JG-D1143

JG-D1131
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JG-D785

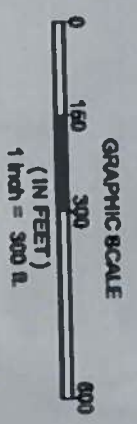
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THRU
JG-D820

JG-D821
THRU
JG-D849

JG-D488
THRU
JG-D509

MATCH LINE THIS SHIT RT



LEGEND

● JG-D1488 SAMPLE AND DRUM LOCATION

● 60 X 80 REBAR (CONTROL POINT)

○ DRUM CLUSTER LOCATION

SCALE

AS NOTED

THIS DRAWING IS A FIELD SKETCH

PROJECT NO. UA-0881-1002

DESIGNED

MRF

F.R. BELL

CHECKED

JED

MARSHCREEK

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SOIL SAMPLE AND DRUM LOCATIONS

USACE

JAGO RIVER DRUM SITE REMOVAL ACTION

KATOVNIK - NORTH SLOPE, ALASKA

4

4 of 5

11-2011

MATCH LINE THIS SHIT LT

JG-D564
THRU
JG-D571

JG-D846
THRU
JG-D853

JG-D823
THRU
JG-D843

JG-D814
THRU
JG-D818

JG-D487
THRU
JG-D477

JG-D883
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JG-D587

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JG-D582

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JG-D728

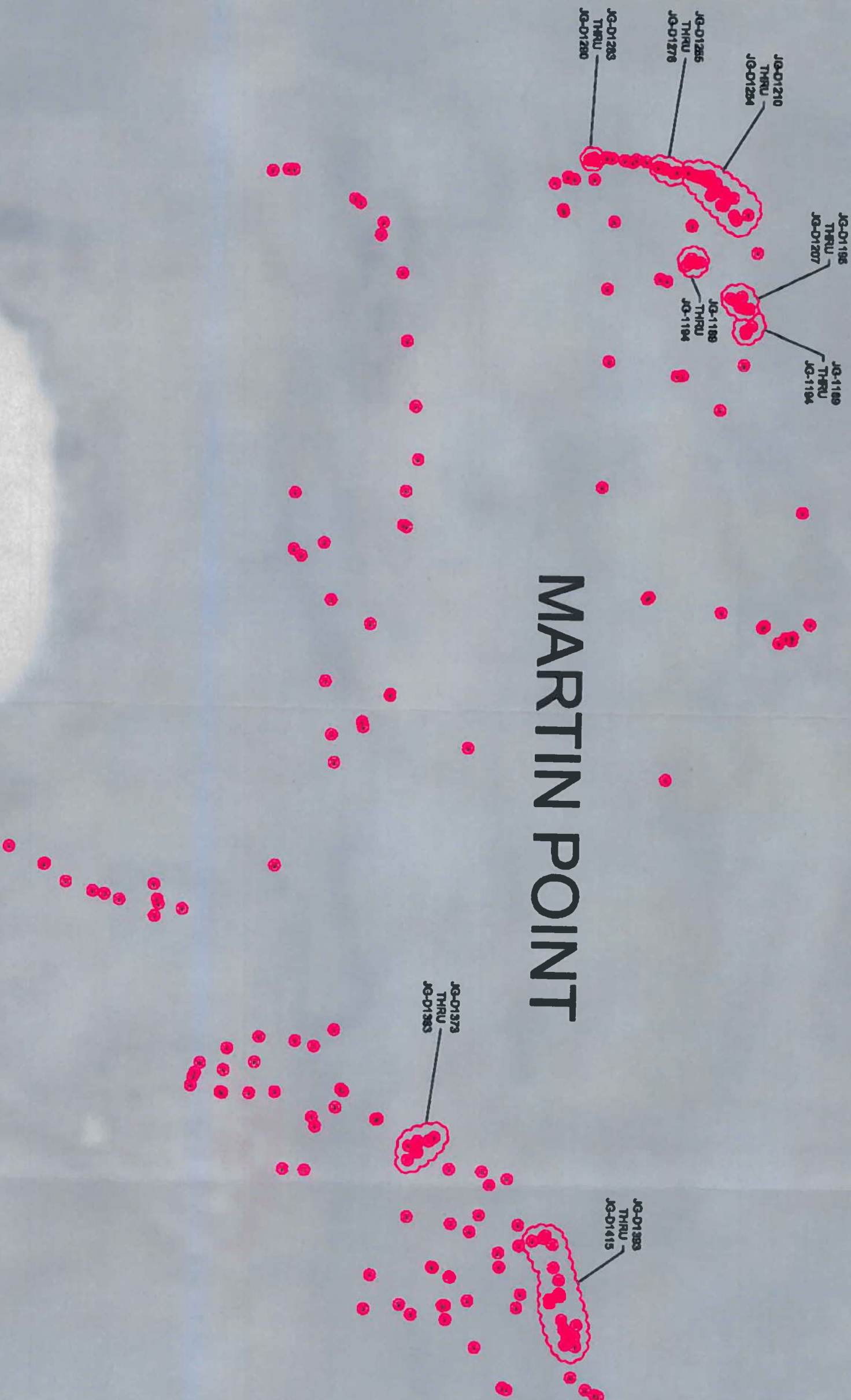
JG-D761
THRU
JG-D768

JG-D486
THRU
JG-D609

JG-D738
THRU
JG-D744



MARTIN POINT



LEGEND

- JG-01482 SAMPLE AND DRUM LOCATION
- 48 X 60 REBAR (CONTROL POINT)
- DRUM CLUSTER LOCATION

AS NOTED

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS



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ENGINEERS & LAND SURVEYORS
INC. 101 WEST 10TH AVENUE
ANCHORAGE, ALASKA 99501

SOIL SAMPLE AND DRUM LOCATIONS

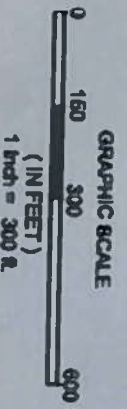
USACE

JAGO RIVER DRUM SITE REMOVAL ACTION
KAKTOVIK - NORTH SLOPE, ALASKA

5

5 of 8

DATE 11-20-11



ATTACHMENT B
TABLE

Table 1
Jago River Drum Site Soil Sample Analytical Results

Shipment / Lab Batch #	Field/COC Sample ID	Date Collected	Time Collected	QA/QC (duplicates and MS/MSD) Samples ADEC Method Two Soil Cleanup Level (Arctic Zone)	Fuels (mg/Kg)			BTEX (mg/Kg)				PID Screening Results (ppm)
					Gasoline Range Organics	Diesel Range Organics	Residual Range Organics	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	
					1,400	12,500	13,700	200	11,000	13,700	27,400	
1104420	SS-JG-D095	8/23/2010	11:40 AM	-	15.4 U	318	1,010	0.080 U	0.128 J	0.160 U	0.468 U	15.9
	SS-JG-D194	8/23/2010	12:15 PM	-	40.4	86.9 J	622	0.0932 U	0.186 U	0.186 U	0.215 J	218
	SS-JG-D330	8/23/2010	12:35 PM	-	21.4 U	419	2,210	0.111 U	0.222 U	0.222 U	0.650 U	46.9
	SS-JG-D684	8/23/2010	12:50 PM	MS/MSD	4.74 U	426	62.9	0.0246 U	0.0494 U	0.0494 U	0.1444 U	17.4
	SS-JG-D1700	8/23/2010	12:55 PM	Duplicate of SS-JG-D684	4.16 U	711	64.9	0.0216 U	0.0432 U	0.0432 U	0.1264 U	-
1104515	SS-JG-D885	8/28/2010	3:35 PM	-	2.17 J,QL	6,650 QL	113 QL	0.0142 U,QL	0.0532 U,QL	0.0532 U,QL	0.032 J,QL	57.2
	SS-JG-A07	8/28/2010	3:26 PM	MS/MSD	5.74 B,QL	7.23 J,QL	30.2 QL	0.00770 J,QL	0.408 QL	0.0941 QL	1.28 QL	20.1
	SS-JG-A09	8/28/2010	3:12 PM	-	229 QL	13.7 J,QL	48.4 QL	0.133 U,QL	3.15 QL	6.79 QL	41.94 QL	24.1
	SS-JG-A10	8/28/2010	3:20 PM	-	100 QL	8.91 J,QL	30.9 QL	0.0112 J,QL	0.46 QL	0.176 QL	1.471 QL	16.3
1104582	SS-JG-D1180	9/1/2010	9:30 AM	-	4.68 U	34.8 U	284	0.0242 U	0.0374 J	0.0486 U	0.0506 J,B	17.7

Notes:
Clean up levels are based upon 18 AAC 75.340(2) Method Two Table B1 & Table B2, April 8, 2012.
Abbreviations:
- - - Not analyzed
B - The result is considered a high estimated value due to contamination present in the method blank.
COC - chain of custody
D - Drum
J - The result is considered an estimated value because the level is below the laboratory limit of quantitation (LOQ) and above the detection limit (DL).
JG - Jago River Drum Site
mg/Kg - Milligrams per kilogram
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PID - Photo-Ionization Detector
ppm - parts per million
QA/QC - quality assurance/quality control
QL - The result is considered an estimated value biased low due to a quality control failure.
SS - Soil Sample
U - The analyte was not detected and is reported as less than the limit of detection (LOD).

