"Building and Preserving Alaska's Future"

AMAKNAK FORMERLY USED DEFENSE SITE

STATUS UPDATE AND INITIAL RESTORATION ADVISORY BOARD MEETING

Rena Flint, Project Manager Tom Reed, Project Engineer Kendall Campbell, Tribal Liaison

U.S. Army Corps of Engineers – Alaska District

19 February 2020













MEETING AGENDA

- WELCOME AND INTRODUCTIONS
- AMAKNAK FORMERLY USED DEFENSE SITE (FUDS)
- RESTORATION ADVISORY BOARD (RAB) INFORMATION
 - RAB Purpose
 - Responsibilities of RAB Members
 - How to get involved
 - Inducting Members
 - Amaknak FUDS RAB Mission and Operating Procedures
- PROJECT UPDATES
 - Information Repository Refresh
 - Pre-World War II Tank Farm Groundwater Monitoring
 - Dutch Harbor Vicinity Removal Actions
 - Interim Risk Management Communication
- NEXT STEPS FOR ACTIVE PROJECTS
- QUESTIONS AND ANSWERS
- SCHEDULE NEXT MEETING
- CONTACT INFORMATION







INTRODUCTIONS

- Meeting Attendees
 - Please introduce yourself
 - Name, affiliation, what you're hoping to get out of the meeting
- U.S. Army Corp of Engineers Team
 - Rena Flint, Project Manager
 - Tom Reed, Project Engineer
 - Kendall Campbell, Tribal Liaison
 - Jennifer Anderson, Brice Engineering LLC
 - Erik Dahl, Brice Engineering LLC
 - David Munro, Tetra Tech
 - Maggie Poyant, Tetra Tech
- Alaska Department of Environmental Conservation
 - Rachael Petraeus

Hello, my
name is





TRIBAL COORDINATION

Alaska District Tribal Liaison What I do:

- Support building and strengthening respect and tribal relationships
- Facilitate cross cultural communication and consultation
- Encourage two-way ongoing dialogue and understanding

Outcomes:

- Establish a relationship first
- Learn Tribe's history
- Learn issues of concern for tribal community
- Understand Individual Tribe's Government Processes and Culture
- Understand Cultural Differences
- Update Tribes about Federal Governmental Processes
- Update Tribes on USACE policies, programs and processes





ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (ADEC)



Our Mission:

Conserve, improve, and protect Alaska's natural resources and environment and control water, land, and air pollution, in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well being. Spill Prevention and Response (SPAR) Division - Contaminated Sites Program -Federal Facility Oversight Section

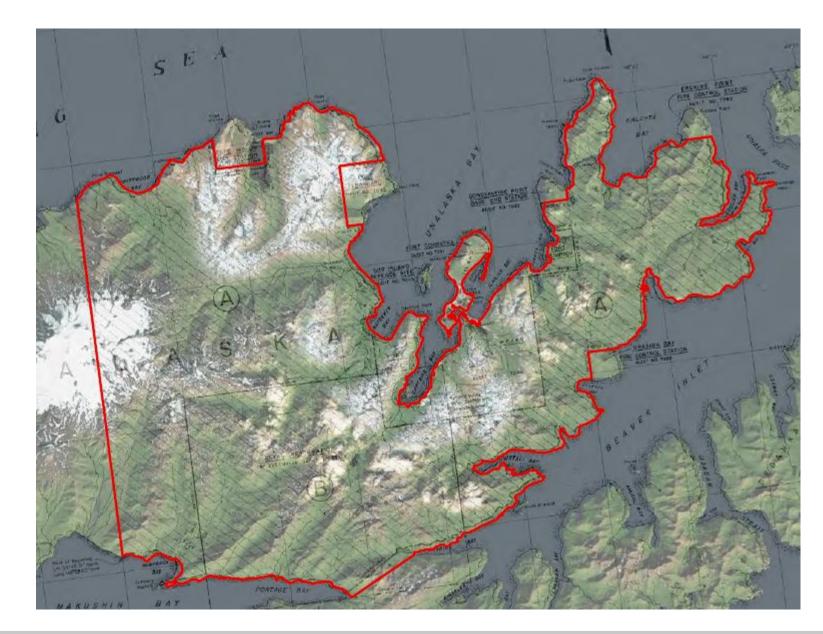
- Regulatory Oversight
 - Ensure protection of human health, safety, welfare and the environment
 - Provide reviews and comments on and approved site characterization, monitoring and cleanup plans that have been implemented.

ADEC Project Manager: Rachael Petraeus Phone: 907-269-7520 Email: rachael.petraeus@alaska.gov



AMAKNAK FUDS PROPERTY







AMAKNAK FUDS PROJECTS 1986 TO RESPONSE COMPLETE (RC)

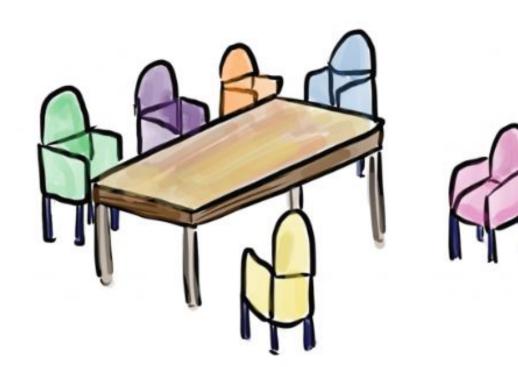


PRO		TYPE	TIMELINE	Present
01	Work Prior to 1990		1989-1994	
02	Project not used	"A BOF		
03	Pre-WWII Tank Farm		19922008	RC
04	Submarine Base/ Ship Repair		19932001	
05	Strawberry Hill Landfill		19932001	
06	Fort Mears Landfill		19932001	
07	Captain's Dock Chemical Agent Disposal	3Rs	1993	RC
08	Dutch Harbor Vicinity		199420	15RC
09	Range Complex No. 1	3Rs	2009	RC
10	Unalaska Power Plant Area	*	2010-20	14
11	Rocky Point Transformers and Pipelines		20102	2017
12	Petroleum Contaminated Stockpiles		2012-20)15

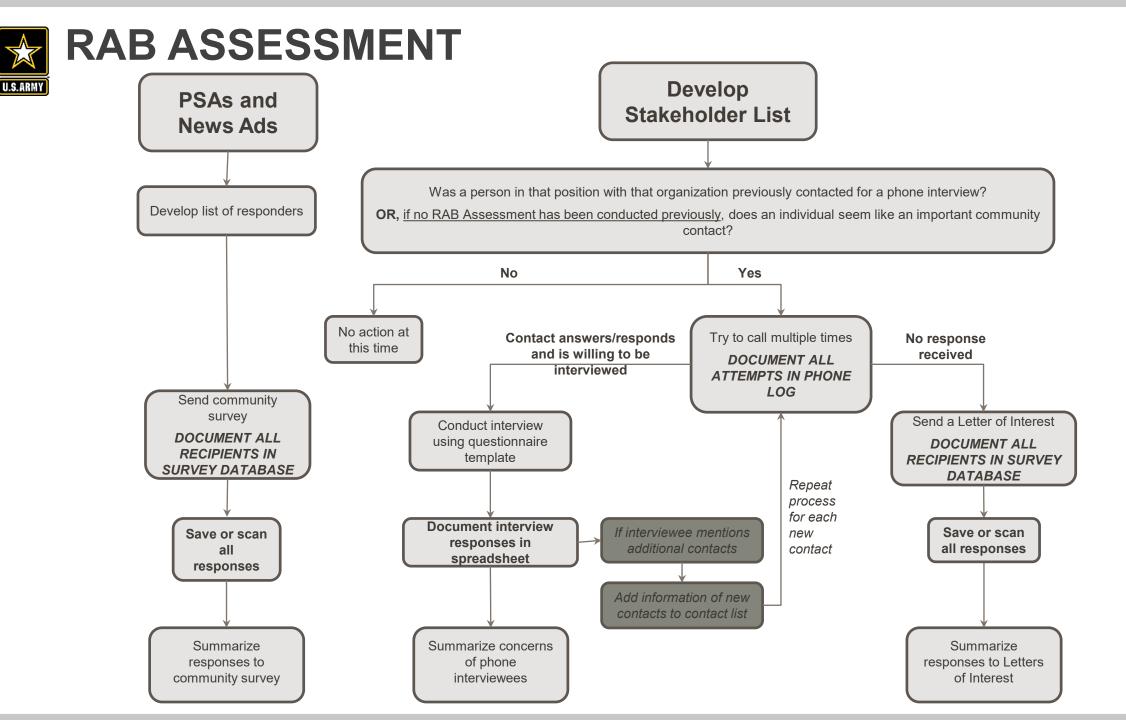


AMAKNAK FUDS RESTORATION ADVISORY BOARD



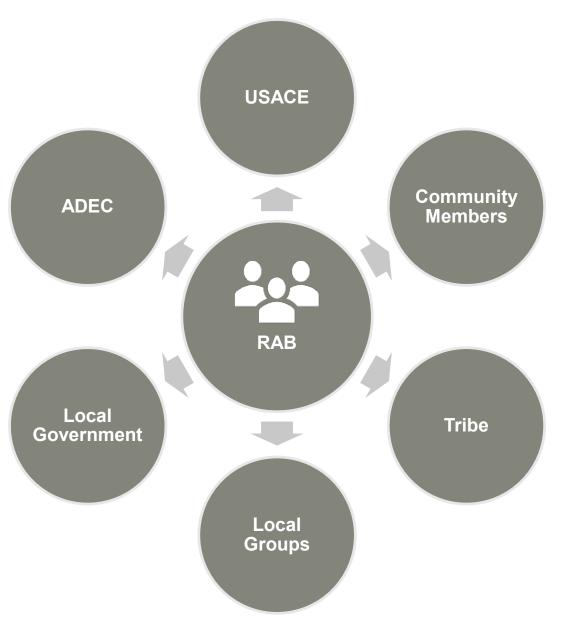








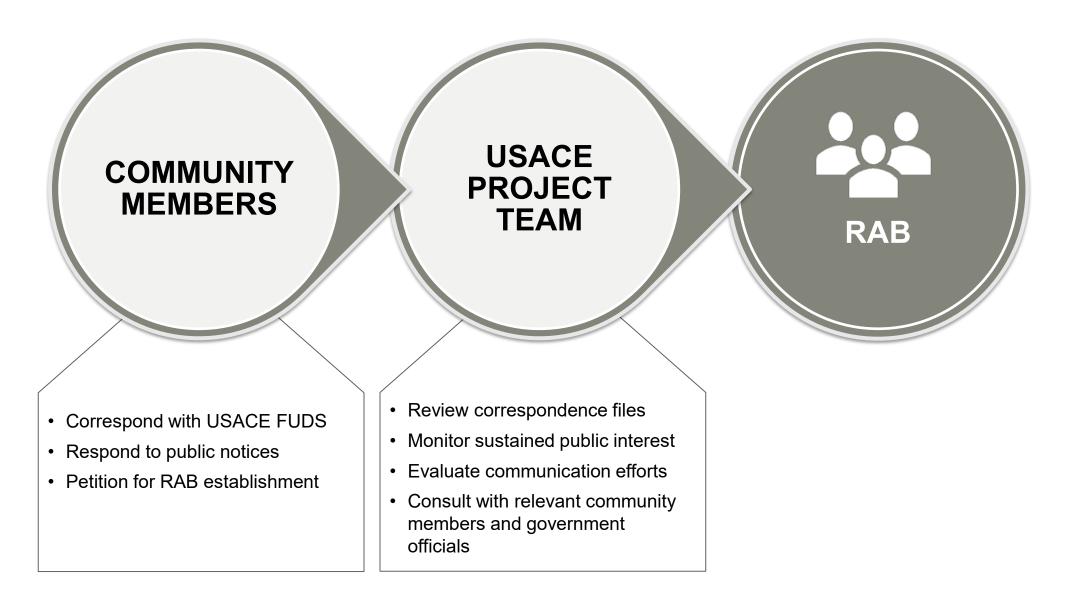






RAB FORMATION

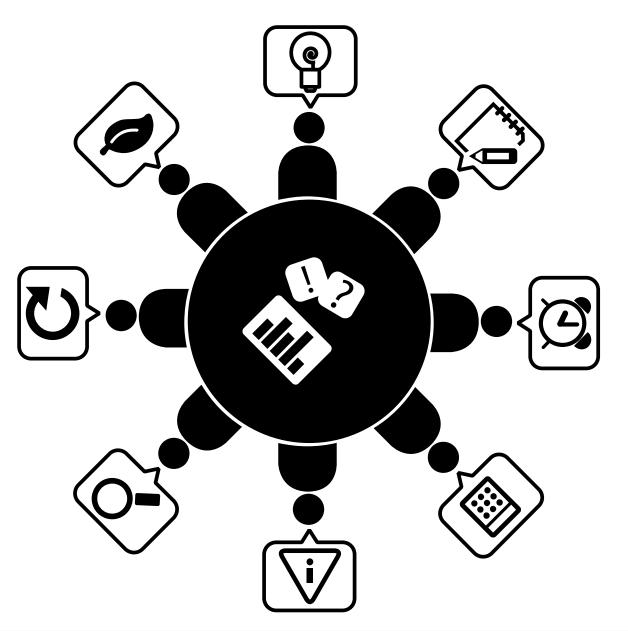






RAB MEETINGS







RAB MEMBER RESPONSIBILITIES

- Regularly review and comment on technical documents and plans relating to the ongoing environmental studies and restoration activities at the Amaknak FUDS property
- Members serve as liaisons with the community and be available to meet with community members and groups
- Membership terms will be decided by the RAB but members typically serve multiple years and attend at a minimum 1 meeting per year







MEMBERSHIP FORMS



MEMBERSHIP FORM

First Name: Last Name: Please identify your affiliation(s) type and name:

- Community Member
- Business Representative
- □ Civic Organization _____
- Environmental Organization _____

Public Agency

□ Other

Mailing Address:

Physical Address:

Phone: (Day)

Email:

ail:

Explain briefly your interests in serving on the RAB:

State:

City:

Zip:

City:

Zip:

(Eve)

DRAFT CONDITIONS FOR MEMBERSHIP

RAB membership duties and responsibilities include reviewing and commenting on technical documents and activities associated with environmental investigation and cleanup activities at the Amaknak Formerly Used Defense Site.

RAB members are asked to serve a multi-year term and attend all RAB meetings. Those who are not able to attend on a consistent basis may be asked to resign. RAB members will be expected to be available to the general community and civic organizations to facilitate the exchange of information and/or concerns between the community and the RAB.

Priority for RAB membership will be given to local residents who are affected by cleanup activities at the Amaknak Formerly Used Defense Site.



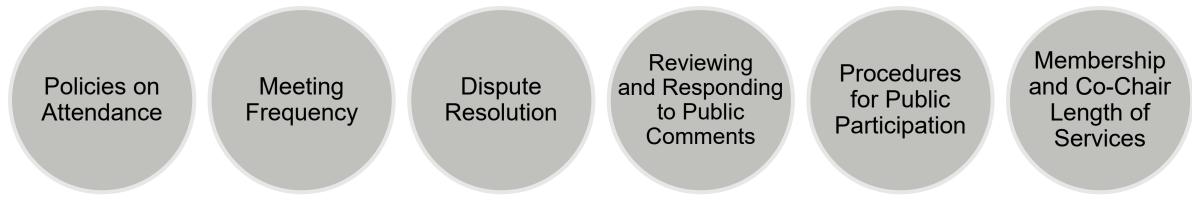
AMAKNAK FUDS RAB MISSION AND OPERATING PROCEDURES



AMAKNAK FUDS RAB DRAFT MISSION

The Amaknak RAB mission is to establish and maintain a forum with all stakeholders for the exchange of information in an open and interactive dialogue concerning the restoration program in the Amaknak community.

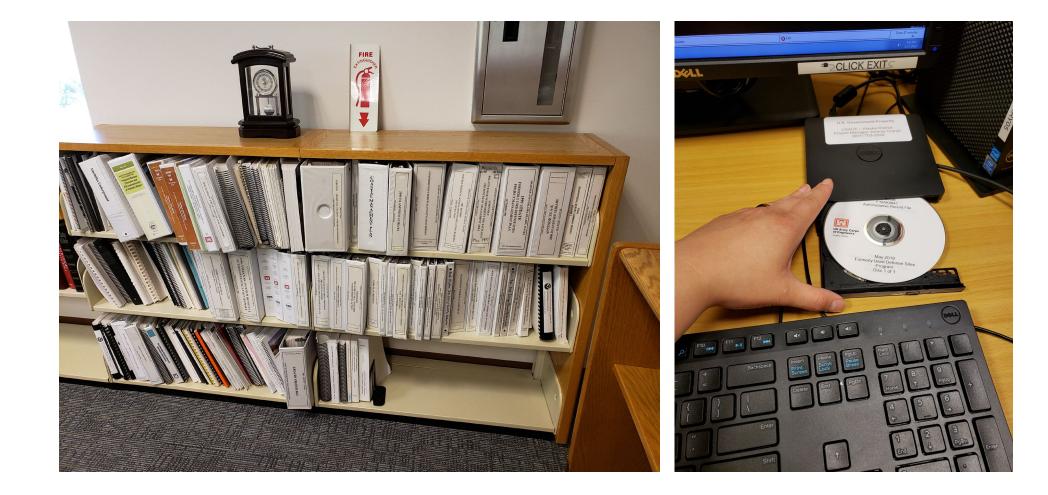
DRAFT OPERATING PROCEDURES





INFORMATION REPOSITORY REFRESH

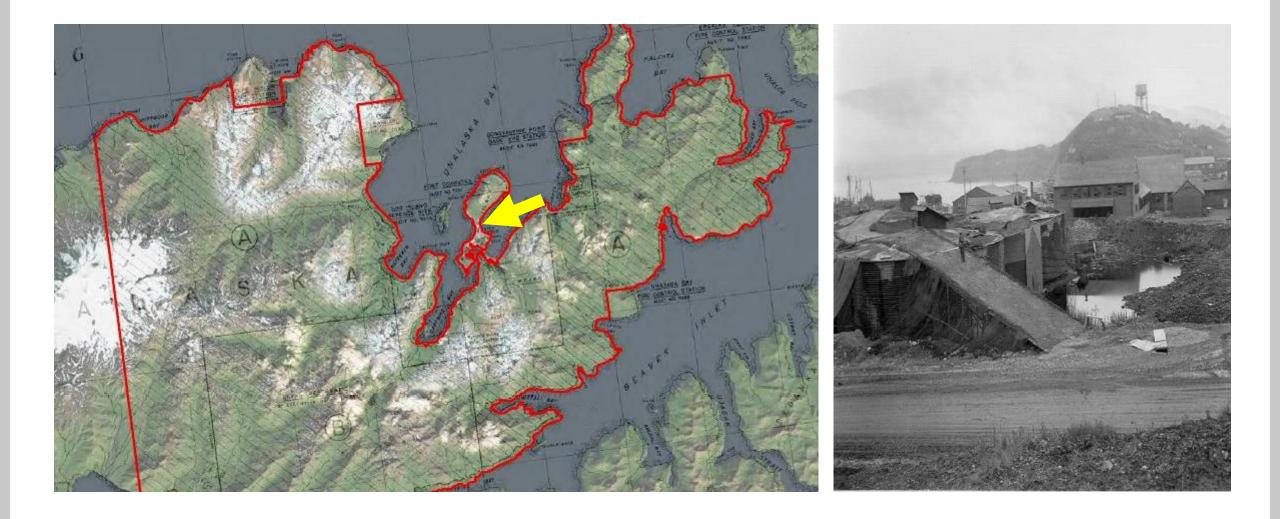






PRE-WWII TANK FARM PROJECT



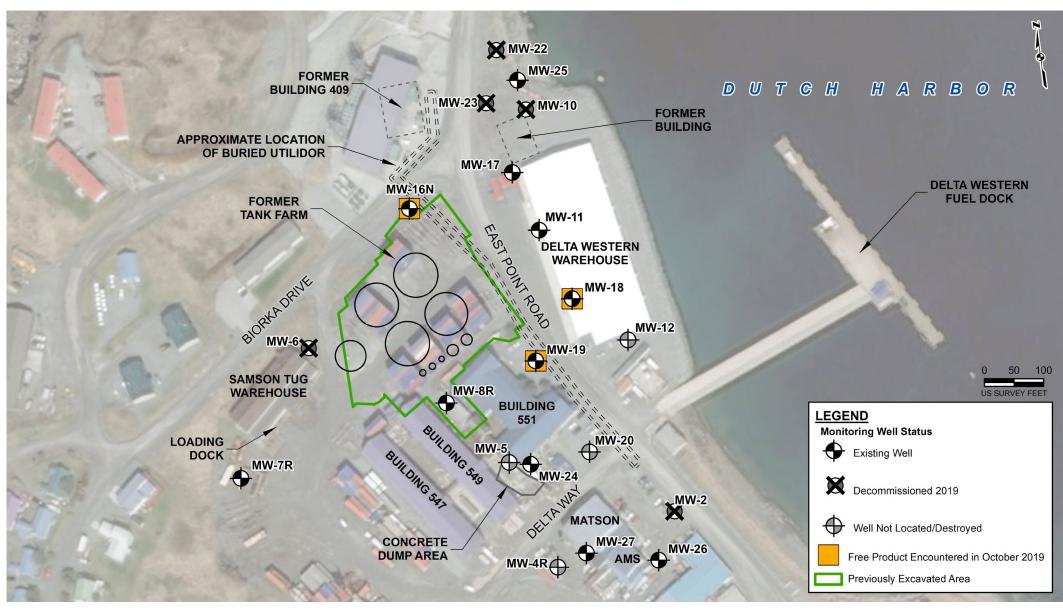


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SITE MAP







2019-2020 ACTIVITY SUMMARY

- Monitoring Well Network Maintenance/Optimization
- Groundwater Monitoring
- Building 551 Crawlspace Covers
- Information to Site Users
- Groundwater Use Determination
- 2nd Periodic Review of Remedy







BUILDING 551 EXPOSURE PATHWAY PROTECTION





































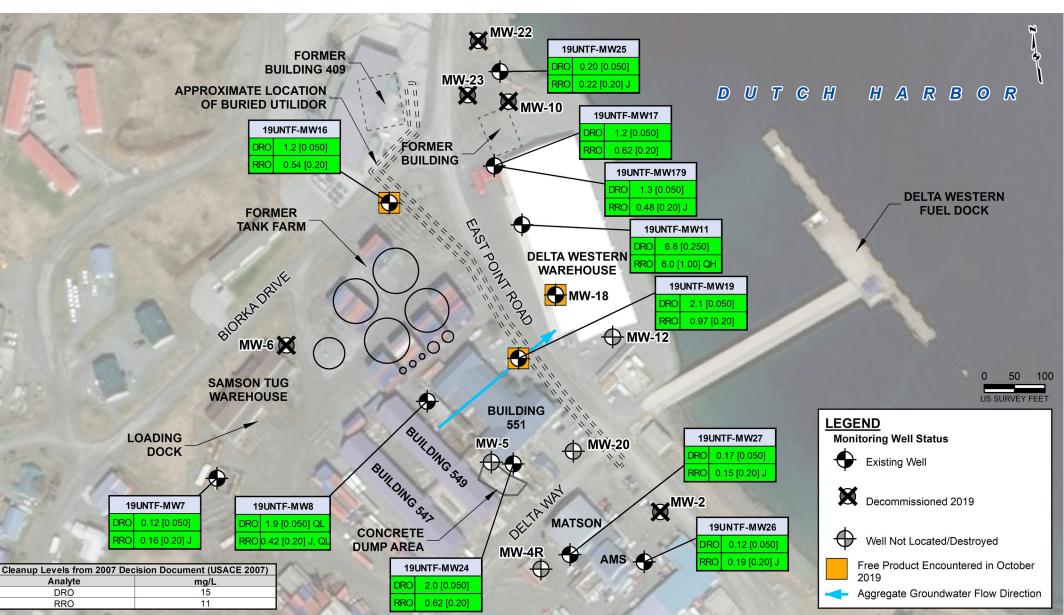








GROUNDWATER MONITORING





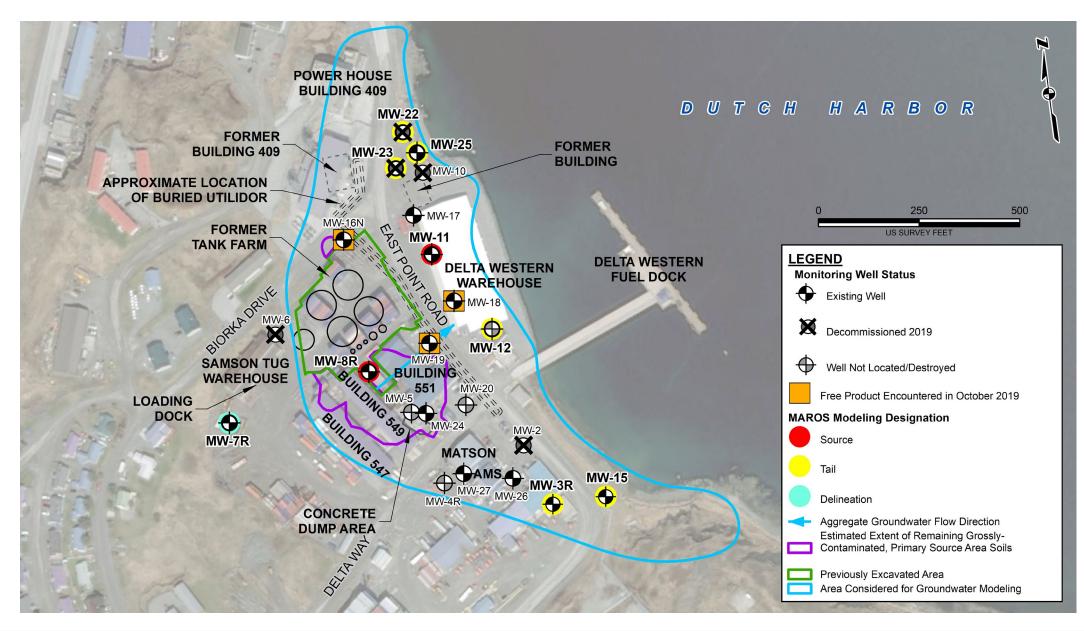
TREND ANALYSIS

	MW-8		le .	MW-23			1					2
Date	DRO	RRO	Date	DRO	RRO	1943			N	IW17		
12/7/1998	4	ND [0.2]	6/30/2009	1.31	0.691				-	DRO	RRO	a
11/14/1999	3.6	ND [1.2]	9/25/2013	0.96	0.56				7/1/2009	2.11	0.746	
2/14/2000	20.2	13.7	12/2/2014	0.84	0.4	MW-	22		10/16/2019	1.3	0.62	•
5/9/2000	2.4	0.55	-	MW-25				/				
8/26/2000	4.8	1.6	10/21/2019	0.2	0.22		•	/		MW-11		
12/7/2000	1.5	0.28	The states	11/1/1	1	MIN 22 30	MW-1	10	Date	DRO	D RRO	
3/6/2001	2.4	0.37	28	MW-16		MW-23	X		12/12/1998	4.9	0.28	D U T G H
6/8/2001	1.2	ND [0.3]	Date	DRO	RRO .	/FORMER	11		11/11/1999	3.3		
9/5/2001	10.7	6.96	11/11/2004	49	47	BUILDING	1		2/13/2000	1.9		HARBOR
2/8/2002	4.7	2.8	10/19/2019	1.2	0.54		Y	10.0	5/9/2000	3.5	1.2	
5/9/2002	7.6	5.6						12.4	9/15/2000	5.5	0.83	Cleanup Levels from 2007
8/20/2002	4.9	2.8		RIED UTILIDO		The State	•	10.00	3/7/2001	150		Decision Document (USACE 2007)
11/24/2002	1.3	0.59		FORMER		EASTPOINT	•		6/8/2001	8	2.4	Analyte mg/L
3/2/2003	2.3	0.696	X	TANK FARM	~~~		DELTA	WESTERN	9/14/2001	20.9		DRO 15
6/30/2009	3.19	0.704			6		WAR		2/9/2002	79		
9/3/2012	1.3	0.26					Rob G	MW-18	5/10/2002	3.5		0 50 100
9/25/2013	2.9	0.62	1	MW-6					8/20/2002	4.2		
12/2/2014	0.75	0.22	and		A	100-		\oplus	11/24/2002	5.7	=	US SURVEY FEET
10/15/2019	1.9	0.42	BIORNA DRIV			000		MW-12	3/2/2003	7.79	-	
and and	1+		attr	9/2		° (11/11		9/26/2013	3.1		Monitoring Well Status
10 202			SAM WAF	SON TUG	LA.		BUILDING	in l	12/3/2014	1.3		
1000000		AND NOT	LOADING		in Day		551		10/18/2019	6.8	6	Existing Well
Data	MW-7R		DOCK		r	Z .	N-5	MW-20		MW-1	10	
Date 12/7/1998	DRO 0.15	RRO		-	81	MC +			Date	DRC		Decommissioned 2019
		ND [0.2] 0.150	V			DIA. 49	No Ch	₹. N	1W-2 7/1/2009	3.49		- 1
5/1/2005	0.014	0.150			(La	DING SHI	DELTAM	No.	10/17/201		0.97	Well Not Located/Destroyed
5/12/2006	ND [0.326]	0.175	/	0	11.	- 11	OF MA	ATSON	10/11/201	5 2.1	0.37	Well Not Located/Destroyed
6/12/2007	0.092	0.149			CONCRET	_ // <	+			MW-2	6	Free Product Encountered in October
5/21/2008	ND [0.0612]	ND [0.51]		0	DUMP AREA	A M	W-4R		Date	DRC	-	2019
6/29/2009	ND [0.269]	0.203		10 M	Sec.	/		184.6	10/23/2019	-		Aggregate Groundwater Flow Direction
9/2/2012	0.017	ND [0.02]		Contraction of the			281	1	10.20.2010	0.112		Previously Excavated Area
9/25/2012	0.017	0.1	5	MW-24			MW27		200		Sid 1	3.4
12/2/2014	0.043	0.035	Date	DRO	RRO	Date	DRO	RRO			F M	Shaded cells with bold text indicate detections
10/21/2019	0.024	0.035	10/22/2019	2	0.62	10/20/2019	0.17	0.15	A			exceeding site-specific cleanup levels.
10/21/2019	0.12	0.10	10/22/2019	2	0.02	10/20/2019	0.17	0.15	////			



TREND ANALYSIS

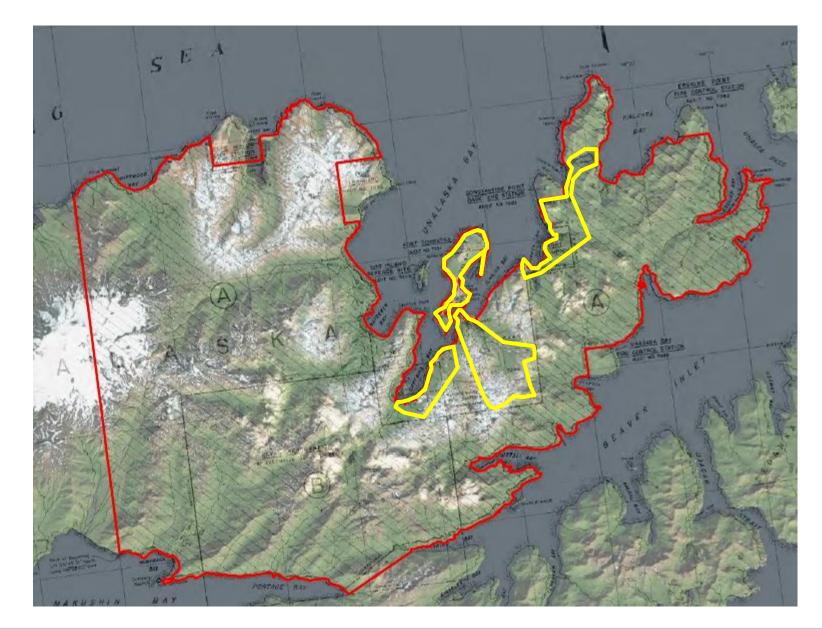






DUTCH HARBOR VICINITY PROJECT





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REMOVAL OF PIPELINES, TANKS, AND ASSOCIATED POL-SOIL







INTERIM RISK MANAGEMENT COMMUNICATION







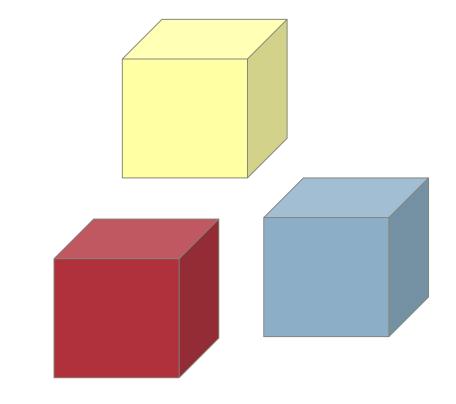






- RAB Membership Forms
- Amaknak FUDS RAB Mission and Operating Procedures
- Status of Cleanup Activities and Timeline
- Site Closures
- Organization of remaining impacts
- Path Forward
- Rescore MMRP risk and conduct a future remedial investigation and feasibility study
- Next Newsletter May 2020
- Schedule Next Meeting









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QUESTIONS?





CONTACT INFORMATION

PROJECT MANAGER

Rena Flint (907) 753-2680 <u>Rena.B.Flint@usace.army.mil</u>

USACE- ALASKA DISTRICT PUBLIC AFFAIRS OFFICE (907) 753-2520 Public.affairs3@usace.army.mil

<u>http://www.poa.usace.army.mil/Library/Reports-and-Studies/</u>. On that webpage, look under "Documents Available for Public Review" and expand the Environmental Cleanup link.





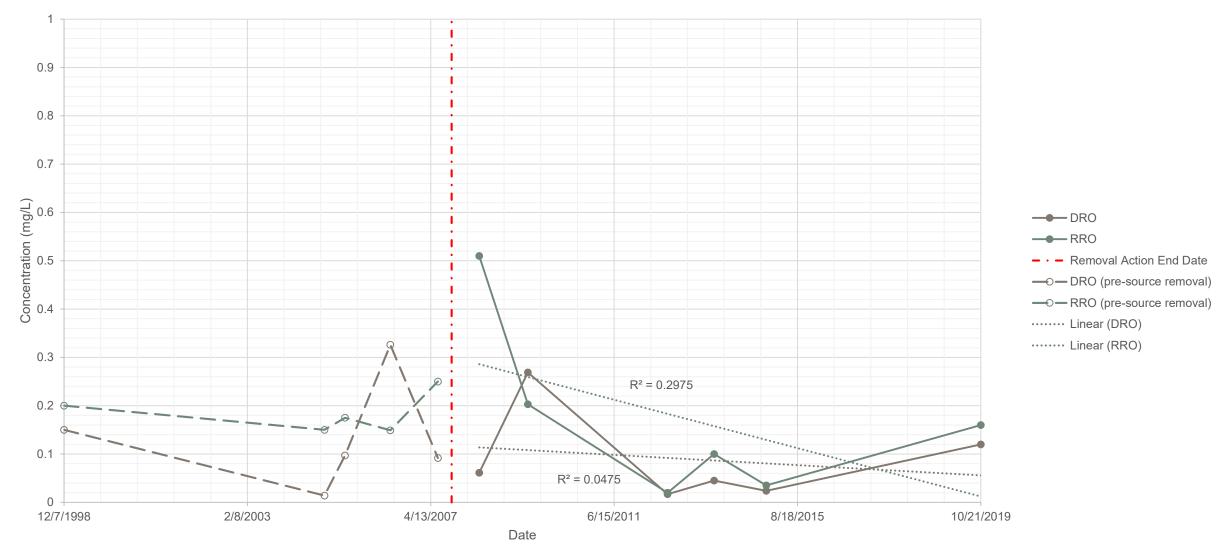


SUPPORTING DATA





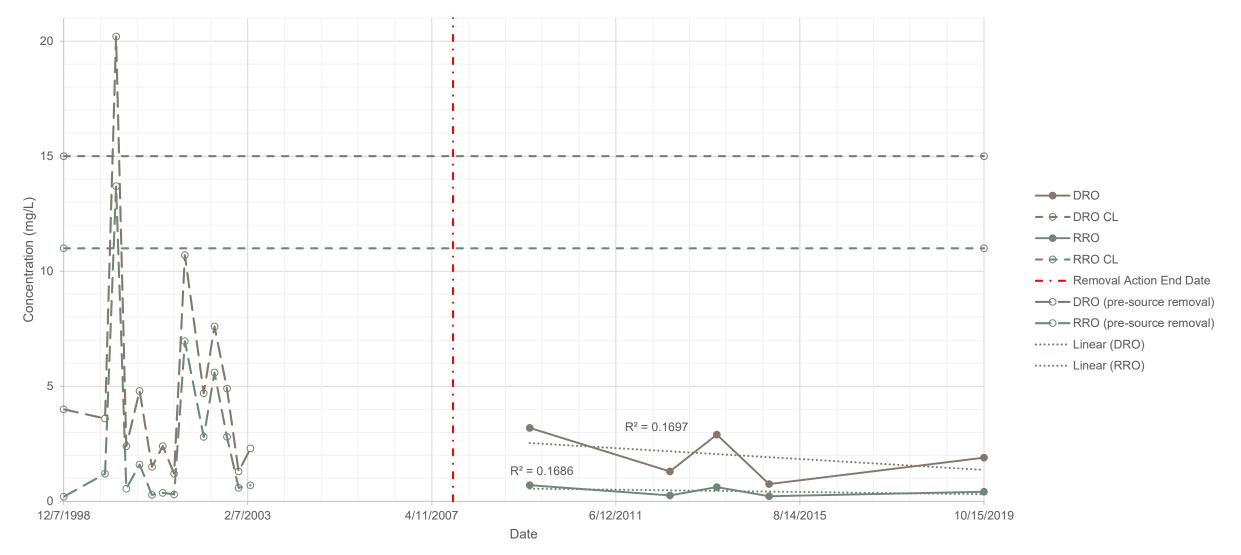
MW-7R







MW-8R



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25 Q 1 20 • Concentration (mg/L) 0 51 \bigcirc ---- DRO --------------------------------RRO - · - Removal Action End Date -O-DRO (pre-source removal) • ······ Linear (DRO) ······ Linear (RRO) R² = 0.1858 5 💩 \$\$ b 60 $R^2 = 0.7595$ 0 12/12/1998 2/12/2003 4/15/2007 6/16/2011 8/17/2015 10/18/2019

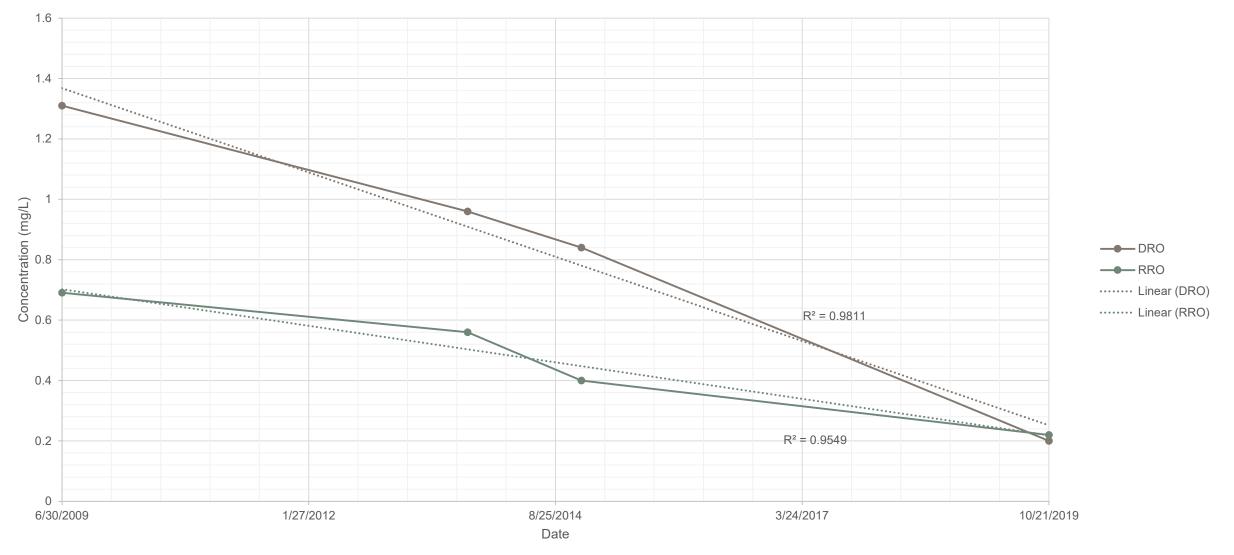
MW-11

Date





MW-23 and MW-25



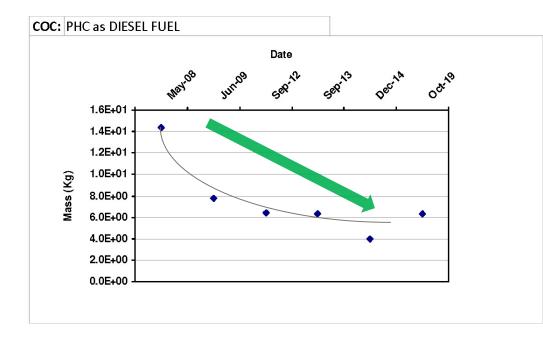
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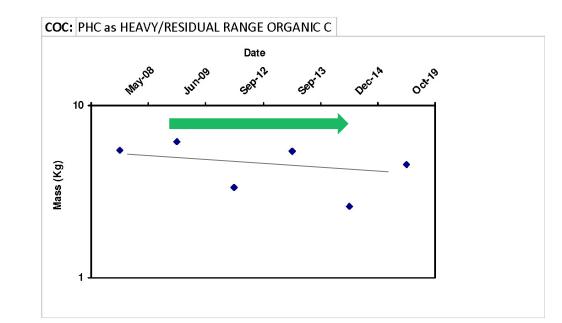


TREND ANALYSIS (MAROS)

Mass of contaminant plume in groundwater

- DRO is DECREASING since soil removal
- RRO is STABLE since soil removal









TREND ANALYSIS (MAROS)

Location of center of contaminant plume

- DRO/RRO plume has moved 220 feet to the northwest since source soils were removed.
- Movement back and forth perpendicular to groundwater, likely from fluctuations in concentrations from tidal/rain effects.

COC: PHC as DIESEL FUEL

