



**“BUILDING AND PRESERVING ALASKA’S FUTURE”**

**Umiat Restoration Advisory Board (RAB) Meeting**


U.S. Army Corps of Engineers – Alaska District  
Nuiqsut, AK  
November 13, 2019

File Name: \_\_\_\_\_

## Meeting Agenda


- Welcome & Introductions
  - ▶ Safety Moment
  - ▶ Prayer
- RAB Administrative Items
- Project Update – Umiat Landfill
- Presentation – Umiat Test Well #9 Drainage Proposed Plan
- Questions & Answers
- Path Forward/Next Steps Discussion
  - ▶ Schedule for Next Meeting
- Meeting Recap/Closing Remarks



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## RAB Administrative Items


- November 2018 Meeting Minutes
  - ▶ Discuss changes/edits
  - ▶ Approval
- Bylaws
  - ▶ Coordinate signed document for permanent record



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## Umiat Landfill Update

- **Decision Document** approved by Headquarters 27 September 2019
- Beginning **Remedial Design** Phase




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## Umiat Landfill



Umiat Landfill Approximate Location Looking North June 2019



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## Landfill Selected Remedy

- **Removal** of the landfill contents from the Colville River floodplain
- **Separate** excavated material into waste streams
- Place **inert debris** into a newly created monofill
- **Offsite** disposal of **hazardous** substances
- **Onsite treatment** of contaminated soils, e.g. thermal treatment, landfarming, or stabilization
- **Treated soils** that meet cleanup levels may be used at the monofill, for road maintenance, or at the handling pad



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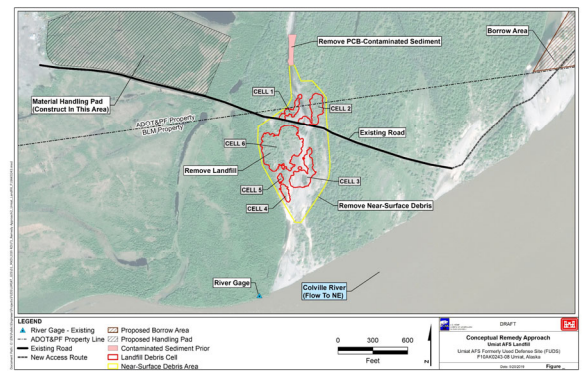
## Changes from Proposed Plan

- Only **inert debris** to be placed into monofill
  - **Onsite treatment** of contaminated soils, if feasible, using thermal treatment, landfarming, or stabilization
  - **Treated soils** that meet cleanup levels may be used at the monofill, road maintenance, or at the handling pad
  - Hazardous waste and contaminated soil (unable to be treated onsite) will be transported offsite for disposal
- Additional project implementation details to be addressed during **design phase**

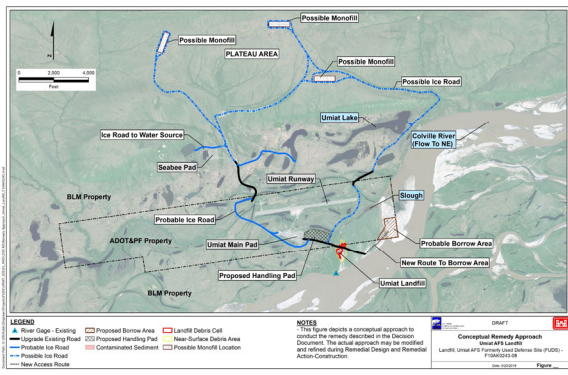


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## Umiat Landfill



## Landfill Remedy Approach



## Annual Landfill Site Inspection

- Visually inspect for signs of recently exposed and potentially hazardous items such as transformers or batteries
- Walk transects and take comparison photographs
- Document any physical changes, observations of debris or exposed items
- Provided overview of entire Umiat project for new PM and ADEC representative
- BLM representative also onsite during site inspection



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## Umiat Landfill – Site Inspection



Exposed Debris during June 2019 Landfill Inspection



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## Umiat Landfill – Site Inspection



Drill Rig 2019



Drill Rig 2012



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## Umiat Landfill – Metal Debris



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## Umiat Landfill – Metal Debris



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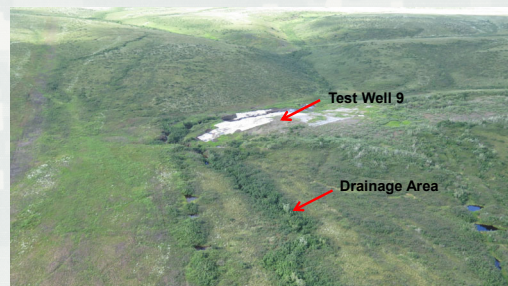
## Umiat Landfill – Next Steps

- Remedial design phase underway
- Award task order to A/E Contractor (March 2020)
  - Execute surveys/investigations/data gathering
  - Design survey
  - Refine Conceptual Site Model
  - Monofill location, handling pad specifications
  - Other investigations Final design by March 2022
- Regulatory/landowner coordination meetings
- Acquisition planning, funding phased considerations
- Remedy Implementation/Construction start approx. 2022

QUESTIONS?

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## Umiat Test Well #9 Drainage No Further Action Proposed Plan



Test Well #9 Drainage looking North, 2015

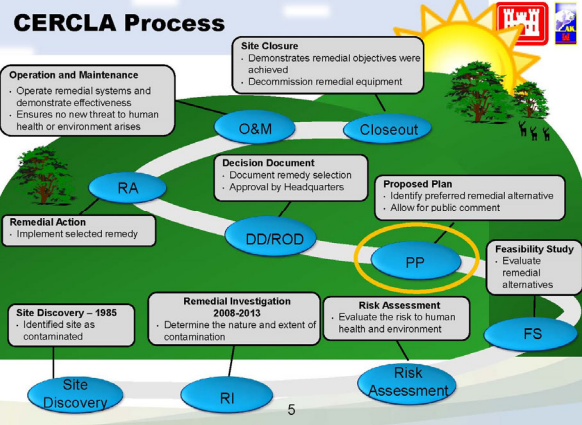
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## Umiat Test Well #9 Drainage



Test Well #9 Drainage looking North, 2019

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## Umiat Test Well #9 Drainage

- Remedial investigation and risk assessment completed 2018.
- Concluded the site does not pose an actionable human health or ecological risk.
- No further evaluation of ecological risk recommended.
- No Further Action Proposed Plan available for public review and comment



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## Umiat Test Well #9 and Drainage



Test Well #9 Location and Drainage, looking South 2019



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## Umiat Test Well #9 Drainage



Test Well #9 Drainage, view north at upper end (August 2017)



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## Remedial Investigation Summary

- Soil sampling over 100 x 100 foot grids
  - ▶ 150 composite samples, analyzed for PCBs and POL
  - ▶ PCB ranged from non-detect to 3.46 mg/kg
  - ▶ Six grids had PCBs above 1 mg/kg
  - ▶ Fuels results all below screening levels
- Sediment/surface water sampling in channels
  - ▶ 46 discrete samples, analyzed for PCBs and POL
  - ▶ Maximum PCBs of 8.52 mg/kg at head of drainage
  - ▶ 9 surface water samples, all non-detect for PCBs
  - ▶ Detections of RRO attributed to high amount of peat/naturally occurring organic materials



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## Umiat Test Well #9 Drainage



Sampling in drainage channel and pond



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## Human Health Risk Assessment

- Potential receptors evaluated
  - ▶ Current/future visitors, future workers, future subsistence residents
- Potential pathways
  - ▶ Ingestion of soil/sediment/surface water, skin contact with soil/sediment/water, inhalation of dust, eating game or wild berries
- Cancer risk estimates for all receptor groups were within or below the USEPA risk management range



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## Ecological Risk Assessment

- Plants and soil invertebrates, birds, and mammals
  - moose, caribou, collared lemming, willow ptarmigan, arctic shrew, arctic warbler, least weasel, and snowy owl
- Potential pathways
  - Direct contact with soil/sediment and dietary intake of potentially contaminated prey
- Conservative evaluation used
  - Bioaccumulation factors
  - Maximum site-wide concentrations and representative average concentration
  - Hazard quotient method compares dietary exposure estimate to toxicity reference values

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## Ecological Risk Assessment

- HQ indicated some potential for harm to small mammals and birds from PCBs and fuels in soils
  - Uncertainties associated with large home range of birds in comparison to size of site
  - Naturally occurring organics and high peat soils
- Benthic organisms in sediment
  - 8 locations exceed minor adverse effect level for PCBs, but are not expected to significantly impact broader ecological community



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## Risk Management

- Remedial action would have significant long-lasting impacts to fragile arctic tundra
  - Loss of wetland functionality
  - Substantial carbon footprint
  - Increased risk of exposure during removal and transport of contaminated material
- Limited potential for ecological risk from sediment exposure does not pose unacceptable risk to animals at a population level



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## Umiat Test Well #9 Drainage



Drainage Channel with steep sides, heavy vegetation



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## Umiat Test Well #9 Drainage

- Public comment period ends:  
December 15, 2019
- Submit additional comments by Email:  
[POA-FUDS@usace.army.mil](mailto:POA-FUDS@usace.army.mil)
- Or by Mail:  
CEPOA-PM-ESP-FUDS (Rm 200)  
Umiat Drainage Proposed Plan  
PO Box 6898  
JBER, AK 99506



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## Umiat Test Well #9 Drainage

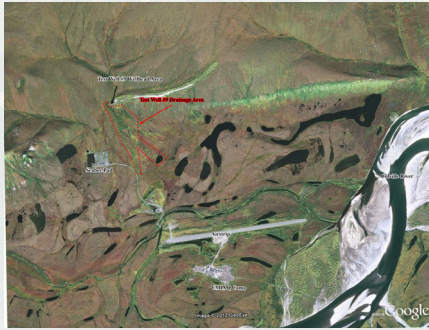


Questions or Comments?



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## Umiat Vicinity



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## Umiat Test Well #7



Umiat Test Well #7 looking south, 2017 Umiat Test Well #7 looking northeast, 2019

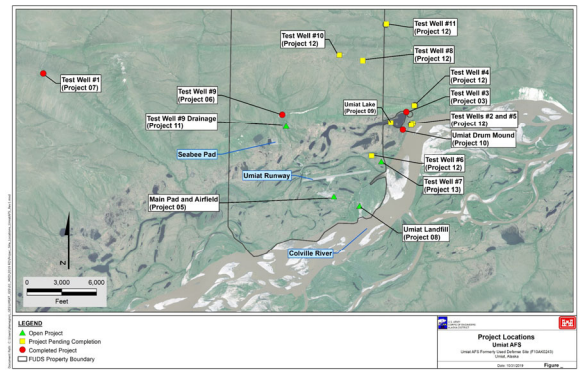
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## Umiat Test Well #7

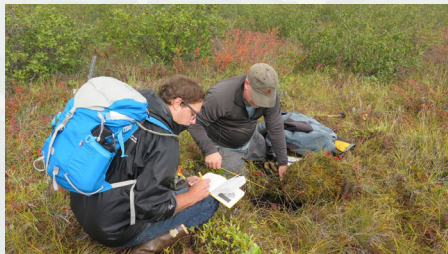
- Feasibility Study underway
- Site visit conducted in August 2019
- Anticipate draft in Spring 2020
- Evaluates remedial alternatives for lead-contaminated soil

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## Umiat AFS Project Locations



## Umiat Fieldwork 2020



Continue Landfill site inspections  
Possible remedial design fieldwork by A/E contractor

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## QUESTIONS or COMMENTS?



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