



Kwethluk Brownfield Case Study

Lessons in perseverance

John B. Carnahan
Brownfield Coordinator

DEC Reuse & Redevelopment Program

Alaska Conference on Environmental Management

November 7, 2012

Anchorage, Alaska



DEC's Reuse & Redevelopment Program

Agenda

- What we wanted to accomplish
- How does a project start?
- First things first – *Site Assessment*
- Problems identified – What's next?
- Field work and more field work!
- Are we done yet?
- Where from here?





What we wanted to accomplish

- Show efficiencies in our capacity to manage this work
- Show how interagency parties can work efficiently
- Exemplify the need for brownfield funding in Alaska
- Complete a cleanup!
 - Pilot the use of STRP funding for more than assessment
 - Make one site ready for reuse
- Make a difference

We want to show that this work is difficult, but important, and can be completed reasonably.



How does a project start?

- Community interest
- A problem that brownfields can address
- Community coordination
- A plan for the future

“Can you bulldoze the building while you are in town??”



What's first? --- Assessment!

- Complete a TBA/DBA form
 - TBA = Targeted Brownfield Assessment (EPA)
 - DBA = DEC Brownfield Assessment (DEC)
- Coordinate with State if you want
 - We provide review and coordination, and are free!
- Contractors develop scope of work in conjunction with all parties
- Generally one field season worth of work



ECONOMIC DEVELOPMENT 2000-2004

For
The Organized Village of Kwethluk
including:

Kwethluk IRA Council
City of Kwethluk
Kwethluk, Inc.
Kwethluk Tribal Resident Council

ORGANIZED VILLAGE OF KWETHLUK

Kwethluk Indian Reorganization Act Council

P.O. Box 130, 147 Jay Hammond Way, Kwethluk, Alaska 99621

Phone: (907) 757-6714/6715, Fax: (907) 757-6328, Email: kwtira@unicom-alaska.com

ORGANIZED VILLAGE OF KWETHLUK IS A TRIBAL CORPORATION INCORPORATED IN THE STATE OF ALASKA. IT IS A SUCCESSOR TO THE KWETHLUK INDIAN REORGANIZATION ACT COUNCIL. THE COUNCIL IS A TRIBAL CORPORATION INCORPORATED IN THE STATE OF ALASKA. IT IS A SUCCESSOR TO THE KWETHLUK INDIAN REORGANIZATION ACT COUNCIL. THE COUNCIL IS A TRIBAL CORPORATION INCORPORATED IN THE STATE OF ALASKA. IT IS A SUCCESSOR TO THE KWETHLUK INDIAN REORGANIZATION ACT COUNCIL.

DATE: July 7, 2009

Greetings,

Joseph Guy Memorial Community Building that was incinerated on April 24, 2006 is now an eyesore and it is potentially hazardous to the environment, human health and safety. The burnt building contains computer debris, insulation, glycol heating system remnants, and other potentially unsafe items. The community is concerned about the welfare and safety of the environment due to these contaminants and the safety of children, especially since the Headstart facility is right next door to the former Community Center.

TARGETED BROWNFIELDS SITE ASSESSMENT QUESTIONNAIRE

ORGANIZATION:

Organized Village of Kwethluk (OVK)
Herman Evan, OVK Tribal Administrator
P.O. Box 130
Kwethluk, AK 99621-0129
Phone: 907-757-6714/6715
Fax: 907-757-6328
Email: kwtira@unicom-alaska.com

SITE:

The site proposed for assessment is the former Joseph Guy Community Center (Center), located at the intersection of Jay Hammond Way and Airport Road in Kwethluk, Alaska. The building was destroyed by fire in April 2006. The Center was built with a combination of federal and state grant funds between 1998 and 2002. The burned-out structure is adjacent to both the post office and Head Start buildings, and across the street from the Lower Kuskokwim School District School. The investigation area comprises approximately one-half acre. The original building plans developed by the engineering firm hired to manage the project during construction are attached.

With the Center's destruction, residents are faced with the loss of their only community gathering place. The loss of the Center also presents a shortage of Tribal and social service office space. The usual hazards associated with unsecured burnt buildings are present, and the threat to human safety and health is exacerbated by the fact the Head Start building is located nearby. Additional hazards include possible soil and water contamination and a direct threat to human health due to the site's former glycol heating system, fluorescent lighting fixtures, computer waste, and insulation waste. There are reports of the following debris and items and conditions visible and present on site: Broken glass windows, water boiler, iron beams, burnt insulation, collapsed roof, burnt computers and other electronic items, broken tile, wires, broken fluorescent lights, and

TBA Request
Form

Basic form to EPA

Letters from
community

Backup to show that
you are serious!





TBA - 2010

Inspecting the site

Five years after the
fire

Building still
standing





TBA - 2010

Building is constructed above grade on insulated pilings

Sides buckled in, but withstood snowfall





TBA - 2010

Plenty of debris
within structure

Concern over metals,
remnant burned
chemical residue –
dioxins

Physical hazards are
great





TBA - 2010

Sampling took place
inside and outside
the structure

Samples collected
near old fuel tanks
and where staining
was present





TBA - 2010

Samples are collected
in accordance with
laboratory
procedures

Protective gloves are
always worn

Laboratory materials
and sampling
supplies bagged



TBA Assessment - What did EPA find?

- Metals in the ground surface beneath building
- Dioxins on the burned materials
- Petroleum/chemical contamination in the ground
- Lots and lots of scrap metal = recyclable
- Lots of burned debris = solid waste



Estimated cost to cleanup - \$375 - \$500,000



What's next?

- Everyone wants more than assessment!
- How many funding options are there?
- Persistence pays off – sometimes it is just plain timing
- Tribe → ANTHC → EPA → DEC
- Identifying the possibilities
- Pilot project – STRP Cleanup



DEC Brownfield Assessment/Cleanup

- DBA/C Request period each year
 - *You must request our services to be considered*
- Limited funding to conduct assessments
- First year to pilot a 'cleanup' with our grant funding
- Only had two projects that were potential candidates
- This was the selected project for cleanup



Potential team - DEC and ANTHC

- Unique opportunity to use ANTHC resources
- ANTHC well established in community
- DEC has funding potential
- Coordination can lead to cost savings
- Timing is key, but seems realistic
- Excellent pilot project opportunity!

What could possibly go wrong?



Whatcha gonna do?

- Not many options – remove building!
- Where to dispose of debris is primary
 - Removal out of community? *More \$\$\$*
 - Dispose of locally? *Where is a permitted dump???*
- Contamination requires special considerations for disposal...
- Approvals and Communication KEY!



Project outline – Easy as pie!

- Step 1

- Coordinated effort to demolish building – (ANTHC to take lead)
- Debris removal before the last barge goes out (Transport steel out of town for recycling)

- Step 2

- Conduct source removal of 'hot spots'
- Dispose/treat material locally
- Grade the site

Step 3 – Redevelopment!



DEC planning for the project

- SHPO/ESA letters
- EPA Approvals
- ABCA = Analyses of Brownfield Cleanup Alternatives
- Public Notices
- Public Meeting
- Hiring a contractor – coordinate with ANTHC



Scheduling – tight timeline to beat barge

John takes a holiday...

- Did I mention that about this time, I decided to leave DEC for 4 months?
- Complete a student teaching gig to complete a long-term commitment
- Not sure what was harder...



First things first - SHPO

State Historic Preservation Office

It is important that you take care of business before going too far.



DEC's Reuse & Redevelopment Program

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

SEAN PARNELL, GOVERNOR
610 University Avenue
Fairbanks, AK 99709-3643
PHONE: (907) 451-5174
FAX: (907) 451-5105
www.dec.state.ak.us

File: 2424.57.001 **RECEIVED**
August 1, 2011 **AUG 04 20**

Judith Bittner
Chief, Office of History and Archaeology
Alaska Department of Natural Resources
550 West 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

No Historic Properties Affected
Alaska State Historic Preservation Officer
Date: 8.12.2011
File No. 3130-2R ADEC
SAB

Re: Request concurrence of "No Historic Property Affected" finding for environmental site assessment and clean-up activities at the Former Joseph Guy Community Center in Kwethluk, Alaska

Dear Ms. Bittner:

The Alaska Department of Environmental Conservation (DEC) seeks concurrence that the environmental site assessment and cleanup activities to be performed at the above site will comply with policies of the State Historic Preservation Office. The project is described below. See Figure 1 for a vicinity map of Kwethluk, Alaska. See Photo 1 for an aerial photo of the community with the site labeled.

Former Joseph Guy Community Center:
The Former Joseph Guy Community Center (Center) was destroyed by fire in April 2006 (see Photo 2). The Center was built with a combination of federal, state, and private funds between 1998 and 2002 on land owned by the Organized Village of Kwethluk (OVK). The burned-out structure is adjacent to both the post office and Head Start buildings, and is across the street from the Lower Kuskokwim School

11/6/2012

ESA Consult

Endangered Species Act

One more piece of
business that can
help keep you out of
trouble.



DEC's Reuse & Redevelopment

Brunner, Melinda S (DEC)

From: Brunner, Melinda S (DEC)
Sent: Monday, August 01, 2011 2:38 PM
To: 'ellen_lance@fws.gov'
Subject: Endangered Species Act Consult - Kwethluk, AK
Attachments: Kwethluk Attachments.pdf

Dear Ms. Lance,

I am with the Reuse & Redevelopment



In reply refer to:
AFWFO

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Anchorage Fish & Wildlife Field Office
605 West 4th Avenue, Room G-61
Anchorage, Alaska 99501-2249



August 5, 2011

Ms. Melinda Brunner
Alaska Department of Environmental Conservation
Contaminated Sites - Reuse & Redevelopment Program
610 University Avenue
Fairbanks, AK 99709

Re: ESA Comments on Kwethluk site assessment and cleanup (Consultation number 2011-0182)
Dear Ms. Brunner:

This responds to your email of August 1, 2011, to Ellen Lance, requesting our concurrence that the above-referenced project is not likely to affect any endangered or threatened species. We are providing the following comments pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.* as amended; ESA).

Our records indicate that there are no federally listed or proposed species, or designated or proposed critical habitat, within the action area of the proposed project. Therefore, requirements of section 7 of the ESA have been satisfied, and no further consultation pursuant to ESA section 7 is required at this time. However, you are required to re-initiate section 7 consultation, on behalf of EPA, if project plans change, if a new species is listed, or critical habitat is determined that may be affected by the identified action.

This letter relates only to federally listed or proposed species, and designated or proposed critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service; it does not address species under the jurisdiction of the National Marine Fisheries Service, or other responsibilities under the Fish and Wildlife Coordination Act, Clean Water Act, National Environmental Policy Act, Marine Mammal Protection Act, or Bald and Golden Eagle Protection Act, or other legislation.

Thank you for your cooperation in protecting and enhancing endangered, threatened, and rare species in Alaska. If you have any questions, please contact me at (907) 257-2249.

Conservation

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11/6/2012

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ABCA

Analyses of Brownfield Cleanup Alternatives

Completed by DEC
for this project –
straight forward
demolition and
disposal.



DEC's Reuse & Redevelopment Program

Home Go Back
Online Public Notice
State of Alaska

Request for Public Comments on the
Comm

Category: Public Notices
Publish Date: 08/25/2011
Event/Deadline Date: 09/23/2011 05:00

Body of Notice:

The Alaska Department of Environmental Conservation (DEC) proposes to redevelop the Former Joseph Guy Community Center in Kwethluk, Alaska. The Center is located at the intersection of Jay Hammond Way and Airport Road. The Center was destroyed by fire in April 2006. The building was destroyed by fire in April 2006. The Center was destroyed by fire in April 2006.

Copies of the Analysis of Brownfield Cleanup Alternatives (ABCA) are available for public review at the DEC's website.

DEC's Fairbanks Office is located at 610 University Avenue, Fairbanks, AK 99709. Telephone: (907) 457-1417.

Organized Village of Kwethluk (OVK) is located at 147 Jay Hammond Way, Kwethluk, Alaska. Telephone: (907) 457-1417.

City of Kwethluk is located at 147 Jay Hammond Way, Kwethluk, Alaska. Telephone: (907) 457-1417.

To provide a copy of the ABCA, please contact the DEC's Fairbanks Office at (907) 457-1417.

The analysis of the ABCA is available for public review at the DEC's website.

Public Notices
the Analysis of

THE DELTA DISCOVERY NEWSPAPER
P.O. BOX 1028
BETHEL, AK 99559

AO/PO#
AIO#

Department of Environmental Conservation
Contaminated Sites Reuse & Redevelopment Program

NAME OF PETITIONER
610 University Avenue
Fairbanks, AK 99709

ADDRESS OF PETITIONER

AFFIDAVIT OF PUBLICATION

UNITED STATES OF AMERICA, STATE OF ALASKA, 11th DIVISION, BEFORE ME, THE
UNDERSIGNED, A NOTARY PUBLIC THIS DAY PERSONALLY APPEARED,
WHO, BEING FIRST DULY SWORN,

ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES Former Joseph Guy Community Center Kwethluk, Alaska August 11, 2011

1.0 INTRODUCTION

This Analysis of Brownfields Cleanup Alternatives (ABCA) is intended as a screening tool to ensure and document that the appropriate type of cleanup is selected to address environmental contamination at the Former Joseph Guy Community Center in Kwethluk, Alaska (see Figure 1). The preferred remedial action considers site characteristics, the surrounding environment, potential future uses, and cleanup goals.

2.0 SITE DESCRIPTION

The Former Joseph Guy Community Center (Center) is located at the intersection of Jay Hammond Way and Airport Road in Kwethluk, Alaska. The building was destroyed by fire in April 2006 (see Photo 1). The Center was built with a combination of federal, state, and private funds between 1998 and 2002. The burned-out structure is adjacent to both the post office and Head Start buildings, and is across the street from the Lower Kuskokwim School District school. The Organized Village of Kwethluk (OVK) owns the site.

The 0.5-acre site is located in Section 5, Township 8 North, Range 69 West, Seward Meridian at 60.810278N, -166.423945W. The project location is shown in Photo 2.

3.0 PREVIOUS INVESTIGATIONS

The U.S. Environmental Protection Agency (EPA) provided a Targeted Brownfields Assessment (TBA) of the site in 2010, and the report of findings was published in 2011. As part of the TBA, 26 soil samples were collected and analyzed for semi-volatile organic compounds (SVOC) and Target Analyte List (TAL) metals; a subset of 11 soil samples was also tested for dioxins and furans. Two additional soil samples taken at the location of a former

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As required,
all applicants may obtain an
instant Application from the Output
Unit. Persons with disabilities
wish to apply and request reason-
able accommodation should advise us in
advance by calling (800) 264-8242 (Voice)
(7) 264-8241 (TTY).
Instant Applications may be deliv-
ered to the Output Unit or by mail.
Instant Applications at (800) 264-8242
must be received no later than
5 p.m. on Monday, August 29, 2011.
IF ALASKA COUNTY SYSTEM IS
USED EMPLOYER AND PROUDLY
SHOWS DIVERSITY (125)(910-91)

Public Notice

THE MEMBERSHIP Freedom isn't free,
and millions of Americans have paid the
price for the freedom we enjoy today. Since
1800, the volunteers of the War of 1812
have served those who served America. From
writing volunteer legislation and their hard-
working volunteers, the War of 1812
has the right to get it through Congress,
to community projects that benefit all
Americans, the War of 1812 is an opportunity for
volunteers to continue to serve. Contact the
War of 1812 at 1-800-851-1111 or 1-800-851-1111
and ask what you can do for your
community. (800) 851-1111

PUBLIC NOTICE STATE OF ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

The Alaska Department of Environmental
Conservation (DEC) is accepting public
comments on the Analysis of Brownfield
Cleanup Alternatives for the Former Joseph
Guy Community Center (Center). The
Center is located at the intersection of
Jay Hammond Way and Airport Road in
Kwethluk, Alaska. DEC proposes to remove
the Center and the contaminated soil at the
site so that the site can be reused.
Copies of the Analysis of Brownfield
Cleanup Alternatives and the report detailing
the environmental investigations done at the
site are available for public review at the
DEC's website.

continued on page 18
classifieds
classified ad

116
at Drive

11/6/2012

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Round 1 - Plans must change

We have 1 year to spend this funding

- Subcontract issues concern ANTHC
 - DEC cannot complete contract with its contractor
- Can't dispose of material locally
 - ALL debris must leave town
- Schedule slips...barge is long gone
 - How do we get steel out of town?
- Everything is more difficult in the winter
 - Losing efficiencies is costly!
 - Ice road is a possibility
 - Maybe a spot on 'Ice Road Trucker'??



Project outline – Easy as pie!

- Step 1

- Coordinated effort to demolish building – (ANTHC to take lead)
- ~~Debris removal before the last barge goes out~~
- Use ice road before it melts in spring!

- Step 2

- Conduct source removal of 'hot spots'
- Dispose/treat material locally
- Grade the site



Step 3 – Redevelopment!

DEC seeks a contractor!

- Shortly after I returned we try round 2 on getting contract in place
- Oasis/ERM was selected term contractor
 - ANTHC was subcontractor to Oasis
- Demolition to be completed in spring before ice road melts
- Return after snow melts to complete small excavations



All site work to be completed by June 30, 2012!

Oasis develops a demolition plan

Property owner provides permission to dispose of material

City provides permission to receive waste material

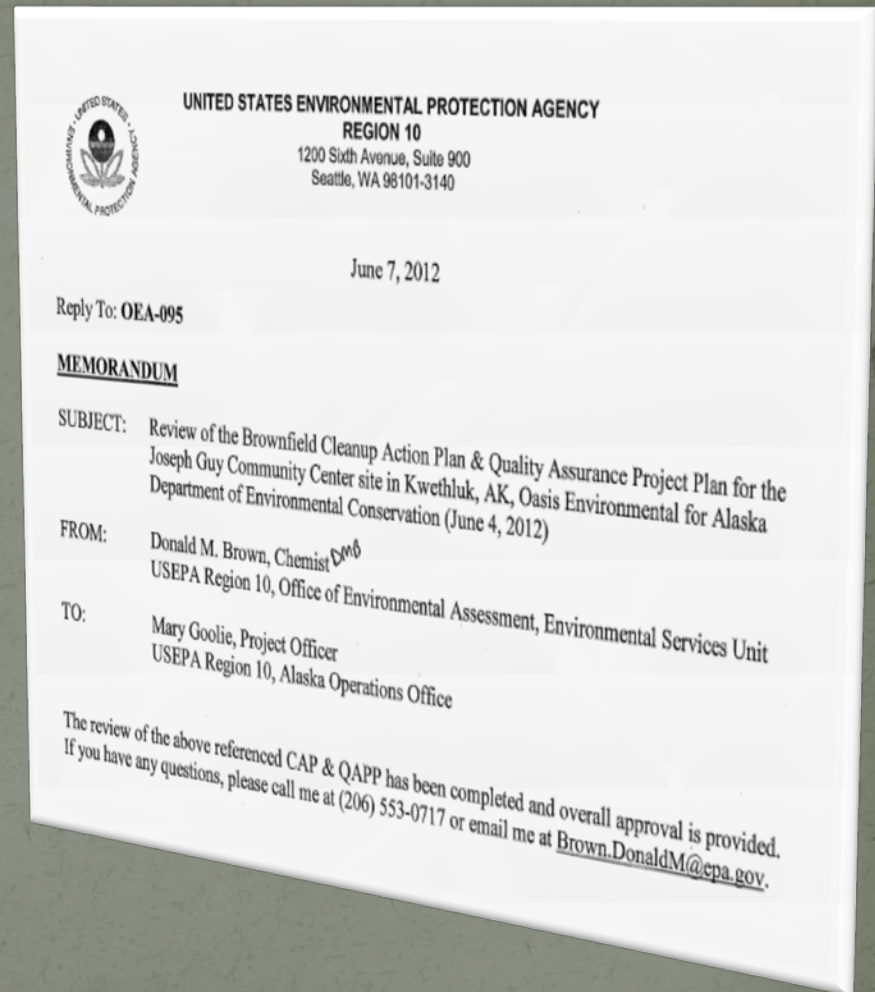
Oasis provides addendum to workplan

What the QAPP?

Quality Assurance Project Plan

*Clarifies how sampling
will be conducted, and
analytical testing
completed.*

*Requires review and
approval*



Round 2: More problems

- Two weeks before field work to commence
 - ANTHC cannot subcontract with Oasis/ERM
 - No contract support in place to complete demolition
 - Cannot dispose of waste materials in Kwethluk dump
- Cancellation of project considered...
- Oasis subs to ANTHC sub...Bethel Services, Inc.



Pictures of field work and ice road



Pictures of field work and ice road



Pictures of field work and ice road



DEC's Reuse & Redevelopment Program

11/6/2012

Pictures of field work and ice road



DEC's Reuse & Redevelopment Program

11/6/2012

Pictures of field work and ice road



Pictures of field work and ice road



DEC's Reuse & Redevelopment Program

11/6/2012

Pictures of field work and ice road



Pictures of field work and ice road



Pictures of field work and ice road



Pictures of field work and ice road



Pictures of field work and ice road



Pictures of field work and ice road



Pictures of field work and ice road



DEC's Reuse & Redevelopment Program

2/22/2012

Big work complete!

- Building down – CHECK!
- Site cleared (for the most part) – CHECK!
- Looks better? CHECK!

At this point, we are pretty happy, and the heavy lifting is done.



Step 2 – complete small excavations

- The removal of two hot spots
 - Small amount of material
- Re-sample the site
- Cleaning up the debris

However, Kwethluk experiences significant flooding

➤ How does a flood affect your site?





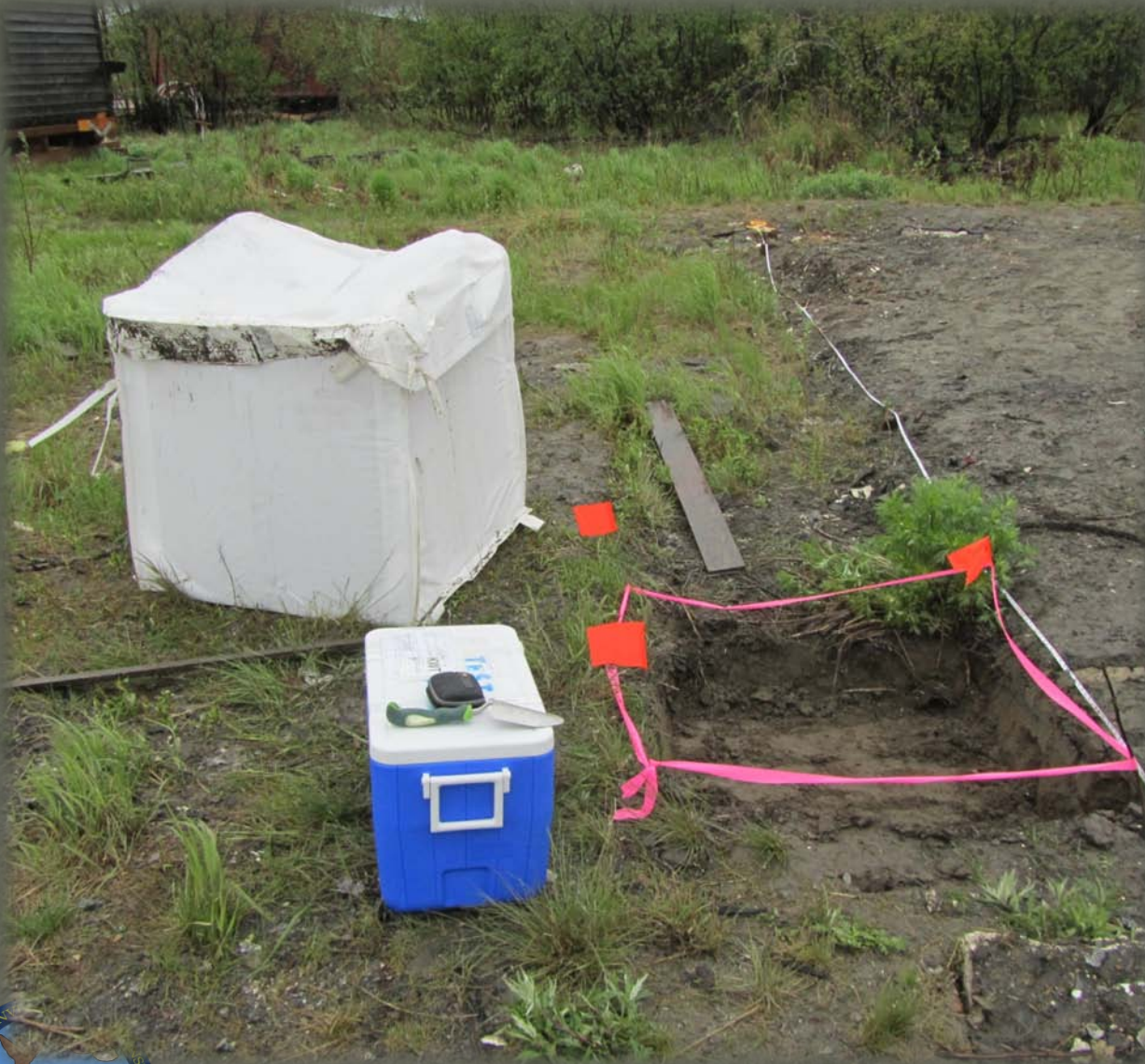




Field work focus
on hot spot
removal



Field work focus
on hot spot
removal





Field work focus
on hot spot
removal



DEC's Reuse & Redevelopment Program

2/22/2012

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Field work focus
on hot spot
removal



DEC's Reuse & Redevelopment Program

2/22/2012

Field work focus
on hot spot
removal



Findings

- Hot spot removal a success
 - No significant impacts remain
- Pilings that held building, pose problem
 - Do we remove them or leave them in place?
- Metals testing across the site indicate potential hazardous waste
 - Very high arsenic, chromium, copper, others...
 - Requires special (=costly) handling!
- What...we aren't done?



How did things turn out?

- Metals contaminated soil
- Pilings to remove
- Cleaning up the site
- Making it ready for reuse
- Identifying new funding opportunities



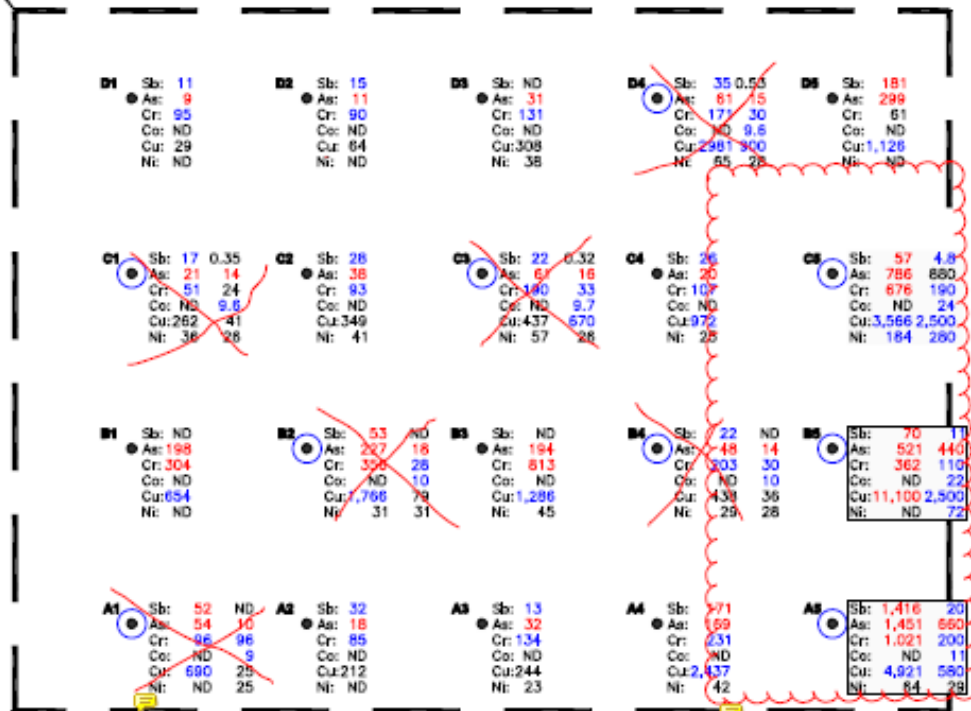
Unforeseen metals contamination

Building footprint
outline

Contamination
remained along one
side

Attributed to wood
preservative

FORMER
BUILDING
FOOTPRINT



New plan

- Return to site and 'supersack' the area with elevated concentrations
- Sample this material for RCRA hazardous waste determination
- Ship out the material that fails Haz-Waste testing
- Scrape the site clean





September metals cleanup

Returning to the site

Remnant debris
across the footprint

Fencing down





September metals cleanup

Filling supersacks with available equipment

Scraping down 6 – 12 inches across the area of footprint

Yes, it does look a little overkill...





September metals cleanup

Strategic placement
of soil into the bag

Each bag holds about
1 yard





September metals cleanup

Collecting samples from each sack

The process of putting the soil into the bags 'mixed' the samples prior to collection of sample

Samples analyzed for 'TCLP' or hazardous waste characterization for metals





September metals cleanup

The area that was scraped and bagged

It was believed that the wooden ramp in this area was preserved with chromated copper arsenate

The metals went into the soil when burned





September metals cleanup

Thirteen bags of soil were removed from the site, and sampled individually

Left onsite since it is against regulation to simply remove hazardous waste from the site

Fate of soil pending results





September metals cleanup

Piling materials were another issue to contend with

Sixteen pilings were situated across site and the stub above grade impeded access

Were going to remove them, but determined they may be reused



Where from here?

- Sample results indicate that NONE of the bagged material is Haz-Waste (whew!)
 - This saves about \$35,000!
- Supersacks to be relocated for storage
 - Cannot dispose of in dump until dump is permitted
- Metals contamination across site is mostly background
- Pilings to remain – may be reused





Final shot of site after last excavation



What remains?

- Sacks of soil to be removed from site and disposed of locally.
- Would like to 'clean' the site of debris, but are out of time.
- Coordinate with community to permit the dump with DEC's Solid Waste Program.
 - *This is necessary to place debris and soil.*
- Seek adequate grant funding to construct new facility.



END

Never Say Never - 2012

John B. Carnahan
Brownfield Coordinator
john.carnahan@alaska.gov
(907) 451-2166

