ST. LAWRENCE ISLAND
RESTORATION ADVISORY BOARD AND PUBLIC MEETING
Meeting Minutes
November 30, 2011, 2:00 p.m.
IRA Building, Savoonga, Alaska

ATTENDEES

Savoonga	**Affiliation**
Janesse Brewer	The Keystone Center, Facilitator
Carey Cossaboom	Project Manager, Corps of Engineers, Alaska District
Lisa Geist	Environmental Scientist, Corps of Engineers, Alaska District
Curtis Dunkin	Project Manager, Alaska Dept. of Environmental Conservation
Molly Welker	Project Manager, Bristol Environmental
Linda Akeya	Kukulget, Inc.
Tom Akeya	Savoonga
Robert Annogiyuk	Native Village of Savoonga, NALEMP Project Manager
Sandra Annogiyuk	Savoonga
Patrick Butler	Savoonga
Larry Kava	Native Village of Savoonga
Mylon Kingeekuk	Kukulget, Inc.
Myron Kingeekuk	Mayor, City of Savoonga
Dean Kulowiyi	Savoonga
Verna Immingan	Native Village of Savoonga
Jeanette (Muffy) Iya	RAB Member - Kukulget, Inc.
Merton Mikluhook, Sr.	Savoonga
Sam Mokiyuk	City of Savoonga
Chester Noongwook	Savoonga
Clarence Noongwook	Savoonga
Elvin Noongwook	City of Savoonga
Thor Noongwook	Native Village of Savoonga
Perry Pungowiyi	Savoonga
Bryan Rookok	Kukulget, Inc.
Lani Rookok	Kukulget, Inc.
Paul Rookok, Sr.	RAB Member - Savoonga
Cerene Seppilu	Savoonga
Eugene Toolie	Savoonga
Morris Toolie, Jr.	Kukulget, Inc.
Morris Toolie, Sr.	Native Village of Savoonga, elder advisor
Raymond Toolie	City of Savoonga
Ronnie Toolie	President, Native Village of Savoonga IRA
Felix Wongitilin	Savoonga

Via Teleconference from Anchorage

Vi Waghiyi	RAB member, Alaska Community Action on Toxics

Via Teleconference from Florida

Ron Scrudato	TAPP Advisor, R&M Technologies

GLOSSARY

ACAT	Alaska Community Action on Toxins
ADEC	Alaska Department of Environmental Conservation
bgs	below ground surface
BERS	Bristol Environmental Remediation Services, LLC
Bristol	Bristol Environmental Remediation Services, LLC
CA	Cooperative Agreement
Corps	U.S. Army Corps of Engineers
COL	Colonel
CY	cubic yards
DOD	U.S. Department of Defense
DRO	diesel range organics
EPA	U.S. Environmental Protection Agency
FUDS	Formerly Used Defense Site
FY	fiscal year
GIS	geographic information system
GPS	global positioning system
HQ	headquarters
IRA	Indian Reorganization Act
MOA	Memorandum of Agreement
MOC	Main Operations Complex
NALEMP	Native American Lands Environmental Mitigation Program
NVNC	Native Village of Northeast Cape
NVS	Native Village of Savoonga
PAHs	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
POL	petroleum, oil, or lubricants
ppm	parts per million
ppb	parts per billion
QAR	quality assurance representative
RAB	Restoration Advisory Board
RI	remedial investigation
RRO	residual range organics
SPIP	Strategic Project Implementation Plan
TAPP	Technical Assistance for Public Participation
TSCA	Toxic Substances Control Act of 1976
USACE	United States Army Corps of Engineers
UVOST	Ultra Violet Optical Screening Tool

Call to Order and Introductions (2:05 pm)

Janesse Brewer from the Keystone Center facilitated the meeting and welcomed everyone. Morris Toolie, Sr., community elder gave the opening prayer. The attendees in Savoonga and on the phone introduced themselves. Janesse outlined the meeting's agenda, which includes addressing old business, Northeast Cape FUDS project updates on the 2011 summer accomplishments, other visits/activities, 2012 remedial action plans, and the status of the Native Village of Savoonga NALEMP project. Janesse noted there was a lot to cover during the meeting and the meetings often go longer than 5 pm to allow time for robust conversations. Janesse also noted the past few meetings have had great participation and she extended an invitation to have folks become official RAB members. Carey Cossaboom will send George Noongwook the forms if people want to sign up. RAB members typically keep up to date on the project and help inform other community members. Janesse added her thanks for all the community efforts over the years, lending their expertise to the conversation.

Review/Approve RAB Meeting Minutes from March 2011

Janesse asked if there were any comments on the March meeting minutes. The minutes were sent out after the meeting last year. Carey replied he had received no comments.

Review Action items from March 2011 meeting

Carey reviewed the action items from the March 2011 minutes:

1. *Community to provide input to Robert Annogiyuk about cabins to be addressed by NALEMP*.

Robert received a list of names with cabins around St. Lawrence Island, will get with the people this winter to talk. There are 2 or 3 homes in Savoonga with material hauled from Northeast Cape. Whaling spring cabins, not sure how many, over 30 cabins with material from Northeast Cape.

2. *Carey Cossaboom to look into extending the TAPP with Ron Scrudato. Ron expressed interest if the TAPP program continues.*

TAPP was extended until 2012. However, this is the last year we can hire Ron Scrudato to assist the RAB and community, Carey was able to extend the TAPP because all the funding wasn't used last year. There is a dollar limit for TAPP assistance; waivers were approved in the past and Ron Scrudato has been supporting community for about 9 years. Ron Scrudato mentioned that his expenses include travel costs. Ron is planning to attend next month's Dialogue Meetings. Janesse asked how the community could get assistance beyond the current timeframe. Carey Cossaboom responded he wasn't sure.

3. *Attach the letter report from the Plant Materials Center site visit last summer to the meeting minutes.*

Representative from the Plant Materials Center verified that native grasses were growing on the landfill cover. Report can be resent or attached again.

4. *Molly Welker to verify with site superintendent if water/liquid was encountered while digging Site 9 test pits last summer.*

Molly will check with her staff to respond to this concern.

5. *Molly Welker will follow up with Eugene this summer about which concrete pad had evidence of petroleum product underneath it during ACAT site visit in 2009.*

Ask Eugene himself.

6. *Bristol to conduct sampling for PCBs of the overburden soil stockpiles from Sites 13 and 31, based on concerns expressed about clean soil being re-contaminated. Also report back if the liners are intact.*

Yes, Bristol sampled the soil stockpiles.

7. *During the 5 year review for the Site 7 Cargo Beach Road Landfill, test the pond sediment north of the landfill.*

Hasn't been 5 years yet, Carey Cossaboom agrees in principle with the request. Good reminder.

8. *Community members who are interested in participating in the EPA workgroups should contact Kristi Parker Celico, Facilitator, Rocky Mountain Collaborative Solutions, at 970-262-1341 (land), 970-368-0999 (cell), or kcelico@gmail.com*

Discussions are ongoing, Dialogue meeting scheduled for next month.

9. *Carey Cossaboom to provide for review any Work Plans for the Drainage Basin cleanup.*

Work plans for Site 28 Drainage Basin are not developed yet, will be provided for review in future.

10. *Review the 2009 ACAT video of Northeast Cape site visit; share this video with Curtis Dunkin at ADEC if he doesn't already have a copy.*

Curtis has seen pieces of the video, doesn't have full video, Vi can send him a copy.

11. Carey Cossaboom to share article on 'red dirt' associated with Site 21.

Carey sent copy to Ron Scrudato. Iron oxidizing in soil causes the red color. [Post meeting note: the article Carey sent to Ron was about Iron Bacteria. This has been seen clearly at Site 28, but the Site 21 red dirt could be different.]

12. Robert Annogiyuk to provide revised draft Cooperative Agreement for NALEMP to Carey Cossaboom by April 6th.

Draft CA was provided.

13. Robert Annogiyuk to seek permission from owners of the cabins at Northeast Cape for the cleanup activities.

Task completed last summer.

14. Carey to send copy of RAB membership form to George Noongwook.

See George Noongwook if interested in formal RAB membership. Carey Cossaboom mentioned we do get good community participation at these RAB meetings.

15. Carey to check if NALEMP HQ requires physicals for workers.

Carey Cossaboom stated the issue wasn't formally addressed with Headquarters. During a meeting with the Savoonga IRA last year, the Corps agreed they could use NALEMP funding to provide physicals to their workers. That offer still stands. Carey clarified that this expense would be part of the overall NALEMP CA budget. Robert Annogiyuk stated in their first budget for 2012, this item was deleted. He also stated there was not enough time to send the workers to Anchorage for the physicals last summer. Myron recommended sending the workers now, before they get sick. Carey Cossaboom stated that Savoonga can use the funds already advanced on the CA to pay for the physicals. It is his understanding they are currently under budget on the FY11 CA. Sam asked if drug screening was part of the physicals. Carey replied last year Savoonga indicated they didn't want it included. Vi Waghiyi stated that ACAT provided Robert with information for a physician. Robert A. replied the doctor couldn't come because he didn't have the necessary equipment. Molly Welker mentioned that these kinds of physicals can only be done in Anchorage due to specialized requirements/tests.

16. Molly Welker to provide landfarming papers to the Corps, Dr. Scrudato and ACAT.

Completed. The Corps decided against doing any landfarming treatment of the petroleum-contaminated soils at the Main Complex.

Northeast Cape 2011 Field Activities Update

Molly Welker thanked everyone for coming and the opportunity to be here. This community cares deeply about what's happening at Northeast Cape. Molly also noted that Eugene Toolie and Mylon were present and could share their experience/knowledge from working at the site

last summer. Bristol is continuing to make progress with cleanup at Northeast Cape. Over 12,000 tons of soil was bagged for shipping/disposal last season.

Molly began with an overview of her presentation, which will review:

- 2011 Field Tasks
- Personnel/Subcontractors
- Mobilization, Equipment & Work Sites
- Debris Removal
- Site 28
- Arsenic Removal at Site 21
- POL-Contaminated Soil Removal
- Continued Monitoring at Site 8 and the MOC
- PCB-Contaminated Soil Removal
- Roofing Tar Removal

The field personnel include over 30 people onsite including a site superintendent, foreman, administrative assistant, operators/drivers/oiler/mechanic, laborers, surveyors, field sampling technicians, bear guard, medic, and a USACE quality assurance representative (QAR). The field crew worked 7 days/week for 10-12 hours/day. Bristol was very fortunate to have an amazing group of people working at the site, the crew was 99% the same as previous years. Mylon Kingeekuk was a new hire and contributed significantly. Eugene Toolie is an integral part of the team because of his historical knowledge of the site.

There were also a lot of subcontractors that made the project possible, including:

Bering Air/Security Aviation – Aircraft charters,
Eco-Land, LLC – Surveying,
Waste Management. – Waste management and disposal,
Fairweather, Inc. – Infirmary and emergency medical services,
Global Services, Inc. – Camp services,
Northland Services, Inc. – Marine transportation, and
TestAmerica Laboratories, Inc. – Analytical testing laboratory.

Bering Air flew 3 flights a week for resupplies, lab supplies, food and miscellaneous materials. The surveyors and medic were on site the entire field season. There were 19 landing craft which hauled off about 752 bulk bags of contaminated soil between July and October. Test America analyzed over 3000 samples.

Staging equipment on Cargo Beach started at the end of June 2011. The Global Services crew setup the camp in early July 2011. A variety of equipment was used throughout the field season including: excavators, rock truck, heavy loaders, hydraulic hammer, pickup trucks, extended boom forklift, bulldozers, water truck, grader, roller compactor, rock screening plant, and side-by-side utility vehicles. The hydraulic hammer was used to break up large pieces of concrete from the excavations. The soil at the Main Operations Complex was too wet to utilize the rock screening plant. Bristol utilized 8 cubic yard (10 ton) capacity bulk bags to transport the contaminated soil. Loaders were used to pick up, move, and weigh the bulk bags. Excavators often had to dig 2’ below ground water. Grader and roller used to maintain and improve the runway and roads.

Work sites included 2 areas and the former tank footprints at the Main Complex, Sites 13 and 31 (PCB contamination), roofing tar area, Site 21 Wastewater treatment tank (arsenic soil), groundwater monitoring at the Main Complex, and monitored natural attenuation at Site 8. Work sites included the temporary camp area, fuel storage area, field screening lab, borrow pit, and a mechanic shop. The camp included 13 tents, 4 tents for NALEMP, 2 modular units for the lab and medic, a kitchen/meal room, showers and laundry facilities, and a recreation room. The camp included internet and 3 phone lines. Molly mentioned that the NALEMP crew worked really hard and completed the cabin demolition task in less than 6 weeks.

Debris removal included miscellaneous metal and wire found on the tundra, rebar in concrete, plus drums and debris hand-picked during site work at the Main Complex. Vi Waghiyi asked what the drums contained. Molly replied 2 had some oil, which were overpacked for disposal next year. The rest of the drums were rusted with no fluid contents. Approximately 34 tons of metal debris was hauled off island.

Bristol also removed roofing tar from a 5,000 sq ft area. The tar was greater than 1 foot thick in places and ~207 tons of roofing tar was double-bagged and removed. Confirmation samples showed the area was clean for PAHs.

At the Site 28 Drainage Basin, the objective was to delineate the extent and magnitude of sediment contamination. The contaminants of concern in sediment are metals (chromium, lead, zinc), PCB, PAHs, DRO, and RRO. Bristol sampled 10 transects between the MOC and confluence with the Suqi River; about ~7 samples per transect (210 sediment samples). A background sample location was selected east of the drainage basin and 12 sediment samples were analyzed for DRO/RRO (including via silica gel cleanup) and total organic carbon. There was no evidence of petrogenic impacts in the background samples. The main contaminant was arctic diesel according to the project chemist. The preliminary results showed 121 of 210 samples exceeded cleanup levels. PCBs were detected in 11 samples. A Technical Memo was submitted to the Corps of Engineers; Molly has more detailed maps she can share later. Contamination still exists in the Site 28 Drainage Basin, but is mainly DRO, with the highest concentrations near the Main Complex. The highest concentration of PCBs detected was 3.4 mg/kg. Samples were collected at 3 depths, 0.5-1.0 and 1.5 feet.

Ron Scrudato mentioned that during his fieldwork, they found the most contamination in the estuary. Carey Cossaboom replied that USACE samples from the estuary haven't shown significant contamination. Carey agreed that additional sampling in the estuary could be performed after all the source removal remediation work is completed upgradient. Ron stated the estuary had the deepest levels of contamination, including mercury and mirex (a flame retardant). Paul Rookok asked about the photos of the sampling, it's a wetlands area with a definite stream that disappears and reappears in the tundra. Carey Cossaboom observed that a natural spring occurs just before the confluence with the Suqi River.

Ron Scrudato mentioned his concern with the contaminated groundwater flowing from the Main Operations Complex; it contains petroleum and this groundwater flows into the tundra to the north. Carey Cossaboom replied the Corps' goal is to cleanup the soil at the Main Complex to a depth of 15 feet, this should help cleanup the drainage basin area, but sediment removal is also

planned. Ron Scrudato wondered if 0.5 foot was too deep to detect contamination in the flat tundra area, not much sedimentation would occur in the tundra. Molly Welker replied that they did detect some DRO at the 2nd sampling interval.

Dean Kulowiyi asked about the beach cleanup done years ago – barrels were punctured with 3-4 holes in them, 17 miles west they found similar looking barrels, where did they come from? Dean said the barrels may have been disposed in the ocean, and drifted back in, there must be more around the island. Carey Cossaboom replied the best way to deal with these remote, scattered barrels is to capture them in the NALEMP Strategic Project Implementation Plan or SPIP. Document the locations and give them to Robert Annogiyuk.

Dean also mentioned his concern with vegetation near the hilltop along the gravel road to the radar station. There is a 30-40 feet long area of dead vegetation along site the road. Someone said they didn't want to touch it, he asked if this area had been tested for contaminants? Carey Cossaboom agreed to look into taking a few samples along the road near the radar site. Dean also mentioned there are still concrete pads on the top of the mountain, and a little landfill at the south end of the hill, they pushed debris over the side. Carey Cossaboom agreed that concrete foundations remain; they don't pose a known hazard. The Corps also did a surface cleanup of the debris fields on the mountain slopes. Bristol was asked to remove surface debris scattered across the area adjacent to the Radar Dome; some metal was cut off at ground level without complete subsurface excavation. Carey acknowledged there could be more buried debris. [Post meeting note: There appeared to be an impromptu debris field at the top of the mountain, but nothing that looked like a landfill.]

Molly Welker continued her presentation. At the Main Operations Complex, the known contamination was subsurface, so Bristol had to remove some clean overburden to access the soil. They sampled areas for stockpiles, put down liner, and then used the clean soil as backfill. The 1st area they excavated was the former tank footprints. The next area was J1A, an area north of the tanks. About 2 feet of clean overburden was removed, and the excavations went 2 feet below groundwater (between 7-12 feet deep due to variable water level). Drums with oil were exposed and removed from the J1A excavation. 93 field screening samples and 27 primary confirmation samples were taken. This excavation remains above DRO clean up levels along the north-northeast border which runs adjacent to wetland areas. The north-northeast excavation wall was lined with heavy plastic before backfilling.

The next excavation area at the MOC was A1. About 8 feet of clean overburden was removed and stockpiled and sampled. The excavation went to a depth of 15 feet. 83 field screening samples and 32 confirmation samples were taken. The excavation has one remaining sample location with DRO above cleanup levels (12,000 mg/kg) at the north corner. Buried debris and underground piping were exposed and removed from the A1 excavation. A total of 7,453 tons of POL contaminated soil were removed from J1A and A1 combined, in addition to 638 tons from the former tank footprints.

Molly Welker also mentioned that a big effort at the Main Complex involved breaking up concrete building pads to access the soil contamination. Bristol removed metal debris and rebar for disposal and the concrete pieces were used as backfill. A total of 8,091 tons of POL contaminated soil was removed from the MOC. Photographs from the summer showed the bulk

bags staged for shipping. 1,206 bulk bags were filled and 752 bulk bags were shipped by barge for disposal in Oregon.

Concurrent with the petroleum-contaminated soil excavation, Bristol conducted removal of PCB-contaminated soils from Site 13 and 31. At Site 13, samples were collected from an area targeted for stockpiling soil. Over 200 individual samples were collected and then split into 48 composite groups. Of the forty eight composites, ten had results above cleanup level (1 ppm). Thus, the area under the potential stockpile areas was considered dirty. The stockpiles were also sampled, and if the results were clean, the soil was used as backfill for the excavations. A total of 236 bulk bags were filled from Site 13 (2,419.8 tons).

At Site 13, the previous excavation (2010) yielded results in sixteen places that were parts of composites that were possibly not above cleanup level (1/n). The first field sampling activity during 2011 consisted of sampling these sites to include or exclude these sites from additional excavation. Of the sixteen grid sites, three of the discrete samples were greater than the cleanup level of 1 ppm; the high samples were 0.83 ppm, 0.89 ppm and 7.39 ppm. Soil was removed in varying amounts but began with 2 feet of overburden removal. Field samples were collected on a 5 foot by 5 foot grid and soil samples were processed at the onsite field lab. Areas where results exceeded cleanup criteria were additionally excavated. This process occurred until results were below cleanup level (1 mg/kg). Confirmation sampling occurred on the same 5 foot by 5 foot grid. Samples were shipped to Test America lab in Tacoma.

Concrete slab, utilidor, pipe and wires were all exposed at Site 13. The concrete was wipe sampled and used as backfill if clean. Any concrete that remained was also wipe sampled. Concrete was removed if it would be in the way of future POL/PCB excavation activities. The concrete walls remain at Site 13. At Site 13, four different areas were excavated and the final depth varied between 5-10 feet. It was a big effort that included a lot of field sampling and confirmation samples. Over 584 field screening samples were collected and over 440 lab confirmation samples, of which 68 exceeded 1 ppm PCBs. The results ranged from 1 mg/kg to 270 mg/kg. Molly stated that additional PCB excavation will continue at this site in 2012. The excavations were lined to mark the depth for continued digging next year.

Ron Scrudato asked if any permafrost was encountered during the excavations? Molly Welker replied no.

The bulk bags were also sampled for waste characterization. Two scoops of soil from each side of the bag were taken and placed in a stainless steel bowl. Two scoops were taken from 7 bags and composited in the bowl. Each bulk waste sample consisted of soil from 7 bulk bags. Bags suspected of being from TSCA (e.g., high PCB contamination) areas were bulk waste sampled individually. (This was the same procedure at all sites). Approximately 448 bags were staged and remain on site for shipping offsite next year. There were no TSCA wastes left on island.

At Site 31 White Alice Communications Station, PCB-contaminated soils were also excavated. Samples were collected from pre-soil stockpile areas and all the areas had results above the cleanup level (1 ppm). Soil was removed in varying amounts but began with 2 feet of overburden removal. Field samples were collected on a 5x5 foot grid and soil samples were processed at the onsite field lab. Areas where results exceeded cleanup criteria were additionally

excavated. Approximately 135 bulk bags (1,418.5 tons) were removed from Site 31. Excavation depths ranged from approximately five feet on the NW edge of the excavation, to as much as ten feet deep in places. The stockpile area is approximately 2 to 3 feet deep. The Site 31 excavation was rimmed with bulk bags to overwinter. This was to prevent people or reindeer from accidently falling into the excavation.

Molly Welker stated that residents from Savoonga visited the site twice during the field season. On August 27th, Bristol superintendent Chuck Croley gave them a site tour. Molly mentioned that people are welcome anytime.

Molly Welker described the groundwater monitoring at the Main Operations Complex. She showed a photo of Lyndsey Kleppin of BERS monitoring ground water from 9 wells. In 2011, two wells (88-4 and 88-5) contained exceedances of contaminants compared to 3 from the previous year's sampling event. The exceedances were for DRO (2.3 and 7.5 mg/L), benzene (9.4 and 20 ug/L), arsenic (0.011 ug/L), and RRO (2 mg/L). Bristol also sampled for monitored natural attenuation parameters. There does appear to be microbial degradation occurring.

At Site 8, Bristol continued with the second year of monitored natural attenuation sampling using the same 3 decision units created previously based on field observations and the approximate location of the pipeline break, including an upper decision unit (upgradient of the source area), a middle decision unit encompassing the source area, and a lower decision unit located downgradient of the source area. A sample grid was developed for each decision unit. 8 samples were collected for soil and water from the random grids. Two surface water samples were also collected at the outfall of the wetland drainage.

All surface water and soil results which included DRO and RRO were below cleanup levels. No sheen or stressed vegetation was observed in the wetland. The monitored natural attenuation parameter results are still pending evaluation by the Bristol chemist. It appears the petroleum has been degrading over time.

At Site 21, the prior excavation bottom locations from 2010 were marked with lathe. The 2010 results ranged from 12 to 180 mg/kg for arsenic. Bristol collected site background samples for arsenic to evaluate concentrations encountered at Site 21. The background sample results were consistent with previous background sampling and confirmed the 11 mg/kg soil clean up level for arsenic. A total of 14.8 tons of arsenic-contaminated soil was removed from Site 21. The confirmation samples all exceeded the 11 mg/kg clean up level and ranged from 22 to 180 mg/kg. The approximate depth of the submerged floor samples is 4 feet. This site is at the confluence of 3 drainages and groundwater is at the surface. Additional soil remains at Site 21 above the arsenic cleanup level.

Cargo Beach. Throughout the field project, bulk bags were stored on Cargo Beach for pick up by landing craft. 19 landing craft removed bags starting at the end of July through October 9, 2011. Approximately 752 bulk bags were removed; 448 remain on site. Bulk bags are used as excavation barriers at Sites 13 and 31, and stored at Site 6 and the Roofing Tar Area. All hazardous PCB and arsenic bulk bags were removed off island. Molly showed photos of loading the bulk bags onto flats at Cargo Beach and then onto the landing craft. Each landing craft hauled approx 45-50 bags during high tide and could be loaded in ~2 hrs using 2 loaders. Each

bag was manifested, signed off by the boat captain and checked by the Site Superintendent. Empty and secured Northland flats will remain on the beach over the winter to be used next summer. Molly noted that Eugene Toolie had recently visited the area and reported that one empty connex had blown over.

Molly Welker stated this was the first time Bristol left the camp/equipment onsite to overwinter. Some items (camp, loader, pickup trucks) are located at the SW end of the runway; others were staged by the Main Operations Complex. Containers and ISO tanks were secured on the shop pad. Heavy equipment is stored north of Roofing Tar Area. 2 full ISOs remain on site (~8,000 gals of fuel). Bristol's goal is to arrive earlier next field season, around June. Demobilization of the camp occurred between October 3rd and 13th.

Molly Welker summarized the work completed last field season:

- Removed 8,091 tons of POL-contaminated Soil from MOC
- Removed 3,838 tons of PCB-contaminated Soil from Sites 13 & 31
- Removed 14 tons of arsenic-contaminated soil from Site 21
- Removed 207 tons of Roofing Tar from Tundra
- Removed 34 tons of debris
- Conducted Monitored Natural Attenuation at Site 8
- Characterization of Site 28
- Continued Ground Water Monitoring at MOC

Carey Cossaboom stated that Bristol still has funding to continue excavation of petroleum and PCB-contaminated soils at NE Cape next field season. Carey also mentioned he brought copies of the videos taken by the USACE QAR during the field season for folks to watch.

BREAK 4:00 – 4:15 pm

St. Lawrence Island – Visits and Activities

Carey Cossaboom reported that Colonel Koenig, Alaska District Commander visited Northeast Cape again last summer (July 12, 2011). He participated in 2 Government to Government meetings with Savoonga and Gambell leadership. Carey noted that a total of $18 million was awarded on the contract to continue remediation activities at Northeast Cape. Carey noted that after much discussion, USACE approved getting physicals for the Native Village of Savoonga NALEMP workers. In Gambell, a similar meeting was held and they discussed concerns about ending of projects. An ongoing problem is that waste shipments are not properly manifested, bags were resampled, and left Gambell in an over budget situation.

Carey Cossaboom mentioned there is a large Dialogue meeting scheduled for next month. The logistics to arrange this meeting between multiple agencies and various senior leaders has been very complicated. Colonel Koenig, Alaska District Commander is scheduled to attend, as well as James Balocki from USACE Headquarters, based on a commitment from his prior visit in 2010. The USEPA recently completed a review of the Corp's cleanup work at Northeast Cape and Gambell. Planned attendees include EPA (Sylvia Kawabata and Matt Wilkening), Alaska Department of Environmental Conservation (ADEC) (John Halverson and Curtis Dunkin), Agency for Toxic Substances and Disease Registry (ATSDR) (Joe Sarcone), Alaska Community

Action on Toxics (ACAT) (Vi Waghiyi), and Ron Scrudato. The group hoped to have Jim Berner from the Alaska Native Tribal Health Consortium come and discuss health issues, but he cannot attend. Carey complimented the community for successfully engaging other agencies to discuss health problems. Carey stressed that the Corps can do environmental cleanup, but not comprehensive health studies.

2012 Remedial Action Plans at Northeast Cape

Carey gave an overview of next field season's upcoming work.

- Excavation and disposal of petroleum-contaminated soils at the Main Operations Complex (MOC) Sites.
- Excavation and disposal of polychlorinated biphenyl (PCB)-contaminated soils from Site 13 (Heat and Power Plant) and Site 31 (White Alice Communications Station).
- Transportation and disposal of supersacks of contaminated soils left over the winter at NE Cape.
- Excavation and disposal of arsenic-contaminated soil from Site 21 Wastewater Treatment Tank
- Removal and disposal of dangerous debris, drums, and poles from tundra areas site-wide where clearly identified.
- Continued Monitored Natural Attenuation (MNA) of petroleum-contaminated sediment and surface water at Site 8.
- Continued MNA of groundwater from monitoring wells in the vicinity of the MOC.
- Soil sampling for DRO and PCBs at Cargo Beach, Site 6, and the Bristol refueling area (ISO tanks) bagged soil staging areas
- Excavation and disposal of contaminated sediment at Site 28 Drainage Basin including construction of a haul road and a sediment basin.

Carey showed various photos from the field season activities, including the excavations at the Main Complex, and the large supersacks staged at Cargo Beach (4 feet tall, about 10 tons each, on 20 foot long pallets). Carey stated that next year, the debris and poles remaining on the tundra will be done early in the season when the ground is still somewhat frozen. The excavation of sediments at Site 28 Drainage Basin is unlikely to happen next summer, because we need to finish the source area removal upgradient at the Main Complex first.

Ron Scrudato stated that the groundwater at the Main Complex was still above cleanup levels, but wondered if the natural attenuation parameters were still being evaluated, if there were physical characteristics that could be modified to enhance degradation. Molly Welker responded that it appears both aerobic and anaerobic degradation is occurring. Molly explained that monitored natural attenuation means that over time microbes "eat" the hydrocarbons. Their chemist is still reviewing the 2011 data for these parameters (dissolved oxygen, other byproducts).

Carey Cossaboom showed a picture of the drainage basin, showing the orange colored sediment. [Post Meeting Note: This is likely iron bacteria.] Ron Scrudato discussed electrochemical oxidation technologies, he was concerned metals could be transported and will send a paper to Carey.

Carey Cossaboom described the plan for continued excavation at the Main Complex area. This does not include the wetlands area north of the gravel pad. There is only a thin layer about 10 feet below ground. The Corps is worried that digging up this wetland will make a bigger mess. He's open to suggestions but hopes that Mother Nature will clean up the wetlands area since it looks good now, and has a lot of healthy vegetation.

Ron Scrudato stated that upgradient of the Suqi River and estuary; surface water could still carry contaminants. In his opinion, petroleum will not degrade in an anaerobic environment; only aerobic conditions are effective at degrading petroleum. Carey Cossaboom replied the Corps does plan, in the active channel of the drainage basin, to vacuum up loose sediments, hopefully removing the most mobile contamination. However, there is still a big concern about using heavy equipment in this area, the Corps is afraid of changing the hydraulics of the drainage basin. Removing the shallowest sediment, 0.5-1.0 feet is the target. The contractor will have to build a new trail along the drainage to allow access. Carey cautioned that we're still in the planning stages, and open to suggestions.

Ron Scrudato asked if we had observed peat deposits in the monitoring well logs? Carey Cossaboom replied yes, in the wetlands portion. Ron Scrudato observed that there is a lot of peat near the Main Complex. Carey agreed the peat horizons may explain the layers of contamination.

Native Village of Savoonga NALEMP Update

Robert Annogiyuk, Project Manager, gave an overview of the project. The Native Village of Savoonga entered into an FY11 Cooperative Agreement (CA) with the DOD for $514,206. Modification #01 added removal of containerized waste (drums, batteries) for $64,900. Modification #02 added disposal of lead contaminated debris for $30,388. The total CA budget is $609,497. Savoonga hired Bristol Environmental as their consultant. Robert hired 5 local laborers; they were a young, hard working, eager crew. Robert stated the workplan was a bit rushed, the fieldwork started in early August. Bristol was very helpful in the field.

The completed tasks included:

- Abatement and removal of all collapsed cabins and abandoned cabins from the Native Village of NE Cape (NVNC)
- Burning of non-painted wood
- Removal of lead-based painted wood and asbestos waste from St. Lawrence Island
- Stacking of debris piles (for future removal)

Robert went through various photos depicting the field crew during the removal activities, including collapsed cabin debris, raking areas for debris, digging a hole for the burn pit for unpainted wood, burning the non-painted wood, and the crew with a board from Annie Alowa's café at the Native Village of Northeast Cape.

Robert explained that most of the lumber in the debris piles was paint weathered wood. However, they did encounter some wood with lead-based paint that had to be sorted. The non-painted wood was burned onsite. Some problems they encountered was flooring underneath the debris piles, with lead-based paint chips, glass, and tiles. The crew filled four 55-gallon drums

with lead-based paint cans, old dried up paint, and some grease. Most of the piles were removed, but there are still some partially buried drums, wires and plywood. There is a debris pile left to be removed. The crew also used the excavator to demolish 3 of the cabins and remove some debris near the road.

Perry Pungowiyi asked if NALEMP funded use of the excavator? Molly Welker replied that a couple hours of the operators time was paid for by NALEMP. Carey Cossaboom remarked that most of the work and sorting of wood was accomplished by hand labor. Perry asked if any sampling was done. Carey replied that is part of next year's proposed work.

The Native Village of Savoonga has proposed additional tasks for a follow on CA in FY12:

- Collect and remove remaining non-burnable debris from the Native Village of NE Cape (NVNC)
- Perform a comprehensive Site Investigation and environmental sampling program at the NVNC
- Abate lead-based paint and asbestos in the three remaining cabins

Carey Cossaboom thanked Robert for his hard work and praised the crew for accomplishing their tasks. Carey mentioned that he was lucky to be visiting the site the day the crew found the board with Annie Alowa's name on it. There is a tribute to Annie planned during the Dialogue Meetings next month. Carey stated that Congressional funding issues continue to impact the NALEMP program nationally. Last year the funding came very late.

Molly Welker mentioned that their site superintendent, Chuck Croley was very impressed with the NALEMP crew; they worked very diligently and did a remarkable job.

Jeanette Iya asked what happens if more funding doesn't come through? Carey Cossaboom replied the Village would ask again the following year if they don't get a CA next year.

Paul Rookok asked why the workers didn't have tyvek suits. Carey replied that Bristol's asbestos subcontractor, Satori, had 2 NALEMP workers wear pocket meters during their work, and didn't detect any contaminants in the air.

Robert Annogiyuk stated that during the first week they completed 3 cabins, but after that the work sped up and the crew got more efficient. Carey agreed the crew was impressive and completed everything they were tasked with doing. It was a good partnership. Carey stated their accomplishment will help with future funding.

Action Items
Janesse Brewer reviewed the action items:

1. Dean Kulowiyi and/or other community members to tell Robert Annogiyuk about locations of barrels, debris, other military concerns around the Island for inclusion in the NALEMP SPIP.
2. USACE to investigate taking samples along the road to the former Radar Station in area of dead, or absent, vegetation.

3. Videos were distributed to Dean Kulowiyi, Muffy Iya, and George Noongwook. Anyone interested in viewing field work activities should contact them.
4. Continue conversation about the petroleum contamination near the main complex and into the wetlands area to the north. Give any ideas or input to USACE.

Janesse Brewer thanked everyone for attending the meeting, she always appreciates the warm welcome and good conversations we receive from everyone. If anyone has suggestions for future meetings, please let her know. The next meeting will likely be in the Spring, March or April.

Adjournment
The meeting was adjourned at 5:30 pm.