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Trip Report

Gambell FUDS and NALEMP Site Visit
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Gambell, Alaska
15 – 17 September 2005

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1. General

Lisa Geist (EN-EE) and Carey Cossaboom (PM-C-FUDS) from the Alaska District, U. S. Army Corps of Engineers (the District or the Corps) and Janesse Brewer of The Keystone Group (meeting facilitator) traveled to Nome, Alaska and the Village of Gambell on St. Lawrence Island to attend a Restoration Advisory Board (RAB) Meeting. The trip also included conducting a site visit, and providing oversight for the ongoing Native American Lands Environmental Mitigation Program (NALEMP) project. The team traveled to Nome, Alaska on Thursday, September 15, 2005 and continued on to Gambell in the afternoon. The team returned to Anchorage on Saturday, September 17, 2005.

2. Purpose

The primary objective of the September 2005 trip was to attend the St. Lawrence Island RAB Meeting. A second objective of the trip was to perform ongoing oversight of the NALEMP debris excavation activities being conducted by the Native Village of Gambell IRA. A third objective of the trip was to investigate reported buried debris or ammunition near the base of Sevuokuk Mountain with Mr. Winnie James, Sr.

3. Background

The Gambell site was used by the U.S. Army, U.S. Navy, and U.S. Air Force from approximately 1948 until the late 1950s, but was largely dismantled in the early 1960s. Various facilities around the village of Gambell were constructed to provide housing, communications, and other functions. All DOD structures were demolished, burned, or scavenged and debris buried on-site.

A Phase I Remedial investigation was started at Gambell in 1994. A Phase II investigation was completed in 1997. A removal action was conducted by Oil Spill Consultants during the summer of 1999 to remove surface debris and contaminated soils. A Supplemental Remedial Investigation was conducted during 2001. A removal action was completed in 2003 by Montgomery Watson Harza under the NALEMP program to excavate buried drums and debris. The Native Village of Gambell (NVG) conducted additional debris removal activities in 2004 and continuing in 2005 under NALEMP. The Corps of Engineers completed a Feasibility Study in February 2004, a Proposed Plan in July 2004, and received approval for the planned remedial actions through a Decision Document signed in July 2005.

A Cooperative Agreement (CA) between the Department of Defense and the Native Village of Gambell for environmental cleanup work under NALEMP was approved in August 2004. The NVG also has a FY05 CA for work to be conducted next summer in Gambell. The NVG successfully completed work under a FY03 CA which included excavation of approximately 83.5 tons of debris and 33 tons of incidental contaminated soil during the 2004 field season.

4. Field Activities

The major on-site tasks for the 2005 site visit were:

a. Attend the St. Lawrence Island Restoration Advisory Board (RAB) meeting

b. Provide oversight to the Native Village of Gambell staff conducting the NALEMP debris excavation activities.
c. Investigation potential buried debris and ammunition with Mr. Winnie James, Sr.

Thursday, September 15, 2005
Carey Cossaboom, Lisa Geist and Janesse Brewer arrived in Gambell around 2:00 pm. Jeff Brownlee from the Alaska Department of Environmental Conservation (ADEC), and Michelle Turner and Larry Pederson from Bristol Environmental and Engineering Services had also just arrived. The Bristol team was preparing to conduct the planned groundwater monitoring at Site 5. Carey confirmed with Aaron Irrowigan, President of Sivuqaq, Inc., an invitation to meet with the board at 10 am Friday morning. The team then met with Gerald Soonagrook, assistant project manager for the Native Village of Gambell NALEMP project to discuss the status of the debris removal activities. Robert Tungiyan, the NVG Project Manager, was out sick. Gerald Soonagrook informed the team that the Northland barge with the empty connexes had turned back from Golovin due to bad weather. The field crew was not working anymore, because all the sites in the workplan were completed, with the exception of Site 17. However, the crew was on standby if connexes were obtained.

At 3:00 pm, Carey, Lisa and Janesse met with members of the IRA Council, Gerald Soonagrook (Assistant NVG Project Manager), Denise Koonooka (NVG Clerk), and Jim Durkin from Travis Peterson Environmental Consultants, Inc. (TPECI) (via teleconference) at the NVG Environmental office to discuss the NALEMP project status and progress. Council members present included Branson Tungiyan and Jared ___. Several council members were not available due to travel to Nome and other business.

Branson Tungiyan had several concerns to share with the Corps of Engineers. His primary concern was the safety issue of excavated debris sitting on the ground surface. Branson was also concerned about the open pit excavation on the north beach which would get flooded by waves and shifting gravels during a large storm. The debris from Sites 17, 18A and 18B were also of concern because the supersacks may not withstand being exposed to winter conditions. Smaller pieces of debris could also get blown around during the winter and is of concern. Gerald informed the team that the debris within the fenced washeteria area had been moved outside of this area in preparation for the arrival of the empty connexes. Branson stated that in the lower 48 states, debris would not be allowed to sit on private land in an unsecured manner, this is a safety concern. Branson stated that the open pit is also adjacent to the boat landing area and may interfere with subsistence activities or pose a danger to people gathering sea foods in that area, or traversing the beach on ATVs in the dark. Jim Durkin stated that Dave Miller from TPECI would be out to do the final confirmation sampling in a couple days, then the pit could be backfilled.

Branson also stated that Site 17 is a health concern to the NVG based on the human latrine waste that was encountered underground. Carey asked what was the source of the latrine waste? Branson replied it must be from the military because residents of Gambell had their own honey bucket dump(s) near the old village. Carey reflected that when Montgomery Watson dug up drums from Site 6, the latrine waste was practically all gone. Branson said the smell is very similar to that encountered when sunken houses are found in the old village area – the area to the left of the entryway was the bathroom and even after a long time, the same smells are encountered. Branson was concerned that next year when Site 17 is worked on again, the latrine smells could drift towards the residential area of Gambell and pose a health concern. Branson mentioned that concerns were raised by ACAT, too. Dr. Carpenter and Dr. Scrudato's report also raised issues about high levels of contaminants.

Gerald agreed that there is still a lot of debris to be removed from Site 17. Robert Tungiyan was supposed to get GPS coordinates for the exact location the latrine waste was encountered. Gerald said the latrine waste was underneath

debris such as steel runway mats. The crew was instructed by TPECI to stop work at Site 17 and told they need hepatitis B shots and other protective gear before continuing work at Site 17. Gerald observed that when Montgomery Watson Harza dug up the waste at Site 6 two years ago, people tended to get more flus and bad colds. If people in the housing area smell the waste from Site 17, there will be complaints next year. Furthermore, a lot of people are getting sick right now. Gerald hypothesized that it is because of the exposed debris on the surface which is staged at Site 1A, 17, and 18. Branson wants to get ACAT to do some air monitoring in the village. Depending on the wind direction, the excavation activities caused a lot of dust. Carey stated that the proper precautions and method for dealing with the remaining waste at Site 17 can be determined during the winter. Branson asked Jim Durkin to provide TPECI's opinion in the next year's workplan. Jim agreed that their observations would be in the cleanup summary report.

Gerald stated that the NVG Environmental program is trying to obtain connexes from other projects in town, including the Bering Straits Housing Authority. Bering Straits may have 3 empty connexes. There are about 31 supersacks full of smaller debris pieces. No incidental contaminated soil was encountered during the excavation activities. Gerald stated that the native store might be getting a fuel delivery to top off their storage tanks. Gerald estimated that the NVG needs at least 10 connexes for the supersacks and lightweight corrugated metal excavated from Site 18. Some of the smaller debris pieces could blow away if they aren't containerized. Gerald stated that the NVG has a good cooperative working relationship with the City and Washeteria operators. Sivuqaq Inc. may also have a role because the debris is sitting on their land. Carey asked if the debris could be put back inside the fenced area of the washeteria? Gerald replied that not all the debris would fit.

Carey stressed the importance of determining the tonnage of debris already excavated. This is especially important to determine if the budget is on track and make sure enough money remains to pay for shipping and disposal of the materials next summer. Gerald stated that he could use pallets to weigh most of the debris. The heavier items such as the crane, bulldozer, and concrete blocks will have to be estimated weights. Gerald will have the crew return to work on Monday to start weighing all the debris. It might take a week to weight everything. Carey repeated that shipping the debris will be the most expensive part of the project and it is critical we know how much debris we're dealing with. Gerald raised a concern that Crowley Marine just bought out another marine shipper and freight shipping rates will likely rise significantly next year. Gerald stated the debris is corroding quickly now that it is exposed to the air.

Branson raised his last concern which is the environment. The drums which are being dug up were supposedly punctured and the contents must have drained somewhere. He is concerned that the contents are sitting on top of the permafrost and could impact the local drinking water supply. Global warming will cause the permafrost depth to keep increasing and spread the contamination. Branson stated that a report from the water and sewer utility recently documented poor quality of water in the community water supply due to increased mineral content and he didn't recommend drinking water from the faucets. Branson indicated the NVG would look to TPECI for expertise on this concern and including it in the updated SPIP.

After meeting with Branson, Carey and Lisa went over the presentation Denise had prepared for this evening's RAB meeting. Gerald agreed to attend the meeting and give the presentation.

Around 4:30 pm, Carey met with Winnie James, Sr. at the Sivuqaq Lodge. At the previous RAB meeting, Carey had agreed do some exploratory digging with a backhoe at the area identified by Winnie as having been missed by the geophysical investigation for potential buried ammunition or debris from the Air Force Camp near the base of Sevuokuk Mountain. Winnie was busy that evening, but agreed to meet us tomorrow afternoon to show the team where to dig.

Carey confirmed the availability of the Q Building for the evening RAB meeting and contacted Debbie James, Mayor of Gambell, to unlock the building. See separate RAB Meeting minutes for a summary of the meeting. The RAB meeting started at 7 pm, and ended at 10 pm.

Friday, September 16, 2005

On Friday morning, Lisa Geist and Carey Cossaboom met with Gerald Soonagrook at 9 am to further discuss the NALEMP project status. Carey and Lisa were invited to a meeting of the Board of Sivuqaq, Inc. at 10 am at the Sivuqaq Lodge. The following members were present: Aaron Irrowigan, Merle Apassingok, Leonard Apangalook, Job, Jerome, and ___. The Board asked about the possibility of constructing a monofill to receive non hazardous debris from the FUDS and NALEMP projects in Gambell. Aaron stated that Sivuqaq was interested in obtaining more local benefit from the debris cleanup projects. Job observed that there was low risk associated with the non-hazardous debris.

Merle stated that Eugene Toolie was pleased with the completion of the first couple projects at Northeast Cape (cleanup of buildings and structures), however he is most concerned about the nasty stuff left in the landfill. Carey replied that he is hopeful that the discovery of several full drums of POL fluids on the edge of the Site 7 landfill won't derail the feasibility study process and planning efforts scheduled for the coming year.

Carey asked if Sivuqaq had a location in mind for the possible monofill? Aaron replied that they would need to do additional research and feasibility study for the area. Aaron speculated that the area on the south side of Troutman Lake near Site 12 and the fenced septic lagoon waste area may be a possibility. Lisa asked if this area would be considered too wet? Aaron replied the Board will suggest some possible sites in the future.

Carey stated that FUDS can only consider using an existing landfill. The landfill would have to be built ahead of time. At Northeast Cape, a monofill made economic sense because of the large amount of debris. However, there are 2 different programs ongoing in Gambell, and the NALEMP program may have a different perspective on a monofill. Carey needs to check the rates for tipping fees typically paid to a landfill. Carey explained that NALEMP may not have the same restriction as FUDS and could consider the savings in shipping costs and apply them to construction of a monofill. Carey stated that a high estimate may be 300 tons of debris left in Gambell to be removed under NALEMP.

Aaron mentioned that the City, IRA Council, and Sivuqaq will be having a joint meeting on the 29th of September. Carey agreed to explore the possibility of a monofill and do more research at the office. Merle expressed his sympathy for the Hurricane Katrina tragedy and thanked Carey as a representative of the Corps of Engineers. The meeting concluded at 11 am.

Carey and Lisa returned to the NVG Environmental Office to meet with Gerald Soonagrook. Robert Tungiyan was also present. Gerald confirmed that the late fall/early winter is when the village tends to get salt water intrusion into the waters supply. There is less water available at that time of year in the aquifer. Gerald thought that early November may be the time period when water usage is at a maximum and the aquifer level is low.

Lisa wondered if the dimensions of the heavy equipment pieces (crane and bulldozer) could be measured to help estimate their tonnage. Gerald indicated the crew had used sorbant pads to get residual oils out of the crane. Site 17 still has debris present on top of the latrine waste. Sites 18A, 18B, and 19 are done. Robert stated that last year they paid $0.50 /pound for outgoing waste on the Northland barge. Truck and train transportation in Washington/Oregon was $275 and $375 per connex, respectively. Carey repeated that we need to know the disposal costs at the landfill

(Waste Management, Arlington facility). Carey asked if the NVG had received any invoices from SGS Laboratory? Robert replied no.

Carey reviewed the remaining sites to be addressed according to the various open Cooperative Agreements. Gerald stated they have no way of accessing/retrieving debris from Site 1A underwater. Site 2, the Air Force Camp at the base of Sevuokuk Mountain could possibly be addressed if the budget allows for more digging. This site has already been located according to information from local elders. Robert estimated that the crew has dug up nearly double the amount of debris from last year. Robert explained that he made a request through Patrick Crosby at Northland for a shipment of connexes at the beginning of the summer, but Patrick left the company and the 25 containers that were supposed to be delivered in June weren't. Gerald confirmed that the heavy equipment could be stored at the city garage again this winter. The security person is still working nights to keep watch on the debris piles and heavy equipment staged near Site 17. Lisa suggested if several connexes can be obtained locally, the supersacks and smaller debris could be containerized and the connexes themselves could be arranged in a U shape to protect larger debris from blowing around.

At 1 pm, the field team met Winnie James, Sr. to do some exploratory digging. Quinn Slwooko operated the backhoe. Winnie James directed the operator to the areas most likely to contain the Quonset hut debris and discarded boxes of ammunition. Winnie stated that he was involved with throwing out boxes of ammunition from between the last 2 qunoset huts in the row. A mess hall was formerly located where a portion of concrete pad was exposed. A total of 5 separate pits were dug in an area of approximately 1000 square feet. The 1st pit contained some green canvas and wood debris. The other pits did not encounter any debris. Each pit was excavated to about 4 feet, and the gravel quickly sloughed back into the areas.

The rough coordinates (using hand held GPS) at the center of each pit were:

Pit	**Y Coordinate**	**X Coordinate**
Pit #1	N 63.77903	W 171.69897
Pit #2	N 63.77906	W 171.69905
Pit #3	N 63.77901	W 171.69914
Pit #4	N 63.77909 – 903	W 171.69913
Pit #5	N 63.77909 – 911	W 171.69922 – 923
Monitoring Well	N 63.77942	W 171.69987
Trail at base of Sevuokuk Mtn.	N 63.77889	W 171.69824

The ATV trail at the base of Sevuokuk Mountain was approximately 140 feet (55 paces) east from the excavated pits. The MW was approximately 160 feet (65 paces) west of the pits. The backhoe operations were ceased at 3 pm and the field team returned to the NVG Environmental office.

The Bristol field team was conducting the groundwater sampling throughout the day. A total of 6 MWs were accessible and contained water. MW28 was found to be dry, with gravel at a depth of about 10 feet below ground surface. Bristol also obtained access to the city water well building to take a sample from the city water supply. The city water plant operator also informed the field team of the current pumping rates (approximately 18.5 gallons per minute) and informed them that a higher pumping rate (about 30 gpm) had been used during the previous weeks to fill the water storage tank. Michelle Turner also informed Lisa that the QA sample bottles did not arrive on time, and the MS/MSD bottles were being used instead to fulfill this requirement. The Bristol team initially containerized the purge water from

the MWs in covered plastic buckets. Jeff Brownlee commented that the purge water could be discharged to the ground surface since the wells were historically clean. Larry Pederson noted that the new locks which Bristol brought to secure the wells were too large to fit the existing holes. Some MWs also needed to have the bolts drilled out because they were rusted and sheared off. Larry ordered smaller locks from Nome, but due to weather conditions, the locks did not arrive before the team departed the Island. Larry indicated that other Bristol personnel (Steve Johnson or Rollie Goebel) would be in Gambell in the coming weeks and could permanently secure the MWs.

Due to foggy weather conditions in Gambell, all afternoon flights were cancelled (Frontier, Hageland and Bering Air). The field team stayed overnight until planes were able to land on Saturday morning. During a walk to the local store that evening, Michele Turner, Larry Pederson and Jeff Brownlee observed water being pumped out of the spill containment pit of the local fuel tank farm. The hose emptying the bermed area flayed wildly about before discharging directly onto the adjacent ground surface. They noted a distinct fuel odor, even at a distance away. This is further evidence that the water table directly below the Gambell infrastructure is unsuitable as a potable water source.

Saturday, September 17, 2005
The first flights arrived in Gambell at 10:00 am and the field team departed for Nome. The next Alaska Airlines flight was the 9:30 pm departure, arriving in Anchorage at 11:30 pm.

5. Conclusions and Recommendations

During this trip, the District team visited with community members, the IRA Council, the Sivuqaq, Inc. Board, and members of the NVG NALEMP crew. The team provided oversight to ongoing NALEMP debris excavation activities, provided oversight of Bristol's first round of groundwater monitoring at Site 5, and attended the St. Lawrence Island RAB meeting.

The ongoing NALEMP project still seems a bit disorganized. The NVG was unable to get connexes delivered due to weather conditions which prevented the Northland Barge from coming to Gambell. However, all sites planned for debris excavation in the workplan were addressed, with the exception of completing Site 17 landfill. The NVG staff seems to understand the importance of determining the debris tonnage, but has difficulty keeping track of the overall budget.

Photo 1: Staged debris piles from Site 17 excavation

Photo 2: Staged debris piles excavated from Site 17 and 1A.

Photo 3: Mr. Winnie James, Sr., Mr. Morgan Apatiki, and Mr. Carey Cossaboom

Photo 4: Excavating exploratory pits near base of Sevuokuk Mountain. View east.

Photo 5: View south towards community water supply and Site 5. Mr. Winnie James, Sr. on ATV.

Photo 6: View southeast towards Sevuokuk Mountain. Backhoe excavating exploratory pits.

Photo 7: Exploratory pits near Sevuokuk Mountain. View east.

Photo 8: Mr. Winnie James, Sr. and Mr. Carey Cossaboom, USACE Project Manager.

Photo 9: Digging exploratory pits. View east.

Photo 10: Pit #1 with some debris

Photo 11: Pit #1 with some debris

Photo 12: Exploratory Pit #1, Quonset hut debris including wood and canvas (green).

Photo 13: Backhoe filling in exploratory pits near Sevuokuk Mountain. View east.

Photo 14: Backhoe filling in exploratory pits near Sevuokuk Mountain. View east.

Photo 15: Backhoe getting ready to dig another pit. View northeast.

Photo 16: Digging Pit #5 near Sevuokuk Mountain. View north-northeast.

Photo 17: Backhoe digging pits. View north.

Photo 18: Exploratory pits near Sevuokuk Mountain. View north.

Photo 19: Exploratory digging with backhoe. View north.

Photo 20: View north towards Bering Sea, area excavated in foreground.

Photo 21: Gravel dug up from exploratory pits.

Photo 22: Water seeps in side of Sevuokuk Mountain at its base along ATV trail. View east.

Photo 23: View east at base of Sevuokuk Mountain, water seeps coming from side of mountain.

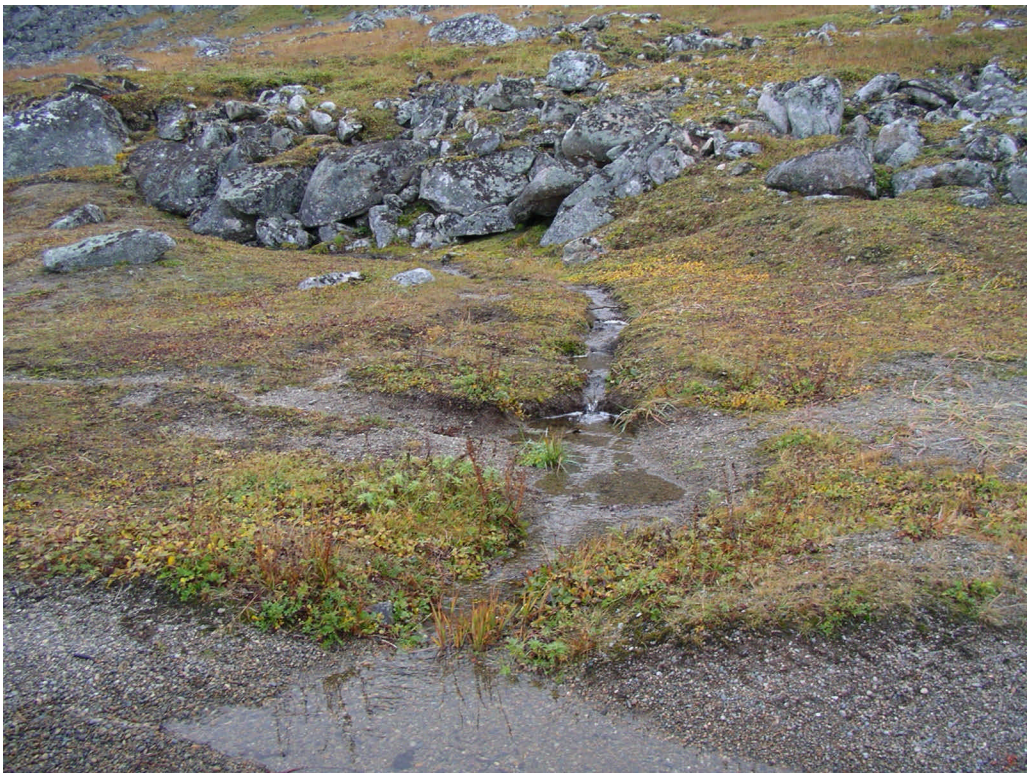

Photo 24: Exploratory pits, view northwest from base of Sevuokuk Mountain.

Photo 25: ATV trail at base of Sevuokuk Mountain, view north towards Bering Sea.

Photo 27: ATV trail at base of Sevuokuk Mountain, view south towards community water supply.

Photo 28: Trail at base of Sevuokuk Mountain, view west towards Village of Gambell.

Photo 29: View east towards exploratory excavation pits.

Photo 29: View east from Monitoring Well (unknown #) towards exploratory pits.

Photo 30: Exploratory pits near Sevuokuk Mountain. View east.

Photo 31: Gold dredge east of Nome.

Photo 32: Gold dredge east of Nome. Larry Pederson, Janesse Brewer, Michelle Turner.

Photo 33: Gold dredge east of Nome. Janesse Brewer, Michelle Turner, Jeff Brownlee.

Photo 34: White Alice antennas on Anvil Mountain outside of Nome.

Photo 35: White Alice antennas on Anvil Mountain outside of Nome.

Photo 36: View of Nome from Anvil Mountain and White Alice site.