Joint St. George and St. Paul Islands
Restoration Advisory Board (RAB) Meeting
December 10, 2004
Aleutian/Pribilof Islands Association
201 East 3rd Avenue, Anchorage

Meeting Notes

PARTICIPANTS
Jason Bourdukofsky, co-chair, St. Paul member at large
Bernie Denno, co-chair, NOAA
Lorin Aldrich, ADEC
Michael Dahl, Polarconsult
Andy Dimitriou, SLR Alaska
Greg Gervais, NOAA
Elary Gromoff, TAC
Karen Holser, Pribilof Public Steward Program
Louis Howard, ADEC
Andy Kashevarof, Tanaq
Aquilina Lestenkof, St. Paul at large
John Lindsay, NOAA
Jim Malchow, NOAA
Max Malavansky, City of St. George
Anthony Merculief, St. George Traditional Council
John R. Merculief, City of St. Paul
Mark Merculief, Sr., Chadux
Victor N. Merculief, Sr.
Bob Pawlowski, Tanaq
Ron Philemonoff, TDX
Mark Ridgeway, U.S. Coast Guard
Chris Riggio, APIA
Leslie Simmons, ADEC
Paula Souik, NOAA
Minh Trinh, NOAA
James Wright, NOAA
Richard Zacharof, St. Paul Tribal Government
Phillip A. Zavadil, St. Paul Tribal Government

WELCOME AND INTRODUCTIONS
Meeting called to order at 9:10. Attendees were asked to introduce themselves and state their affiliation. A sign-in sheet was circulated. Handouts were distributed (agenda, September 2004 RAB minutes, site status tables).

DISTRIBUTION OF RAB MINUTES FOR REVIEW AND APPROVAL
Motion to approve the September 2004 St. George and St. Paul RAB meeting minutes was delayed until after people had time to review minutes during break.

MODIFICATIONS TO AGENDA
Modification to agenda to approve minutes at a later time. Agenda approved with this modification.

2004 PROJECT HIGHLIGHT VIDEO

A short video was shown highlighting one 2004 project from each island. For St. Paul, the corrective action at the Diesel Seep site was featured. For St. George, the free product recovery pilot project was featured.

ADDITIONAL RESULTS OF 2004 CLEANUP ACTIVITIES SINCE LAST RAB

St. George

Free Product Recovery Pilot Project-

Chadux's subcontractor, SLR Alaska, used different field tests and published numbers for the porosity of fractured basalt (*i.e.*, an indication of the number of voids and therefore storage capacity in the bedrock) than Tetra Tech. Based on these tests and figures, SLR estimated 2,000-16,000 gallons of free product, compared to Tetra Tech's previous estimate of 30,000-50,000 gallons. NOAA thinks SLR's estimate may be closer based on the rate of product flowing back into wells once it was pumped out. Of the recovery equipment tested in the pilot project, the pneumatic bladder pump will likely be recommended in the project report for use in the full-scale project. The project report should be issued in the next couple of months. It is estimated that once pumping begins, the full-scale project will take about 3 years.

Old Carpenter Shop- TPA 19

One confirmation sample collected 8 ft. below ground surface, at refusal, was slightly above the lead cleanup level of 400 mg/kg. Other sample results were below cleanup level.

Inactive Gas Station- TPA 3

Conducted lead hot spot removal. Confirmation sample results were below cleanup level for lead.

Old Power Plant- TPA 9

- Lead hot spot removal conducted.
- The excavation extent figures shown were presented at last RAB, however the validated sampling results were received after the last RAB and have been added.
- The north end of the building was sampled for PCBs because transformers were reported to have been drained there in the past. Sample results indicated no PCB detections. Later, as soil was excavated for petroleum contamination, additional samples were periodically collected and analyzed for PCB. No PCBs were detected in any of the samples analyzed.
- Petroleum-contaminated soil (PCS) was excavated as close as possible along the building and near utilities. Some PCS remains where the excavation was limited by these structures or where excavation equipment reached refusal due to basalt.
- To the north of the power plant, the excavation stopped where refusal was encountered 3 or 4 inches below the ground surface, and the slope dropped off steeply.
- Tried to avoid sewer pipe, but at one location the bucket scraped and broke an elbow. The pipe was repaired.

Public Health Service Pile

Confirmation samples detected DRO, but concentrations were below the cleanup level. No further action is required.

St. Paul

Diesel Seep Site

- The corrective action objective/cleanup standard was to remove petroleum contamination believed to cause the sheen on the Salt Lagoon Channel.
- NOAA removed shoreline and upland soil. Shoreline reconstructed with gentle slope rather that steep bank as prior to remediation. Reconstructed slope is 2:1 or less steep. Not possible to reconstruct bank as steep as before and make it stable. Rock and sand combination was used for new shoreline to prevent erosion. Filter fabric used to retain sand and keep it from washing away. Old shoreline was sand and topsoil held together by grass roots.
- Shoreline revegetated using seed, fertilizer, and straw/coconut husk erosion control mat.
- A series of photos from channel looking east were shown, demonstrating the shoreline and sediment removal and the original embankment held together by grass roots.
- Minimal current in channel during shoreline work because Kelly-Ryan had blocked channel as part of harbor improvement project.
- Excavation conducted as deep as –3 MLLW. Difficult to excavate in the "flowing sand," -sand saturated with groundwater.
- Wet soil dewatered in dewatering cell before hauling off site for disposal.
- Installed granular activated carbon (GAC) trenches. GAC in sandbags installed from approximately +5 MLLW to -1 MLLW; groundwater occurs on average at +2.5 MLLW. The top of the GAC trenches are 2-4 ft. below ground surface. Idea is to keep residual petroleum from making its way to the channel by intercepting and adsorbing it with the GAC.
- Most confirmation samples were below ADEC Method Two cleanup level. Some were above, but again, the point was to eliminate the PCS-causing sheen, not to hold to cleanup level given that contamination occurred within the water table.
- Subsequent to project completion NOAA removed containment and absorbent boom from shoreline as sheening had stopped.
- Low spot at north end of shoreline was prone to water flowing upland during storms; NOAA added ~2 ft. of riprap and soil to bolster low spot.

Former Drum Pad on Tract 50

- Contamination discovered within foundation of old drum storage pad when Kelly-Ryan was constructing the USACE harbor improvement project dredge spoil dewatering cell. Approximately 500 cubic yards of PCS was initially removed from above grade within the drum pad foundation, which was constructed of an approximately 3 ft high concrete wall.
- The walls were demolished and removed.
- Later removed approximately 750 cubic yards of PCS from below grade, down to groundwater. Some confirmation sample results at water table came back above ADEC Method Two cleanup level.

Lukanin Bay
Revegetated using seed, fertilizer, and erosion control mat. Boulders placed to keep vehicles from driving on site.

Ice House Lake
- Removed 21 cubic yards of PCS.
- Confirmation sample results were below cleanup levels.
- Wood waste partially covered by soil during the corrective action was burned and removed.
- Site restored to grade.

Vehicle Boneyard
- NOAA thought the covering of this site was completed in 2003; however, an additional 500 cubic yards of sand and topsoil had to be brought in to provide a cover for an area of the buried waste that had been missed. Seed, fertilizer, and erosion control matting were then added to the new area.
- Also found issue with one sample from earlier site investigation (0-2 ft. below ground surface, 4,400 mg/kg DRO and 15,000 mg/kg RRO). NOAA collected five new samples at the location of the exceedance and about it, making a 10 ft. on a side square surrounding old hot spot. Found new samples about old sample didn't exceed Method Two cleanup level; new sample at old spot was above Method Two cleanup level for DRO. NOAA reviewed ADEC regulations, found the ADEC Method Three cleanup level could be used as site-specific data on soil type and groundwater is available. The ADEC online Method Three calculator indicated the sample is below Method Three cleanup levels. Applying this cleanup level also meant avoiding disturbing an area where vegetation has regrown.
- NOAA had the laboratory conduct silica gel cleanup on the soil sample. This procedure removes non-petroleum organics, which may interfere with analysis, from the sample. The result was that the DRO and RRO levels at the same depth and location of the original sample were significantly lower, and below the ADEC Method Three cleanup level.

Cascade Building
- Removal actions conducted inside building. All confirmation samples came back below cleanup level.
- Encountered sewer line near door and did not disturb it. Think it connects to machine shop.
- Concrete pad also found below ground at 2 ft deep.

Tract 42 Landfill Capping
- Municipal solid waste (MSW) from Cell B was consolidated within Tract 42's Cell C during 2003.
- NOAA had been stockpiling the PCS removed from cleanup sites on top of the MSW in Tract 42 at the landfill. (Photos of the pile at different points shown.)
- The PCS was used to cap the MSW during 2004. PCS soil cover thickness is at least 2 ft., thicker in some areas to even out the low spots of MSW beneath the cap.
- Side slope of 3:1 or less steep, as required by ADEC regulations, was maintained.
- Boulders placed around cell to keep ATVs out.
- MSW is contained at least 50 ft. from the property line, inside Tract 42.

- Stockpiled PCS not used to cap the MSW was cleared of rocks, transferred to NOAA's landspreading site, and tilled.

Polovina Stockpile

- PCS stockpiled at Polovina from 1997 cleanup actions.
- Stockpile relocated to Bubbler Dump site in 2002.
- Confirmation samples all below cleanup levels following two removal actions.

Question: Does the diesel seep site need more fill?
Answer: No. It was brought back up to original grade. Should be suitable for use as equipment storage as used prior to cleanup actions.

Question: Why was GAC used at Diesel Seep site, but never anywhere else?
Answer: State does not generally require NOAA to excavate into the groundwater table. However, at this site, groundwater contamination was believed to be causing the sheen on the Salt Lagoon Channel, and this is a violation of the Clean Water Act. NOAA wanted to eliminate sheen. Excavating in the groundwater table is very difficult because the soil/water is very fluid. Hard to remove everything but wanted to remove as much as possible. Knowing some contamination would be left behind, NOAA implemented the GAC trenches to adsorb the residual petroleum.

Question: How effective have the trenches been?
Answer: NOAA doesn't know at this point. NOAA hasn't been back to the island to check. If a sheen appears again, then it will show the GAC didn't work or needs to be replaced. There is enough material to put in third trench should it become necessary.

Question: How much do GAC trenches cost?
Answer: NOAA paid about $75,000 for enough material for three trenches, then paid $45, 000 for installation of the two existing trenches. Enough material remains, already packed in sandbags, to install another trench.

Question: Any plans to use extra material at other sites?
Answer: No, not at this time.

DISPOSAL OF PCS

St. Paul

- NOAA implemented two PCS disposal/treatment alternatives after evaluating numerous alternatives.
- Beneficial Reuse- 25,600 cubic yards of PCS atop of Tract 42's Cell C landfill to form cap over MSW. ADEC approved beneficial use of PCS for capping the MSW. Cover will be seeded and fertilized.
- Landspreading- Approximately 10,000 cubic yards of PCS not needed for landfill cap were moved to NOAA's National Weather Service property. ADEC made a determination that the landspread site does not pose a risk to the environment or human health. NOAA implemented tilling of PCS after spreading, though not required by ADEC. Soils initially tilled two or three times a week, then once per week until the end of the field season. 14 acres approved for use in landspreading; only used 5 acres. Snow fence placed onsite for winter.

Question: Will NOAA cover or do anything else at landspread site?
Answer: NOAA isn't required to do anything else. NOAA may choose to revegetate site.

St. George

- On St. George, there's no federal land available for landspreading and NOAA doesn't have funds to treat PCS with the thermal conduction system.
- 20K cubic yards of soil needed to complete city's new landfill berm. Coincidentally, NOAA had about that much PCS stockpiled or remaining to be excavated.
- City Council passed a resolution to allow Max Malavansky to negotiate land use agreement and compensation with NOAA.
- ADEC did a risk assessment on the use of PCS at the new landfill, and determined it would not pose an unacceptable risk to human health or the environment. No threat to drinking water supply based on previous studies at old landfill.
- NOAA drafted a land use agreement, and the City is reviewing it now. In the meantime, Department of Commerce general counsel has detected language in the agreement that may need revision. NOAA asked Max to postpone signing the agreement until NOAA gets further information from Department of Commerce.
- The thickness of the PCS around the landfill will vary depending on the natural grade of the land. In one area, it may be 15 ft. thick.

Question: How did you decide on the shape of the new landfill?
Answer: Shape based on the property provided by Tanaq, then Chuck Eggner's design within that property. Also, needed 3 ft. of overburden to act as natural filter in the unlined landfill.

Question: Is NOAA negotiating a disposal price per unit for PCS with the City of St. George?
Answer: The city is allowing NOAA to use the landfill for placement of PCS and has requested some considerations in return.

GROUNDWATER SAMPLING RESULTS

St. George

- Ongoing studies are trying to figure out the groundwater flow directions in area of the village, and determine whether it is possible for the drinking water wells to draw up contaminated water from the village. Tetra Tech is working on a hydrogeologic evaluation report. NOAA should be able to issue it to ADEC and the St. George RAB in the next few weeks.
- Groundwater is tidally influenced, although not all groundwater influenced in the same way.
- More wells installed last year. Loggers placed in wells to monitor elevations every 6 minutes. Used this data to determine the direction that groundwater flows. Flow is complex and must be estimated using mathematical models.
- Found a mounded area near the Tanaq shop that is a higher hydrogeologic elevation and causes water to flow away from Bering Sea, though it eventually curves back toward the sea. The mound is likely caused by denser, less permeable basalt.
- Investigated at high and low tide period. Flow directions determined to be essentially the same during high and low tides.
- Total dissolved solids, which in this case is a measure of saltwater intrusion, is above state water quality standards for drinking water in some areas near the village. This supports the hydrogeologic flow model; that is, the groundwater flows toward the same areas that high total dissolved solid concentrations indicate the salt water is intruding.

- Tetra Tech also used data and ran a USGS model to simulate the effect of pumping drinking water from the well field at a high rate (20 gallons per minute) to see if the contamination can be induced to flow to the drinking water wells. Results indicate the extra pumping still doesn't cause contamination to flow to the drinking water wells. Draw area (capture area) primarily away from village, even under these extreme circumstances. Saltwater intrusion, however, can be an issue if high flow rates were used. The recommended maximum pumping rate is only 6 gallons per minute per pump with three out of four pumps running, and there are flow restrictors installed to keep rates even lower.
- Tetra Tech recommends placing a dedicated logger into a drinking water well to validate and fine tune their model.

Question: Do they compare water levels (elevations) between wells to determine flow direction?
Answer: Yes.

St. Paul

- Collected four quarters of groundwater monitoring data over past year. Only two wells have contamination above 10X Rule. Free product only located at well north of ATCO. Tetra Tech is working on a report currently. NOAA will be submitting a revised plan to ADEC for groundwater monitoring, including schedule and analytes.
- Landfill- as part of closure of landfill, NOAA has had to decommission wells. Several new wells recently have been added. NOAA doesn't yet have data for these. Three of the four wells for which we have data have no exceedances. Lead exceedance in one well for one of the four quarters (16.4 ug/L Pb with 15 ug/L Pb state regulation).
- Lukanin Bay- Have never detected contamination here, let alone had anything above cleanup level. The corrective action at this site had a clean closure.
- Ice House Lake- One of six wells has had persistent DRO exceedances. With PCS removal action, would expect to see this decrease.
- Diesel Seep- Had to remove two wells. These have been replaced. There was a DRO Table C exceedance in one of 5 wells.
- Village area- Two wells contained DRO at a concentration ten or more times the ADEC Table C cleanup level. One of these wells is near door of equipment shed. The other is near the ATCO building. Several wells were above Table C level for DRO. Major changes in contaminant levels have not been found over time.

Question: Is there floating product in village area?
Answer: Only place it's been found is at the ATCO building. Elsewhere it is dissolved. Columbia Environmental Sciences, Inc. previously pulled a paint-like substance out of a saltwater well located by the Decommissioned Power Plant. The substance was removed and was not observed again after the removal.

Question/Comment: What is so historic about the saltwater wells? Jason Bourdukofsky stated he would like to see the buildings removed; they are inhibiting cleanup of area.
Answer: NOAA thinks they are part of the historical landmark because the saltwater was used to wash seal skins. If removing them is desired by the community, it is necessary to go to the Department of Interior or the state to ask permission. Spending resources on the removal of these buildings is not a NOAA priority, and NOAA does not intend to remove them. The new landowner could remove them. The wells are closed and should not present an issue.

ST. PAUL CRITICAL WATER MANAGEMENT AREA

There is contamination in the groundwater in the industrial area of St. Paul Village. Contaminated water is brackish (saltwater intrusion), is far from the drinking water wells, and cannot migrate to the drinking water wells. Does not threaten human health or the environment. Under these circumstances, the cleanup levels can be raised by ten times. ADEC has agreed to grant NOAA the 10X Rule, but NOAA must institute administrative/institutional controls on the access to and use of groundwater. The State Attorney General's office would not accept a city ordinance as an institutional control. NOAA then decided to pursue a Critical Water Management Area (CWMA) with the State Department of Natural Resources (DNR). NOAA has had a workshop on island to explain the CWMA, other discussions at public meetings including RAB meetings, and a meeting in Anchorage with DNR, ADEC, and the RAB subcommittee on CWMA. The CWMA will likely be larger than the 10X Rule area because of the concern of water being drawn from one area into another. Various boundary alternatives have been discussed. NOAA, with input from others, decided the 10X Rule area would be limited to areas of contamination. NOAA has not yet received approval for its proposal. DNR will be having a public meeting to discuss what they think should be the CWMA area. NOAA understands that they've been holding off, pending additional groundwater flow data.

Question: Would CWMA apply to both saltwater and freshwater?
Answer: Yes, it would prohibit any wells from being installed in the area.

2005 FIELD ACTIVITIES

Congressional record shows that the $7 million appropriation should be split $6.5 million for economic development and $500,000 for cleanup. NOAA had plans to do a number of things on the islands this year, but will no longer be able to conduct these plans.

Question: The sheet metal building is a safety hazard. What does NOAA plan to do about this?
Answer: NOAA had planned to tear it down, but will be unable to under the circumstances.

Question: Does NOAA have any remaining funds from FY03 or FY04 that could be applied?
Answer: 2003 funding is gone, and 2004 carryover is needed to pay contractor invoices from the 2004 field season.

Comment: When NOAA does have money again, would like to have former paint shed area on St. George investigated, as previously mentioned.

Question: What does this funding situation mean for FY06?
Answer: NOAA's authorization has been extended to FY07, so there is the possibility of receiving additionally cleanup money.

Question: Will further efforts be made in the area of the St. Paul drinking water wells?
Answer: NOAA conducted studies in this area prior to being prohibited to spend money on FUD sites. NOAA has drafted a site characterization for Telegraph Hill. Based on data presented, the state has said no further action is necessary.

Comment: City received complaints about road damage due to truck traffic, including Kelly-Ryan hauling clean dredge spoils for USACE Harbor Improvements Project. Damage extends along Polovina Turnpike past landfill.

Response: NOAA believes it has met its obligations by making repairs already to damaged sections of the road, though other parties may not have.
Comment: City can't confirm that NOAA had met its obligations; just stating this issue for the record to pass along community complaints. The city is working on an ordinance to deal with road use and repair issues.

Question: Will there be any cleanup work in 2005?
Answer: NOAA will not be performing field activities or visiting the islands under current funding circumstances. NOAA will be working on reports and closure approvals.

Comment: Leslie Simmons stated that she has noticed the huge improvements in the cleanliness and operation of the St. Paul landfill. Congratulations to the community for making it happen.

Question: Did the Telegraph Hill site characterization report get sent to the RAB members?
Answer: Not certain about the draft report. The final report will be distributed soon.

PREVIOUS RAB MEETINGS' MINUTES APPROVAL

- September 17, 2004 St. Paul minutes - approved without comment
- September 15, 2004 St. George minutes - approved without comment

PUBLIC COMMENTS/2005 MEETING SCHEDULE/ADJOURN

- Alexay Merculief's name misspelled in video.
- Motion by RAB to strongly advise NOAA to investigate and potentially clean up the St. George paint shop when funds are available. NOAA explained that the RAB cannot force NOAA to do work, just recommend or advise. Anthony B. Merculief urged that it needs to be done as not many people know details of the paint shop location and operation, and institutional knowledge is important. NOAA agreed to consider the merit of the request. Motion approved by RAB without opposition.
- Jason Bourdukofsky said he is planning to go to Washington, DC to request further cleanup money.
- John R. Merculief and Ron Philemonoff thanked NOAA and ADEC personnel for all the work they've accomplished so far. Special thanks to John Lindsay for his personal commitment to getting the cleanup work done, and to NOAA staff for being helpful and trying to get cleanup work done.

Question: With the NOAA funding issue, will the RAB be dissolved?
Answer: No, it will not be dissolved as work still needs to be done.

MEETING ADJOURNED AT 11:45.