

Final Meeting Minutes
Restoration Advisory Board (RAB) Meeting
Sunflower Army Ammunition Plant (SFAAP)
Wednesday, September 3, 2003

1. The thirty-third RAB meeting was held on Wednesday, September 3, 2003, in the Clearview City Ball Room.
2. Copies of the agenda and sign-in sheets are attached.
3. Mr. Tony Spaar, the Commander's Representative at SFAAP and RAB Army Co-chair, called the meeting to order at approximately 6:00 p.m. Introductions were made around the room.
4. Mr. Bill Maasen, the RAB Community Co-chair, then asked for comments regarding the draft minutes from the July 9, 2003 meeting. No additions or corrections were discussed. Minutes were approved
5. IRP project updates were presented. Ms. Judy Meier provided an update on LTM. A groundwater-sampling event was conducted during May and June of 2003. A handout was distributed to the RAB.

SWMU 011:

- A total of 9 wells are present at SWMU 11.
- Six of the wells were sampled; three wells contained no measurable groundwater. Well 10-04 exhibited nitrate concentrations above the maximum contaminant levels (MCLs).
- Tom Price questioned what procedure would be taken with Well 10-04. Ms. Meier stated that the well would continue to be monitored as part of the LTM program for a period of 5-years or until there are no hits. Process will be reviewed at the end of the 5th year.
- Mr. James Oyler asked if nitrate contamination exists at the level of bedrock. Mr. Spaar responded that nitrates migrate through the soil to shallow bedrock, and that Shaw had remediated the ponds to the depth of bedrock adjacent to the creek.
- Ms. Lisa Larsen asked for a site-wide map that identified all monitoring well locations. Mr. Spaar responded that there was not a single map that had all existing wells at Sunflower, but each SWMU RFI report contained well location maps for that SWMU. Mr. Herstowski said that there is a map in the 1997 Groundwater study that had all of the groundwater wells that existed at that time.
- Ms. Judy Meier reported that lead concentrations in all wells were below State of Kansas risk-based cleanup levels.
- Groundwater monitoring will continue.

SWMU 033/35:

- Sampling was performed and the laboratory results indicated that all contaminants of concern (COCs) are below MCLs.
- A second sampling event will be held this week, with the report to be completed by December 2003. The SFAAP Project Delivery Team will close out this SWMU. Closure report expected by the end of FY 2004.

SWMU 033/034:

- Phase I sampling was conducted on 3 COCs to identify if SVOCs, lead, and cadmium were present.
- Sampling results indicated that contaminants are below the MCLs.
- This SWMU will be closed.

6. Mr. Keith Walker with Shaw provided the following program status report on Shaw's work at SFAAP:

Task Order 004:

- *SWMU 22* – The Army indicated that funding will be obligated to address the propellant burning ground in the 2nd Quarter of fiscal year (FY) 2004. Shaw has submitted a Draft Delineation Field Sampling Plan to define the lateral and vertical extent of propellant beyond the burning cells. Anticipate comments from TRC by end of September 2003.

Task Order 006:

- *SWMU 2* – No action this period. Risk Assessment and Revised RFI to be delayed until FY 08.
- *SWMUs 18, 32, 33, 34 and 35* – The Army is reviewing responses to comments to the Draft RA Report. Revised RA Report will be completed by September 30, 2003. Expect to close SWMU 32 and take off list at SFAAP.
- *SWMU 32* – Completed LUST requirements with KDHE surveillance on May 13, 2003. The excavation was closed and the lead reclamation building was demolished and stockpiled for disposal by others. Mr. Tom Price requested what the term, “disposal by others” meant. Mr. Keith Walker explained that the building is not IRP eligible, and that it was necessary to demolish and move from the site to facilitate construction of the bio-remediation cell. The disposal of that building debris would be handled by the Army at some time in the future under non-ER,A funds.

Task Order 007:

- *SIRP Planning document status*: CQCP, SHERP and SAP updates to be initiated January 2004. These documents dictate policies and procedures to be used at SFAAP for the execution of all phases of work. Mr. Keith Walker provided a review of each plan: the SHERP is our safety health and emergency response plan, which provides OSHA guidelines for all work conducted at SFAAP. The SAP or sampling and analysis plan presents guidelines for the collection of data and the quality control and laboratory quality assurance procedures for analysis generated. The CQCP or contractor quality control plan presents the QC procedures, definable features of work, and the detailed checklists for each work site. The USACE, Army Commander’s Representative, KDHE and EPA must approve all these documents. These SIRP Planning Documents are in place to prevent duplicative reproduction of such documents for each site
- *SWMU 21 RFI Investigation* – Shaw has completed all planned surface soil and subsurface direct push RFI Characterization. Dioxin, arsenic and lead in soils and residual TPH in groundwater (11 DM2 well vicinity) indicate the need for risk assessment and CMS.
- *SWMU 21 Excavation and Bio-remediation Pilot Test*. Site work, including stream bank restoration, completed. Seeding will be completed in September-October time frame. Bio-remediation treatment under way – chemical admixture applied and first round of treatment monitoring samples collected and analyzed to verify the effectiveness of the bio-remediation treatment. Lisa Larsen asked approximately how much soil had been removed. Mr. Kevin Neal, Shaw, stated approximately 5,000 cubic yards.
- *SWMU 14 – Phase I Stream Study* - Shaw has completed all sediment and surface water sampling. Report production ongoing. Shaw anticipated that all results could be published for TRC review in September 2003. Report due in October 2003. Shaw will collect samples to measure base flow conditions in streams. It appears that each stream is a gaining stream, and base flow is groundwater emanating from the site into the streams. By sampling the pooled water in the dry creeks, Shaw will be able to get an indication of what contaminants are migrating into the stream from groundwater (if any). Sampling was scheduled for Friday but postponed because of the rain. Will reschedule in several weeks if no rain. Sample results should be available at next RAB meeting. Results will be added as an addendum to the Phase I Report.
- *SWMU 14 – Phase II Stream Study* – The TRC met and discussed the preliminary scope for the Phase II Stream Study. Phase II will include sampling to conduct annual water quality monitoring from “in-drainage” and “in-stream” locations, confirm the water quality as it enters the plant and as it leaves the plant boundaries, and to target specific analytes in-stream that were detected during the Phase I study. Phase II Stream Study to identify correlation between results from one year to the next from strategic locations. Collections of data to be repeated year after year to see consistency. Cost estimates are being developed for this spring sampling action.
- *SWMU 1* – Draft RFI and QCSR issued for TRC review. Comments from TRC anticipated by October.
- *SWMU 39* – Draft RFI Report and QCSR to be issued to TRC for review by September 5, 2003. Comments from TRC anticipated by end of October. Final November-December.
- *SWMU 44* – Surface soil samples collected. Phase II subsurface samples proposed to TRC. Sample results will dictate the future groundwater sampling requirements.
- *SWMU 45/47* – All sampling complete. Kickoff meeting for RFI Summary Report for SWMU 45 scheduled for September 9, 2003. Target Draft is due to TRC November 20th. The SWMU 47 sump data will be archived until FY 2005 (target period for sump investigation of 19 remaining sumps). Mr. Spaar added that groundwater was also sampled to obtain additional information that may help design a remedy to remediate ground water. Ms. Micheline Burger asked why some sumps had been re-sampled. Mr.

Walker explained that sumps that yielded contaminants above the Kansas RBK standards were re-sampled at step-out locations in order to define the lateral extent of contamination emanating from the sumps. Mr. Oyler questioned the Army's intent to burn the NQ buildings. Mr. Spaar stated that the Army intends on decommissioning the buildings but metal buildings are much harder to decontaminate than the wood frame buildings in other areas of the plant.

- *Disposal Optimization Conceptual Plan* – Shaw will submit internal draft of Corrective Action Management Unit (CAMU) soil repository conceptual plan to Army by September 5, 2003. Army anticipates approximately 45 days for internal review. Comments will be incorporated into Formal Draft Disposal Optimization Study for TRC review. Work is scheduled for 2005, costs built into cost estimate but pending onsite proposal.
- *Disposal Optimization Treatability Study (DOTS)* – Army is conducting a Site-wide Treatability Study to streamline remedial design, administrative records documents and Army decision documents. By combining sites with like COCs and media for SWMUs 4, 6, 7-9, 21, 22, 24, 30, 32, 36 and AOC 15, the Army can accelerate the remedial design phase for each site, and obtain concurrence from TRC on an approved treatment matrix for each site that has similar chemical characteristics. Concurrent with the site-wide Treatability study, Ms. Meier stated that a site-wide explosive safety assessment will be done first. Mr. Spaar stated that nitroglycerine is a safety risk that we are working through various ways to mitigate the explosive risk. Mr. Olyer stated it was taking too long. Mr. Spaar indicated that Sunflower was the first installation to do an explosive safety assessment for a nitroglycerine production area. When Alliant managed the Installation the Army and Alliant personnel were told to stay away from it, because it was too dangerous, and that area didn't need to be addressed at that time because there were 51 other SWMUs to work on. Acreage spreadsheet to be provided at next RAB meeting.

Task Order 008:

- Task Order 008 is currently funded to execute RFI Investigations for SWMUs 13, 20, 27, 41, 48, 52, 10, 14 and 38, remediation of PCBs at SWMU 62 and AOC 2 and 13, completion of a site-wide explosive safety assessment, and completion of the database consolidation and development of a delivery system.
- Draft Work Plans for SWMUs 3, 10, 14, 20, 38 and 52 have been submitted for TRC review. Field investigation soil sampling work has been initiated at SWMU 20. Similar work is planned for SWMUs 38 and 52 in October. Field investigation for other SWMUs will be completed in FY 04.
- LTM Field Work for SWMU 41 is scheduled to proceed in the fall. Lack of groundwater precludes completion of SWMUs 13, 27 and 48 RFI sampling. Plans will be revised to incorporate TRC comments with spring target completion for sampling.

Site-Wide Explosive Safety Assessment – Army has conducted an ESA Sampling Kickoff Meeting with distinguished ordinance and explosive (OE) experts from the Army Environmental Center (AEC), Joint Munitions Command (JMC) and USACE (KS, Huntsville, ERDC) to review global approaches to explosive safety at SFAAP. Based on the recommendations from the meeting, the team has conducted site visits to Indian Head and Radford AAP, and is currently at Badger AAP, to research nitroglycerine production and waste management procedures. Additional information may be required from commercial entities trained at handling primary explosives.

7. Mr. Spaar asked if there was any new business:

- Mr. Olyer inquired as to how the nitroglycerine would be sampled. Mr. Walker replied that it could be sampled by using a remote direct push or geo-probe sampling rig. Radford AAP representatives believe that manual removal of the sample from the geo-probe sleeve could be hazardous. They have suggested that SFAAP should consider using controlled explosions, propagated through the soil, to desensitize the NG. Unknown outcomes need to be treated as “worst case” to be safe. Ms. Meier stated that soils with concentrations of explosives greater than 5 percent nitroglycerine by unit weight is considered an explosive hazard and must be handled with extreme caution
- Ms. Burger inquired as to how difficult or easy it is for someone to get into the “nitro” area. Mr. Spaar stated that it would not be easy. There is no surface product. Most of it is located at the center of the plant, below soil surface, at the highest elevation on the plant. Nitroglycerine will move downward into the subsurface and degrade if it gets in groundwater. Pockets of nitroglycerine located in the subsurface are the largest risk to sampling and removal crews.

- Mr. Leon Coker asked the status of the administration complex. Tony Spaar explained that the administration building area was not a high risk environmental concern, but the buildings were decomposing and unsafe structurally.
- Ms. Meier brought up the progress on the new database and delivery system. All records from the past 15 years from 6 different contractors and the USACE are being standardized into one database. Approximately 95 percent of the data consolidation is complete (pending receipt of ATK information). Further discussion of the delivery system and the verification of data will be held at the November 5th RAB meeting.

8. The next RAB meeting will be held on November 5, 2003 at 6:00 p.m. in the Clearview City Ball Room.

9. Mr. Spaar announced that the agenda for the next meeting will remain the same, with the following additions:

1. Update bio-remediation status
2. Stream Study Presentation Phase I
3. Database and delivery system update
4. Any information on completed RFI findings

10. Meeting adjourned at 7:20 p.m.