

Minutes of the
NAVAL BASE CHARLESTON
RESTORATION ADVISORY BOARD MEETING
Tuesday, October 16, 2001
North Charleston Old Town Meeting Place

AOC - Area of Concern, SWMU - solid waste management unit, SC DHEC - South Carolina Department of Health and Environmental Control, USEPA - United States Environmental Protection Agency, UST - underground storage tank

RAB Members Attending

Tony Hunt	Navy Co-Chair
Wannetta Mallette	Community Member
Lou Mintz	Community Member
Paul Bergstrand	SC DHEC
Wilburn Gilliard	Community Member

Guests Attending

Gary Foster	CH2M-Jones
Tom Beisel	CH2M-Jones
Gil Rennhack	SC DHEC
Jo Cherie Overcash	SC DHEC
Rob Harrell	Southern Division
Keith Johns	EnSafe, Inc.

Welcome and Administrative Remarks

Tony Hunt began the meeting at 5:35 p.m. and introductions were made. Mr. Hunt noted that this meeting was called to replace the meeting cancelled on September 11th. He personally called all the RAB members for this meeting. Mr. Spariosu was not able to attend because of funding limitations at USEPA. Wannetta Mallette stated that the RAB should be able to use this meeting place in the future. There were no comments on the July 2001 minutes.

Subcommittee Reports

There was not a community relations subcommittee meeting today. The community relations subcommittee is working on a fact sheet that is intended to get ideas from the community on how the community perceives the progress of the environmental cleanup activity. CH2M-Jones, EnSafe and the Navy are working together on this project.

Environmental Cleanup Progress Report

Gary Foster presented an update on the long-term critical sites, AOC 607, SWMU 25/70, SWMU 36, SWMU 620, SWMU 196, SWMU 166, the UST sites, scheduled future activities and recent contract awards.

AOC 607 - The interim measures work plan has been approved for AOC 607. In early September, CH2M-Jones started installing electrodes for the Soil Vapor Extraction (SVE) system for six-phase heating. Baseline monitoring has been done for the groundwater and soil gases. Two and a half weeks ago the SVE system was turned on and it's slowly heating up. Yesterday the temperature

was about 68 degrees (centigrade). The temperature will be maintained between 99 to 101 degrees centigrade.

Tom Beisel presented pictures of the electrodes, power cables and protector box being used in the six-phase heating system at AOC 607. The electrodes go into the ground about ten feet. The chlorinated solvents are mostly above the clay formation. Attempts to clean up the solvents below the clay formation at this time could spread the solvents further. The health risk is from the contaminants in the upper aquifer, not the lower aquifer.

Photographs were shown of Building 225, the old dry cleaner building, the SVE pipes, carbon tanks, monitoring points. Mr. Foster stated there's fencing around this area. The vapors from the SVE system go through the carbon tanks and the carbon filters pull all of the chlorinated solvents out before the gas is discharged.

Lou Mintz has asked the county and city police departments to ride around this area as often as possible. Mr. Beisel presented photographs of transformers for the 50 electrodes that are going to be turned on. He also explained the chilling system: when the water and the vapor come out, it's really hot and needs to be chilled down so that the water precipitates out, but the chlorinated solvents stay in vapor form and then be cleaned out when it goes through the carbon tanks.

A picture of a blower was shown, which is just a big vacuum. The blower sucks the vapors out of the ground. Mr. Mintz asked what happens to the water that goes through the carbon tanks. Mr. Beisel responded it's collected and recycled for the chilling system.

Mr. Mintz questioned if there was monitoring. Mr. Beisel replied that there are monitoring points throughout the whole system to make sure it is operating correctly. Mr. Mintz asked DHEC if they take samples. Mr. Bergstrand replied DHEC has asked CH2M-Jones to make sure. Mr. Mintz also questioned if the samples are sent to an independent lab. Mr. Foster answered they have SUMA canisters that are set away from the building and have an eight-hour volume control. DHEC at this time is not requesting independent testing of the air samples. DHEC has the capability of testing the air.

Mr. Beisel stated the performance standards in the system are more stringent than what South Carolina allows a dry cleaner in a residential area to discharge. Mr. Bergstrand has looked at CH2M-Jones calculations that they've submitted to the Bureau of Air for a permit and the numbers are below the standard. Mr. Hunt responded that the Navy is monitoring the exhaust from the SVE system. Mr. Hunt replied that SUMA canisters are being used to test the ambient concentration of contaminants. Mr. Foster stated there is also hand-held perimeter monitoring every day.

Mr. Mintz inquired if there was a warning that will automatically shut the machine down without a human shutting it down. Mr. Beisel stated there is an automatic system for shutting down the equipment in case of malfunction, but not for the air monitoring. A human would have to shut it down if the vapors exceed standards.

Mr. Foster says there is daily monitoring of the equipment. The equipment is monitored at night by a remote system in Atlanta.

SWMU 25/70 - Remedial actions are being reviewed. CH2M-Jones will be using an oxidizer, hydrogen peroxide, with an iron powder as a catalyst. They are going to inject this site with this process to get rid of the hexavalent chromium.

A contract has been awarded to ARS on this process, and they're working on the design. A work plan for this site will be submitted to DHEC by the end of this month. This is a busy time for the tenant so CH2M-Jones is holding off on working on this site until the very beginning of next year.

SWMU 36, AOCs 620 & 605 (Building 68) - The Redevelopment Authority (RDA) has a potential tenant. CH2M-Jones will submit work plans to do additional sampling. They just need to delineate exactly to what extent they have to do excavation at these sites. The RDA wants to demolish the building. CH2M-Jones is in the process of getting additional sampling. The hazardous areas need to be identified before they demolish the building. RDA is holding off on the RFP until additional information is obtained.

AOC 605, SWMU 5 and 8 - CH2M-Jones is developing work plans for additional sampling. They may need to do additional excavation on this site.

SWMU 196, Zone H, the old landfill area - This area has chlorobenzene contamination. Yesterday CH2M-Jones started constructing injector wells to inject hydrogen peroxide. Chlorobenzenes are associated with transformer fluid. All the injectors should be installed within the next couple of weeks.

SWMU 166 - CH2M-Jones has installed over 100 borings out there. CH2M-Jones expects to be receiving bids back from contractors on the remedy process in a couple of weeks. The work plan will be submitted to DHEC in November. The area to be remediated includes the right-of-way along I-26 and they hope to begin operations in January. SWMU 166 was an area where maintenance was done for cars and trucks. Chlorinated solvents were used to clean the parts.

Mr. Beisel reported that sometimes corrective interim measures are the final measures. It's a process that RCRA allows in order to shorten the process of cleaning up contamination quickly. A graph was shown of the ECD, which is a probe that is pushed into the ground and detects solvents or any kind of hydrocarbons. ECD gives you a layout of the footprint of the contamination, and you can go in and pinpoint the depth.

CH2M-Jones is working on a Corrective Measures Study (CMS) remedy plan for SWMU 9. The CMS work plan has already been approved by SC DHEC. Soil vapor extraction in such a large landfill would take an enormous amount of power. The best technology is oxidation: saturate it with hydrogen peroxide.

The work plan for the landfill has been approved by SC DHEC. CH2M-Jones is working on a CMS for the remedy. There was a site close to the landfill where torpedoes were dropped and it's unknown if they were recovered. It is treated as a site with unexploded ordnance. Interim Measure work plans have been submitted for SWMU 17. There are two contaminants out there. One is a nonaqueous phase liquid, petroleum & diesel, floating on the water table. CH2M-

Jones will vacuum the contaminants out. There are also PCBs out there, and that area will be excavated.

SWMU 42 and 44 - Excavation will be done this month.
SWMU 14 - CH2M-Jones will excavate the surface soil
SWMUs 1 and 2 - A small excavation may be performed

Of the 78 UST sites, 42 have no further action, 33 sites have had corrective action plans submitted, and only three sites have not had corrective action plans submitted. Of the 33 sites, 22 require groundwater monitoring. 11 sites have alternative action plans. Some require excavation. Some have free product that must be removed.

Oxygen release compound is a technique that uses natural occurring bacteria to "eat" petroleum. Oxygen, in a compound, is released very slowly into the ground so that the bacteria will eat the petroleum. Add more oxygen and the bacteria will thrive and eat more petroleum. When the petroleum is gone, the bacteria lies dormant or dies. There are millions of different kinds of naturally occurring bacteria. Whenever something shows up in the ground, bacteria will start munching on it.

SWMU 39 has had hydrogen release compound injection and is being monitored. On other RCRA sites, there's still further sampling and investigation still going on.

Subcontracting

Mr. Foster presented information on new subcontracts. Prosonic has a new contract award for drilling. ARS Technologies has a new contract award for in-situ remediation at SWMU 25, 70. Leon's Fencing is a new contract award for fencing around AOC 607. Earth Science is a new contract award for laboratory testing. Atlantic Drilling has a new contract award for well installation. There will be more contracts awarded as the work comes up like specialty contractors for injection systems, groundwater monitoring, concrete pouring and supply type things.

Hess Update

Mr. Hunt reported that someone from Hess had planned to to give a presentation at the September meeting but could not make it to the RAB meeting a second time. Mr. Hunt presented slides on the Hess cleanup activity. Mr. Hunt receives a copy of the annual reports from Hess to DHEC. If there are additional questions for Hess, Mr. Hunt will pass them on and hopefully get a representative from Hess at the RAB meeting in the near future.

Mr. Hunt then provided a brief summary of the Hess issue and involvement. Back in 1993, the Navy found a well near the northern boundary of the property that had free product (undiluted petroleum) in it. The Navy did an investigation along with Hess, and Hess found that they had a release from a transfer station on their property. Hess has been conducting corrective action out there, mostly tackling the liquid petroleum hydrocarbons. Hess has not addressed any of the dissolved phase contaminants.

Mr. Hunt reported that the free product has migrated further onto the Navy's property. It's very near Virginia Avenue now. The technology that Hess is using is a windmill pumping compressed

air. The windmill is hooked to a compressor and it raises the pressure in the tank which is distributed to a series of pumps in wells. Hess periodically pumps some of that free product into a tank and then empties the tank.

Hess was not getting enough wind to operate the windmill. The windmill has been supplemented with a compressor that comes on periodically that provides plenty of air pressure. Some of the analysis of the free product looks like it's xylene and some diesel in there and MTBE. MTBE is an oxidant used in the newer mixtures of gasoline.

The Navy was concerned about Hess starting an active pump and treat system before the Navy could get the chlorinated solvent at SWMU 39. In such a case, Hess might influence the migration of the contamination. Hess has looked at the time that it would take for the dissolved phase plume to reach the wetland marsh and has determined that the dissolved phase petroleum will degrade by the time it gets there. Their reports show that it will degrade to levels below the Risk Based Screening Level (RBSL).

The Navy has advised Hess to not take any action on the dissolved phase until the Navy can get a remedy in place to address the chlorinated solvents. Hess' plan is to continue to address the free product. Hess is working very closely with the Bureau of Water, and the Navy is copied on that correspondence.

Agenda for Next Meeting

Jim Augustin will be present to talk about the Noisette project. The next RAB meeting will be the second Tuesday of November. There were no other questions or suggestions.

Meeting adjourned.

Tony Hunt
Navy Co-Chair

Don Harbert
Community Co-Chair