

NASJRB WILLOW GROVE RAB MEETING MINUTES

Meeting Date: January 18, 2006
Meeting Time: 6:00 p.m.
Meeting Place: Horsham Township Public Library

	<u>Name</u>	<u>Organization</u>
Attendance:	Jack Dunleavy	RAB Member
	Jim Vetrini	Community Member
	Rick Myers	RAB Member
	Eric Lindhult	RAB Member
	Marc Newell	Horsham EAB
	Jim Vetrini	RAB Member
	Tina Merl	Horsham Water and Sewer Authority
	Mike McGee	Horsham Township
	Suzanne Montgomery	NAS JRB Willow Grove PWO
	Jim Edmond	NAS JRB Willow Grove
	Jacqueline Siciliano	USAF 111 FW
	Mark Medvesky	USAFR Willow Grove
	Duane Maslowski	ARS Willow Grove
	Charanjit Gil	ARS Willow Grove
	Hal Dusen	ARS Willow Grove
	Bob Lewandowski	Navy, PMO
	April Flipse	PADEP
	Russ Turner	Tetra Tech NUS, Inc
	Kevin Kilmartin	Tetra Tech NUS, Inc
	Scott Shaw	Tetra Tech/Geotrans

Jim Edmond opened the meeting and thanked everyone for coming, mentioning that this is the 27th RAB meeting. The Navy Executive Officer (Navy Co-Chair of the RAB), Commander Brown, could not attend due to a Navy commitment. LTCDR Suzanne Montgomery attended in his place for the Navy.

There is an air show planned for June 16, 17 and 18 featuring the Navy Thunderbirds. There will be a Doobie Brothers concert on June 15th. Mr. Edmond will try to obtain tickets for RAB members.

Charanjit Gill, the Air Reserve Station (ARS) representative, again thanked everyone for coming and introduced Scott Shaw to provide updates regarding progress made since groundwater treatment using in-situ chemical oxidation began, groundwater sampling results, and plans for implementing biosparging, the next phase, at the Air Force POL site.

Using a projected figure of the northern portion of the Air station, Mr. Shaw reviewed the site location and features, including groundwater flow direction and monitoring well locations, and reminded the audience that the compounds of concern resulting from the historical spill of jet fuel in the area are benzene and naphthalene, mainly in the shallow groundwater below the surface. Generally, concentrations of benzene and naphthalene encountered in groundwater at the site have been reduced to below or in the range of the Pennsylvania Department of Environmental Protection (PADEP) standards for groundwater protection, five parts per billion (ppb) for benzene and 100 ppb for naphthalene, since the chemical oxidation remediation process has been underway. As a result of this process, the Air Force has identified a number of wells, especially those further downgradient, that have not seen detections of the compounds of concern for many years. The Air Force has been able to remove a number of these historically unaffected wells and abandon them according to PA regulations. However, using projected slides, Mr. Shaw pointed out that a number of wells remaining in the network still contain benzene and sometimes naphthalene at concentrations that vary over time, but may fluctuate at or above the corresponding PADEP limit. Sufficient upgradient (unaffected), downgradient sentinel, and bedrock wells

remain to provide reference data to evaluate the ongoing remediation program. As mentioned previously at RAB meetings, the remediation of the ARS POL site is anticipated to be in two phases. The current chemical oxidation phase will be followed by a process called biosparging. In biosparging, air is introduced into the contaminated groundwater at a low pressure (volume) to avoid actually stripping the contaminants by the air flow, to enhance the natural biological activity that degrades the contaminants in place. Enhanced biological activity would then continue cleanup of the site. Analysis of groundwater has already been performed over the past years to ensure that conditions exist to support enhanced biological remediation using biosparging. The types of equipment needed for this next phase of remediation, include air compressors, compressed air distribution systems, and electrical power supplies. A preliminary design effort is underway to calculate the size of this proposed equipment and to see where on-Base adequate power supplies are located. In 2006, the Air Force will continue to implement the chemical oxidation process as needed while it begins to procure and install the equipment for the biosparging phase remediation. Some areas of the site may begin to be treated by biosparging while other sectors remain under the Phase I chemical oxidation program in 2006.

A RAB Member asked how long it would have taken to remediate the site to groundwater standards if no chemical oxidation or air sparging had been implemented; if the Air Force planned to sparge in bedrock wells; how thick is the aquifer to be treated; if there is iron (what valence?) in the groundwater; and what causes the benzene concentrations in some wells to fluctuate between periodic samples. Mr. Shaw said that a natural attenuation evaluation performed four or five years ago indicated that naphthalene would require from 2 to seven years and that benzene was estimated to require five to 18 years to achieve PA groundwater standards. The bedrock wells are to monitor background conditions; one of them has been sampled for nearly 12 years and has always been clean. The thickness of the overburden aquifer that the Air Force is dealing with lies above the bedrock and varies from ten to about 18 feet thick and contains a water layer from about four to eight feet thick. Pilot testing in the field will be used to determine the natural concentrations of iron to be dealt with by the biosparging system. Fluctuations in the benzene concentrations encountered in groundwater samples could be the delayed effect from the water level rising and falling in the contaminated subsurface soil releasing residual contamination, potentially free product disassociating and dissolving from the soil into the groundwater.

A RAB Member asked if there is an advantage in abandoning those wells. Is it that you do not have to monitor them because they've been nondetect for so long? Mr. Shaw agreed with that reasoning for saving unnecessary monitoring expense and added that some of the abandoned wells were well out in the farmer's field where security controls and routine maintenance are hard to maintain. These wells are holes in the ground possibly susceptible to tampering.

Mr. Edmond mentioned that the Navy will discuss the process of soil removal and recent groundwater results at Site 5 (Fire Training Area), Site 3 (Ninth Street landfill) groundwater and soil investigation, and the investigation of the Site 1 (Privet Road Compound) groundwater off-Station source impacting Navy wells. Mr. Edmond also announced that Ed Boyle, the Navy RPM (remedial project manager) has left the Navy for another position. Bob Lewandowski was introduced from the Navy Program Management Office who will be involved with Air Station matters.

Jeff Dale discussed the status of the Site 5 soil removal action underway according to the plan described in the last RAB meeting. The initial soil excavation was performed but was followed by several rainy weeks causing delay. The "burn ring" was found to be an old cast iron tank open at the top. The bottom of the tank was found to be sound, which has probably blocked the solvent fire fuels used over the years from percolation down into the underlying soil. Post-excavation sampling was performed last week (early January) to determine if remedial goals have been met. A source of soil to fill the hole has been found and the Navy also sampled that material to ensure it also meets cleanup requirements.

A RAB Member asked if the soil and fire ring have been removed. Mr. Edmond replied that the soil was gone and that the ring (tank bottom) has been removed from the ground for later disposal.

Using a projected figure of Site 5 features, Kevin Kilmartin provided a concise history of drum storage and fire training activities that have lead up to the current state of remedial investigation (RI) of the solvent-contaminated groundwater plume in the area. In response to some regulatory questions and concerns, the Navy installed additional monitoring wells at four different locations to examine groundwater conditions at specific locations and depths in agreement with EPA. USGS (the United States Geological Survey) was also involved in obtaining geophysical logging and “packer testing” for groundwater chemistry in each borehole. Mr. Kilmartin use projected slides and the analogy of a layer cake to explain the investigation of the groundwater plume chemical concentrations and flow directions based on the geologic “strike” and “dip” of the bedrock stratigraphy. Also, the Navy obtained samples from all Site 5 monitoring wells to confirm current status as well as investigate a new compound, 1,4-dioxane, sometimes associated with the types of solvents found in the Site 5 plume. Only the groundwater sample obtained at the plume historical source area, the former drum storage area, was found to contain a low concentration of 1,4-dioxane (13 parts per billion) , indicating that this “new” compound is not a concern at Site 5.

A RAB Member asked what was the driver that made the Navy think of 1,4-dioxane? Ms. Flipse explained that EPA is requiring analysis for this compound at every EPA site. It is being added to the list of compounds analyzed at all sites. Mr. Edmond summarized the presentation, saying that the results indicate that the groundwater plume is moving on Navy property and not closer to the facility fence line, so that is good news for the community.

A RAB Member stated for confirmation; the fact that the Navy did not find high concentrations in the “down dip well” indicates that contamination was in the dissolved-phase with no free product being heavier than water that flowed down the strike line, and that the “fire ring” had a bottom confirms that the entire plume comes from the drum storage source area not the fire ring. (Mr. Kilmartin agreed). And when you say you compare something to regulatory limits, you’re talking about drinking water standards; right? Mr. Kilmartin agreed, adding that the MCL (maximum contaminant level) standards for TCE and 1, 1-DCE were exceeded.

Mr. Dale explained that the Site 5 results represent a good starting point for discussing the investigation the Navy has begun at Site 3 (Ninth Street Landfill site). Using the projected figure, Mr. Dale pointed out site features and summarized historical investigations at Site 3. The Navy is in the process of installing a new monitoring well upgradient of Site 3, downgradient of the Army truck maintenance building to track down the historical source area of the solvent plume found below Site 3. Site 3 is downgradient of Site 5, but it looks like the downgradient limit of the Site 5 plume is near the upgradient source area of the Site 3 plume. Fortunately, for investigation clarity at least, the two plumes (Site 3 and Site 5) have different primary solvent components, so it helps the scientific investigation into the source and extent of each separate plume if you can tell if there is one plume or two. Preliminary results from USGS packer testing in the new Site 3 upgradient well indicate the Army Reserve truck maintenance facility is not the source of the plume below Site 3. Therefore, the Navy and EPA will meet to agree on the Site 3 source investigation soil borings planned near the Army Reserve Hangar. For the moment the likely source is the old (since replaced) oil/water separator and its’ former outfall area. In addition, the Navy is performing a “desk top” records search of activities at the entire Army Reserve facility looking for any recorded evidence of spills or discharge to the environment.

A RAB Member asked for the original name of Site 3, and April Flipse asked about the land responsibility (between the Army and the Navy) at these locations. Mr. Edmond mentioned the original name for Site 3 is the Ninth Street Landfill, although the results of Navy soil and groundwater investigation so far indicate that the landfill is not the major source of contamination. The property belongs to the Navy; the Army Reserve is a tenant, but the Navy has responsibility.

Mr. Dale next discussed the location and background of Site 1, the Privet Road Compound area and the two Navy potable water supply wells. Groundwater contamination in the Navy supply wells is

documented back to the 1970's. After numerous investigations performed on Navy property over the years, the Navy wanted to convince the EPA that the source of groundwater contamination is not the Navy Base, it is from off-Base somewhere on the other side of Route 611. The Navy installed two new boreholes, performed packer studies of groundwater in three zones in one borehole and eight zones in the other, and concluded from preliminary (packer) chemical results that the contamination coming from the off-Base up-gradient source(s) correlates well with the depths and concentrations found in the Navy wells on-Base.

A RAB Member asked if the test was for groundwater flow direction too. Is the flow north to south? Mr. Dale used the projected figure to show the general flow direction of groundwater flow roughly from south to north, but that the large volume of pumping at the Navy supply wells significantly affects local groundwater flow patterns.

A RAB Member asked what are the contaminants and who is going to take the blame for that. Mr. Kilmartin replied that the main contaminants are TCE (trichloroethene) and PCE (perchloroethylene). Mr. Edmond explained that the Navy is working with PADEP, who has a lot of historical information about groundwater in the vicinity to share, and EPA to try to identify the off-Station source.

A RAB Member asked about groundwater level measurements in the two new monitoring wells and if the Navy has discussed this new data with EPA, what is EPA's position. Mr. Dale and Mr. Edmond explained that water level measurements were obtained continuously during the borehole packer testing operation, but the graphs just show up and down extremes resulting from the on/off cycle in the Navy potable water supply pumping wells. Ron Sloto of the USGS previously mentioned that he could correlate the on/off cycle of the Navy pumping wells almost to the minute by the corresponding drawdown (or recovery), on the order of three to five feet or more, in the test borehole. Local groundwater flow would be greatly influenced by the Navy pumping wells. EPA's position on this new data has been to contact their site assessment branch to reevaluate old sites upgradient of the Air Station. April Flipse and PADEP are also looking into the issue. PADEP supplied a compilation of data from their files to aid the investigation.

Mr. Dale mentioned that the other issue at Site 1 is the soil. The Navy prepared the no further action (NFA) Proposed Remedial Action Plan (PRAP) and presented it to the RAB last year. Before a Record of Decision (ROD) could be prepared and signed, EPA requested a confirmation of the RI soil sampling results for volatile compounds (VOCs) in soil to be sure there is no remaining VOCs in soil leaching to groundwater. The Navy resampled the two soil borings found in the 1997 RI to have the highest indications of possible VOC content. The resample activity used the more recent procedure using a special tube and shipping container to ensure that those VOCs, if present, are not lost to evaporation before the sample arrives at the laboratory. The results for the new samples correlate very well with the 1997 results, showing essentially non-detect for volatiles in the soil. As a result of this new sampling, the Navy will proceed to prepare the NFA ROD for Site 1 soils.

A RAB Member asked if you would be able to grow crops there and suggested growing more trees if the soil is too rocky for crops. Mr. Edmond agreed, saying that EPA and PADEP agree with the Navy, that after the soil removal action performed a few years back, the soil is clean enough to permit unrestricted use of the land.

A RAB Member asked about the status of the PRAP and ROD, saying you already had the public meeting for the PRAP, so it's only a matter of completing the necessary paperwork. Is that right? Mr. Edmond agreed and explained that the Navy and PADEP have been meeting on a regular basis to share comments. Most of this work you see recently, with the probable exception of the Site 1 PCB soil removal, was performed based on the recommendations by EPA on reports already completed. The result of the team meeting process is that the program has been able to move forward.

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A RAB Member stated that his pet peeve is that at every one of these big important meetings, one of those team members is not present. Mr. Edmond replied that the team meetings with the regulators are held at EPA Region 3 headquarters. .

Mr. Edmond asked if there were any more questions.

A RAB Member asked if he could bring up the BRAC (Base Realignment and Closure) word. If they decide to give it (the Base) to the Army will we still meet here but have the Army guys? Mr. Edmond offered that those decisions are yet to be determined. The Base as you see it today will be around for a while. Twenty seven RAB meetings so far is just the tip of the iceberg.

A RAB Member asked if you take a test, can you have the results that day if you had all of the samples and testing equipment there, or is there a time frame it takes (to receive the analytical results)? Mr. Dale replied that if you are taking a lot of samples, trying to make decisions in the field, like tracking the extent or direction of things, you can bring in special equipment in trailers to perform analysis immediately on site. If you are only taking a few samples, on-site analysis would be very costly and the laboratories offer quick turn around analysis in one or two days for a competitive price. In the case of packer sampling at the two new bore holes at Site 1, the Navy paid for 48 hour turn around to be able to keep the driller on site to avoid the driller leaving and paying them to return later.

Mr. Edmond mentioned that USGS was here performing the Site 1 bore hole packer testing on some of the coldest days of this winter. They deserve a pat on the back for being out there testing for those new wells 12 and 14 hour days in the bitter cold. Ron Sloto was not able to attend this RAB meeting because he was at a dinner to award an environmental award Ron received.

The Next RAB meeting is tentatively scheduled for April 19, 2006. The meeting place will be the Horsham Township Library, 435 Babylon Road, Horsham, PA 19044 (phone: 215-443-2609). At the request of the RAB, a brief overview of the Air Force and Navy IR programs will be presented with a brief historical summary for each IR site.

Mr. Edmond thanked everyone for coming and wished all a nice winter.