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NASJRB WILLOW GROVE
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RESTORATION ADVISORY BOARD MEETING AND TRANSMITTAL HELD ON 25 MAY 2011
FOR JOINT RESERVE BASE WITH ATTACHMENT NAS WILLOW GROVE PA
5/25/2011
NAVAL AIR STATION JOINT RESERVE BASE



TETRA TECH

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July 15, 2011

Project Number 02014

Reference: Contract No. N62470-08-D-1001 (CLEAN)
Contract Task Order (CTO) No. WE05

Subject: Distribution of RAB Meeting Minutes, May 25, 2011
NAS JRB Willow Grove, Pennsylvania

Dear Restoration Advisory Board (RAB) Member:

At the request of Jeff Dale of the Navy's Base Realignment and Closure (BRAC) Program Management Office (PMO), Northeast, copies of the RAB meeting minutes for the RAB meeting held on May 25, 2011 are enclosed. Questions should be addressed to Bill Heil, the RAB Coordinator for the Naval Air Station Joint Reserve Base, Willow Grove, at (215) 443-6938.

Sincerely,

A handwritten signature in black ink, appearing to read 'AF' followed by a stylized flourish.

Andrew Frebowitz
Project Manager

AF/pg

Enclosure: RAB Meeting Minutes
Presentation Handouts
Distribution List

c: Garth Glenn (Tetra Tech)
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**NAS JRB WILLOW GROVE
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July 2011**

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Glemser, Tina Marie
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NAVAL AIR STATION JOINT RESERVE BASE
(NAS JRB) WILLOW GROVE
Restoration Advisory Board (RAB) Meeting Minutes
RAB Meeting No. 45

Meeting Date: May 25, 2011

Meeting Time: 6:00 p.m.

Meeting Place: Horsham Township Public Library

	<u>Name</u>	<u>Organization</u>
Attendance:	Rick Myers	RAB Member
	Stacie Popp-Young	Weston Solutions
	Theresa Katalinas	PATCH
	Tom Ames	HLRA
	Bob Lewandowski (R)	Navy, BRAC PMO
	Hal Dusen (R)	Navy, Willow Grove
	Tim Sheehan (R)	PADEP
	Jessica Kasmari (R)	PADEP
	Lisa Cunningham (R)	EPA
	Kevin Kilmartin	Tetra Tech
	Russ Turner	Tetra Tech

(R) Designates RAB Member

Bob Lewandowski opened the meeting, thanking everyone for attending the 45th Restoration Advisory Board (RAB) meeting by noting that there were some new faces and asking each attendee to give a brief self-introduction.

Mr. Lewandowski provided a summary of the planned agenda and mentioned that in the process of closing the Base, a few things have happened since the last RAB meeting in January that although not related to the environmental program, will help, bring everybody up to speed and make sure that the public is aware. On March 30th The Navy held the disestablishment ceremony for the Base and the final flight. Then shortly after, April 19th, there was a change of command ceremony. Commander David Foster replaced Captain David Opatz as the commanding officer. Commander Foster will be here through operational closure scheduled for September 15, 2011. On May 11th, the Navy hosted the Horsham LRA (Horsham Local Reuse Authority) and Pennsylvania DEP's office of community revitalization and local government support personnel. Navy provided them a tour of all cleanup sites. Mr. Lewandowski stated that it was well attended and appreciated. Tom Ames agreed that the tour was very helpful.

Mr. Lewandowski introduced Russ Turner to give an update on the Site 1 post-ROD monitoring.

Mr. Turner provided a brief summary of the location, operating history, investigations and issues relating to Site 1, the former Privet Road Compound. Referring to a series of slides, Mr. Turner provided information on site issues including historical site use, cleanup and the record of decision (ROD) for soil, groundwater flow direction, and the ROD for groundwater. Site 1 was

untreated. As mentioned, there were two shallow wells here (in the former Privet Road Compound waste handling area) that were removed for the construction of the new detention basin. In addition, the soil from the area was also removed. When the Army went to build their foundations here, they found some waste in the soil, like pieces of trash, maybe pieces of metal. The Navy had previously done a whole series of soil borings in there and found no contaminants in the soil. However, this soil had to be dug out anyway to make the detention basin. Since the excavated soil had some waste in it, the contractor disposed of that soil excavated here off-site. So the soil that we're actually testing (for residual solvent) with the groundwater sampling, has been removed.

Results of the first round of sampling for the chlorinated hydrocarbon compounds of concern specified in the ROD were found to be very low in the area of the former waste handling. The MCL is 5ug/kg for PCE (tetrachloroethylene) and TCE. Concentrations found in 01MW01S and 01MW01SO were 0.59 and 0.11ug/kg respectively PCE and TCE. So we concluded at that point in September of 2009 that there doesn't seem to be a continuing contribution to groundwater from the soil in this vicinity. The second round of sampling can be done now that the replacement wells have been installed. That's scheduled for September 2011.

Mr. Lewandowski added that we'll be going back out and taking that second round of sampling, comparing them to the MCLs again. If results are consistent with what we saw previously, we'll make a case that we don't have to do additional sampling in those shallow wells because if the sampling comes back consistent as it was before, then there really isn't any remaining threat from soil there, as we suspected. Mr. Turner agreed, pointing out the well locations once again on the projected slide. If the shallow wells are found to be consistent with the low concentrations of the chlorinated compounds found previously, they'll be deleted from the sampling program. The two deep wells used by the Navy for potable water production will be the only two remaining (for periodic sampling). The sampling analysis done in the deeper wells however is a much wider suite. We're sampling for metals and VOCs (volatile organic compounds).

Tim Sheehan asked about the sampling and analysis. Isn't the groundwater sampled before treatment because you want to see what the groundwater's like? Mr. Turner replied that the routine analysis performed by the Navy is for potable water supply purposes. The treated water checks are on a routine basis (to verify potability). I don't think they check it on a routine basis before treatment. However, things could happen in the future which could affect the quality of water in these wells, so in accordance with the ROD, the Navy is doing a wider suite (of analysis in the deep wells). It's just the chlorinated VOCs that are a concern for the area, but since Navy assets are being impacted (from off-Base) the team decided it's better to monitor for a wider suite. Rick Myers asked if by any chance, was any test done for the LOX area when they took that out? Mr. Turner explained that this was an active Air Station and liquid oxygen (LOX) was stored here (in the area of the consolidated reserve training facility). In the comprehensive survey of environmental conditions of the Base, the Navy looked at a lot of things, including the LOX area, where possible asbestos was identified. Mr. Lewandowski pointed out that the building with possible asbestos on the outside of the building was identified for further investigation. When we actually went back out as part of our follow-up to examine that, it turned out it was not asbestos on that building. So there wasn't any need for any special handling there when the building was demolished (to prepare for construction of the consolidated armed forces training center). Mr Myers asked if the aerial photograph could be updated to show the

achieve the chemical conditions that the bacteria would like. Mr. Lewandowski added that the bioremediation project we've been doing here is actually a pilot project. We haven't reached a remedial decision yet, but it was something that we felt had a good chance of working and we wanted to put in a system and test to make sure it was going to be effective before we went full scale. Mr. Kilmartin continued, after that we did a round of sampling and found that even though the population of the bacteria had increased, which, of course, we had hoped it would and it should, it really didn't increase to the point where there were enough bacteria to do the job. And we also found through DNA analysis that these bacteria were lacking some of the specific genes that are needed to completely destroy these chlorinated solvents. The Navy performed a round of what we all call bioaugmentation, which is where commercially prepared solutions that contain the right bacteria with the right genetic makeup produced in a laboratory were purchased to inject into the aquifer along with the sodium lactate and sodium bicarbonate amendments. The current status is very much like our last update. What we have found is that concentrations of the original solvent compounds that were spilled at the site in groundwater have been sharply reduced, even to the point in some wells where they don't even exist anymore. Certain intermediate compounds that are produced as the original compounds break down have been noted. Remember as the parent compound breaks down, it produces an intermediate compound. As the parent compound decreases, an intermediate compound will increase originally because you're actually creating it through the destruction of your original compound. These intermediate compounds have been steady to even a declining concentration. The compounds that signal end stage of the process, the complete destruction of the original solvents, are starting to appear. This shows that the biological process is going all the way through to completion. We did find, and we talked about this last time, that periodic biostimulation is required. That again is the addition of the sodium bicarbonate and a lactate nutrient compound. What the Navy is currently doing, even right now today, is we're still adding lactate, but we're adding it in a slightly different form. Rather than just pure sodium lactate, we're adding it as a form commercially available with emulsified oil. This compound has just as much lactate available, but it will be longer-lasting because it releases the carbon at a slower rate so we won't have to be going out there quite as often to replenish the supply. As Bob mentioned, the Navy has incorporated bioremediation into the proposed plan for Site 5 groundwater remediation as the primary remedy for groundwater within and surrounding the source area where the drums were stored. That will be combined with natural attenuation for the downgradient portion of the plume. What that means is, as you reduce the source of your plume, the downgradient portion of the plume will start to attenuate or eventually disappear because the source material is being removed right up at the point of origin. The Proposed Plan is currently under review by EPA at Lisa's group. The goal is to attain a record of decision in this current fiscal year. Mr. Lewandowski added that the current fiscal year ends September 30, 2011. Mr. Lewandowski, Mr. Ames and Ms. Cunningham provided an update on the review process for the Proposed Plan that is expected to be released final in time to support a ROD (Record of Decision) this fiscal year.

Mr. Kilmartin continued with a series of slides depicting the area of the treatment system extraction/injection/monitoring wells, charts of the current concentrations in those wells compared to historical concentrations, and discussed the mechanism by which the larger original contaminants are broken down through a series of "daughter" compounds in the biologically mediated process. Mr. Ames asked at what levels are the latest sampling rounds as compared to

realistic. Thanks, Kevin. Russ will give us just a quick rundown where we're going with the Phase 2 remedial investigation at Site 12.

Mr. Turner began by summarizing the history and locale (referring to a projected figure) for meeting attendees not familiar with the site. The Navy had been investigating for many years at Site 2, adjacent to Site 12, for evidence of reported landfill operations, without finding significant evidence of the reported landfill. Since then, a (no action) record of decision was completed for Site 2 a little over one year ago and signed. Meanwhile, there was some question (referring to the projected slide of Site 12) about this area. From inspection of old aerial photos, EPA noticed (what appeared to be) drums out here about five years ago. The Navy went there and confirmed in person that yes, there were drums, all rusted, no bottoms, and some other debris. The Navy hired a firm to clean up that area. But there was a lingering doubt whether that was sufficient. Samples were taken. Some petroleum-type compounds and some metal compounds were found in soil. Eventually the site this was raised to the level of an installation restoration program site, just like Site 2 was before it, Site 5 is, and the other landfill, Site 3, which is nearby.

Mr. Lewandowski added that coupled with the fact that we never really found the waste at Site 2 that we thought we were going to find, we realized we simply had been looking in the wrong place. Now we've found that waste at Site 12. Mr. Turner continued, saying that the old original investigation in the late 1980s suggested that there was a landfill here. Site 2 looks like a typical landfill with the steep embankment. However no appreciable waste was found at Site 2. When the Navy found out it (the historical landfill) was here (at Site 12) and discussed the issues with Pennsylvania DEP and EPA, Site 12 was raised by EPA and given an official designation as one of the IR program sites. The Navy has completed a work plan and one round of investigation. The first phase of remedial investigation is complete. A series of test pits – a backhoe digs up the soil, finds things, and takes soil samples – was completed. Soil borings, sampling and other investigations were implemented to determine what activities occurred there in the past. Those (Phase I) field investigations were actually following an electromagnetic survey using a device that can read densities beneath the ground. Phase I investigations found evidence of the suspected former landfill. For those familiar with it, Site 12 history of use was very much like at Site 3, which is also a former landfill, where the Navy historically would dig a trench, put some waste things in there, burn it, cover it with soil and move to another trench nearby.

From the Phase I investigation it was concluded that Site 12 is a historical landfill that has not been used for many years, since the mid '60s when this one was closed down. However, there are residual compounds. There are compounds of concern to be investigated, along with groundwater, in Phase 2 which will be upcoming in the fall, maybe in the summer. The step that we're in is that a work plan has been written. It includes additional soil borings and test pits so we can close the loop on former disposal pits, things that we know of there. After this next phase of remedial investigation, we expect to proceed with the next logical step, which would be the feasibility study for Site 12. EPA is in the last step of reviewing the sampling and analysis plan (SAP) for Site 12. That SAP is in the hands of EPA. Very likely we'll have that back within a month, and that would put us in the field mid-summer. After that, there would be a remedial investigation report written in the fall and a feasibility study approximately next winter or spring. Mr. Lewandowski added that this is the most recently identified site that we have.

work. Why they're not here, I can't comment on that because I don't know. Mr. Myers asked if we are going to invite the Army or National Guard or Reserve? Mr. Lewandowski explained that in the DoD, it is the property owner, which is either Air Force or Navy that is responsible.

Mr Lewandowski said thank you very much everybody for attending.

(Meeting adjourned.)

**NAS JRB
WILLOW GROVE**

**RESTORATION
ADVISORY BOARD
(RAB)**

May 25, 2011
Meeting Number 45

Agenda

- Welcome Community RAB Members/Announcements
- Site 1 – Privet Road Compound Post ROD Monitoring
- Site 5 – Fire Training Area Groundwater Remediation Decision Process
- Site 12 – South Landfill Phase II Investigation Plan Status
- Closing Remarks

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**Site 1 Privet Road Compound
Post ROD Monitoring**

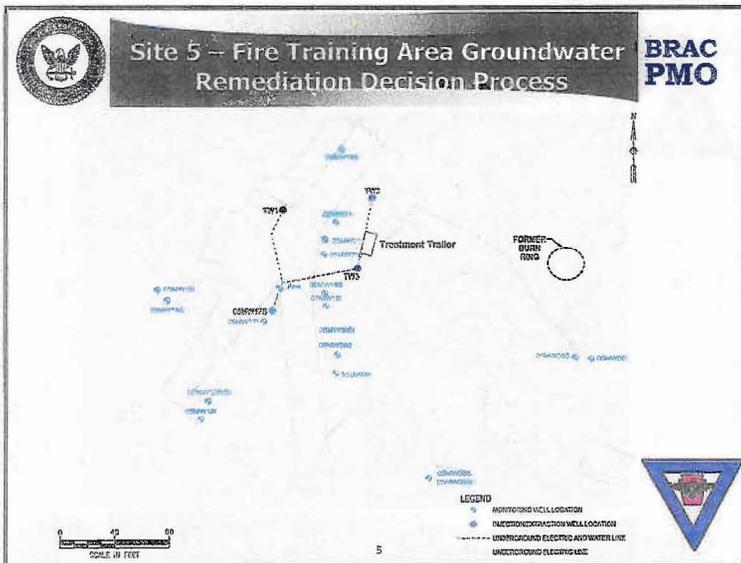
**BRAC
PMO**

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**Site 5 – Fire Training Area Groundwater
Remediation Decision Process**

**BRAC
PMO**

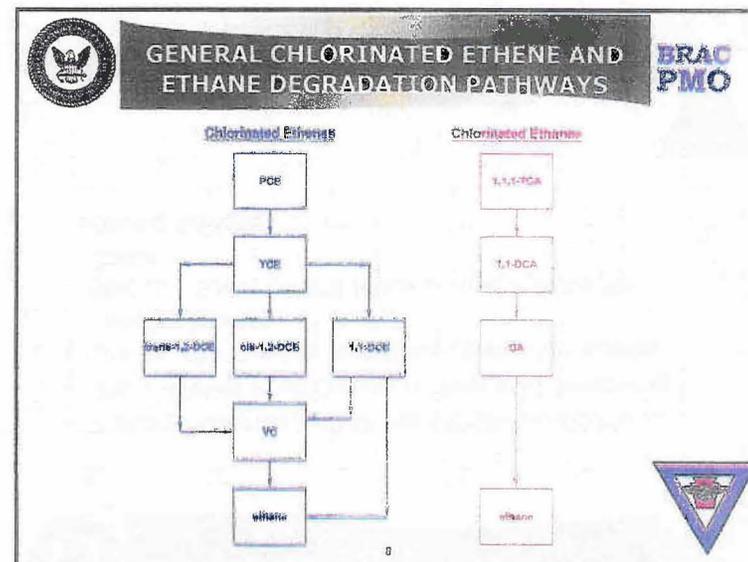
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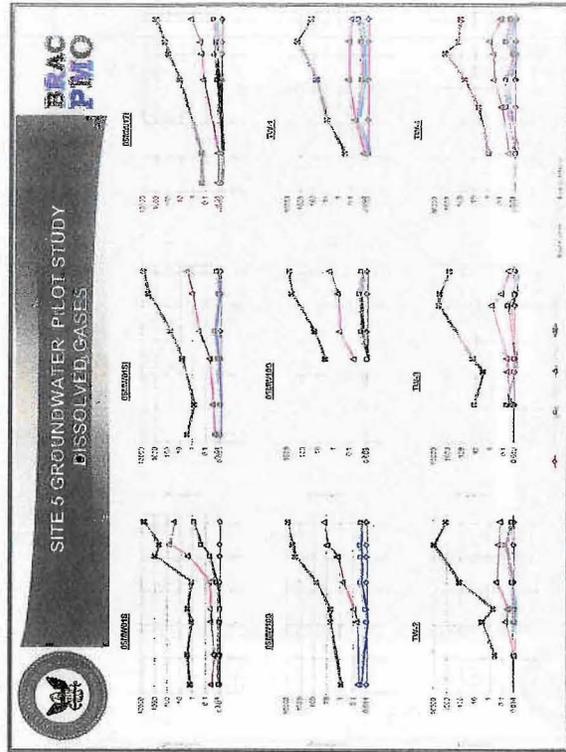
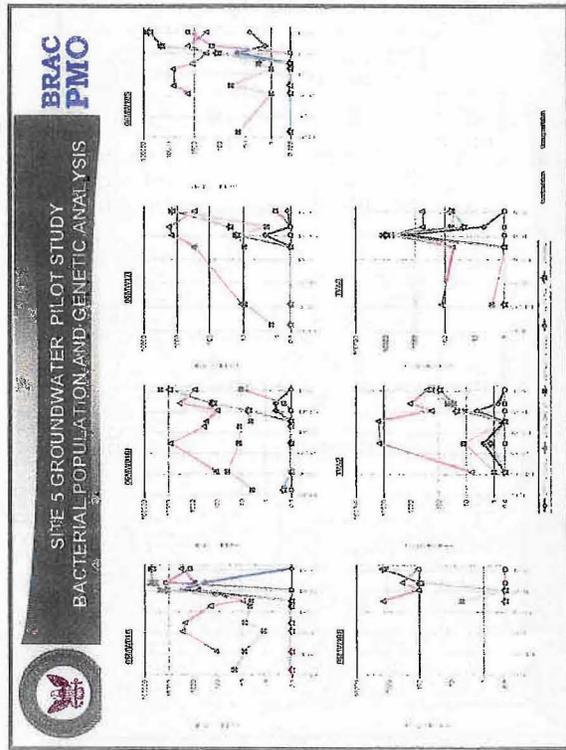
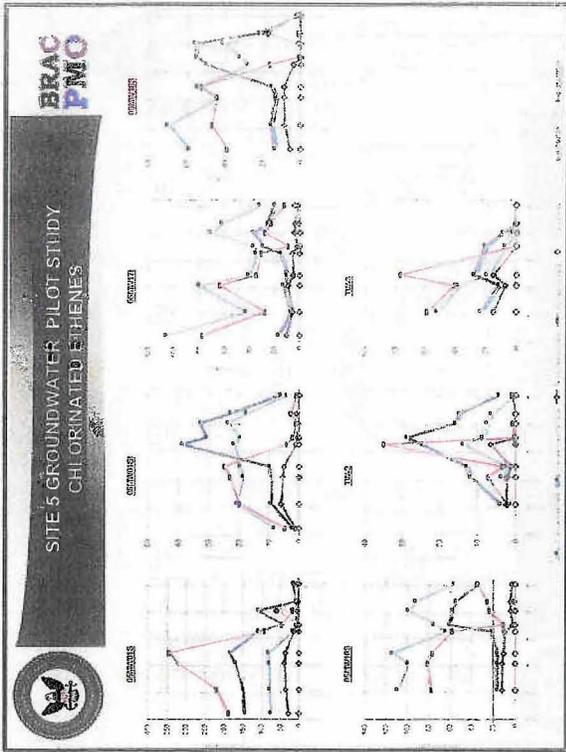
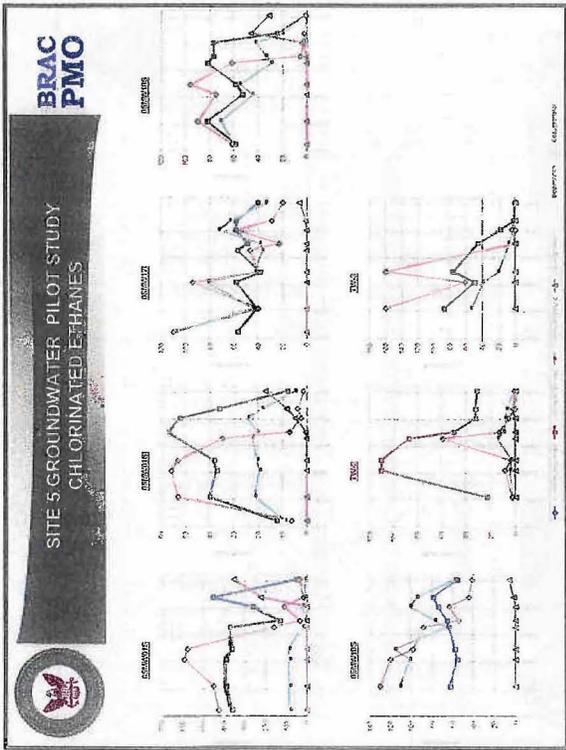


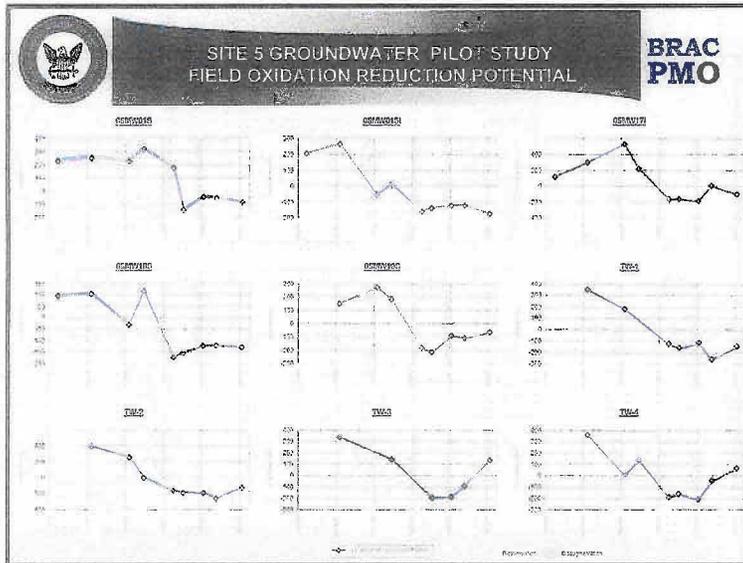
- Site 5 – Fire Training Area Groundwater Remediation Decision Process** BRAC PMO
- Biostimulation created the environmental conditions required by the bacteria (pH, DO, ORP)
 - Bioaugmentation increased the bacterial population with the required genetic makeup
 - Current Status
 - Original solvent compounds sharply reduced to absent
 - Intermediate compounds steady to declining
 - End stage compounds appearing
 - Periodic biostimulation is required
 - Navy currently adding lactate – emulsified oil

Site 5 – Fire Training Area Groundwater Remediation Decision Process BRAC PMO

- The Navy has incorporated bioremediation into the proposed plan for Site 5 GW remediation as the primary remedy for groundwater within and surrounding the source area, combined with Monitored Natural Attenuation (MNA) for the downgradient portion of the plume.
- The proposed plan is currently under review at EPA, with the goal of attaining a Record of Decision (ROD) FY2011.







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- NAS JRB Willow Grove
RAB Meeting 44**
- BRAC
PMO**
- Closing Remarks
 - Questions or Comments From The Community?
 - Next Meeting Date (Proposed Date August __, 2011)
- 15

**NAS JRB Willow Grove
RAB Meeting 44**

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THE END

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