

ENVIRONMENTAL HAPPENINGS AT PICATINNY ARSENAL

VOLUME 10, ISSUE 1 WINTER 2010/2011

MMRP KICKOFF MEETING

The kick off meeting at Picatinny Arsenal for the upcoming Remedial Investigation (RI) phase of the Military Munitions Response Program's (MMRP) activities at the arsenal occurred on November 10, 2010. This meeting was the first technical project meeting for this next phase of the MMRP. The MMRP program is separated into four phases as follows:

1. TPP1 – Site understanding and initial evaluation
2. TPP2 – Determine data needs
3. TPP3 - RI results and reporting
4. TPP4 – Feasibility Study (FS)

Each phase is preceded by a meeting. The intent of the meetings is to provide for “early and often” stakeholder involvement and to allow stakeholders to communicate needs or concerns. For example, the TPP1 meeting goals were to provide a “project overview, understanding of site CSMs, DQOs and technical approach in advance of work plans.”

In attendance were representatives of the following:

- Picatinny Arsenal
- US Army Corps of Engineers (USACE)
- US Army Environmental Command (USAEC)
- US Environmental Protection Agency (USEPA)
- NJ Dept. of Environmental Protection (NJDEP)

- UXOPro (NJDEP's outside contractor on UXO and munitions issues)
- Weston Solutions, Inc. (Weston)
- Malcolm Pirnie, Inc.
- Local communities

The following meeting participants are the spokespersons of the principal environmental restoration partners and they also serve the public as official representatives of their respective government agencies to the PAERAB: Mr. Ted Gabel, PAERAB Co-chmn. (DoD) and US Army Project Manager for Environmental Restoration; Mr. Bill Roach, USEPA Remedial Project Manager; Mr. Gregory Zalaskus, NJDEP Case Manager.

In attendance on behalf of the communities were the following PAERAB members: Ms. Barbara Dolce, the TAPP Consultant, Subsurface Solutions; Mr. Michael Glaab, PAERAB Co-chmn. (Community) and Jefferson Twp. representative; Mr. Cliff Morris representing the Community at Large and Tilcon Quarry; Ms. Diane Trocchio representing Rockaway Twp. and Ms. Lisa Voyce also representing the Community at Large.

The firms Weston and Malcolm Pirnie which are working together as a team on the MMRP RI contract figured prominently in the meeting's

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IN THE FIELD.....

Recent field activities for October through December 2010 included the following:

Building 91 Area Vapor Intrusion: Sub slab sampling in Building 91 and ground penetrating radar of the three

sample areas in the building

(October).



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Editorial Reviewers

David Forti, Michael Glaab

Technical Advisors

Ted Gabel, William Roach,
Gregory Zalaskus

POINTS OF INTEREST:

• The most recent PAERAB meeting was held on October 7, 2010 at the Hilton Garden Inn at Rockaway, NJ. The next PAERAB meeting is expected to occur on March 3, 2011.

• Mr. Chris Dour was confirmed as Denville Township's official representative to the PAERAB at its October 7, 2010 meeting.

• Mr. Michael Glaab was re-elected to the position of Restoration Advisory Board (RAB) Community Co-Chair at the October 7, 2010 RAB meeting.

• A technical project “kickoff” meeting concerning MMRP activities was conducted at Picatinny Arsenal on November 10, 2011. It was attended by several PAERAB members.

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VAPOR INTRUSION CONCERNS

During a public meeting of the board in 2010 individuals describing themselves as arsenal employees, including at least one person who referred to himself as a union representative, had verbally expressed before the assembled body concern that an arsenal building housing several employees, Building 91 located near Area D, might be experiencing unwanted vapor emissions. Apparently the building occupants had expressed concern over indoor air quality at a public meeting held in April 2010. However, based on current USEPA and NJDEP guidance, currently accumulated groundwater data does not appear to evidence significant potential for vapor intrusion. Nevertheless, an indoor air quality investigation was conducted by Picatinny Arsenal. An Army industrial

hygienist screened indoor air quality and found it to be acceptable. Building occupants were notified of those results at a meeting on September 23, 2010. Although there did not appear to be reason for further action Picatinny Arsenal agreed to complete a vapor intrusion study. Sub-slab sampling was conducted in October 2010. Three different locations were tested. At each location a ½-inch diameter hole was drilled in the concrete floor. Tubing was inserted in the hole and sealed in with clay. An air sample was collected over a 24-hour time period using a Summa canister. Results of the sampling were submitted to the regulators in draft final form as “Vapor Intrusion Evaluation for Area P – Site 78, Building 91.” The NJDEP responded on November 9, 2010 and recommended no further action. Reportedly vinyl chloride was not detected and although carbon disulfide,

toluene, trans-1,2-dichloroethene, and tetrachloroethene were detected, those compounds were detected in amounts below applicable criteria. The USEPA responded on December 14, 2010 that it was in agreement with Picatinny Arsenal’s no-further action recommendation because “...the detected concentrations of VOCs in the subslab area are all below the Non-Residential NJDEP Soil Gas Screening Levels.”



600 AREA WORK PLAN FINALIZED AFTER COMMENTS

Comments from the NJDEP (October 26, 2010) and the USEPA (November 2, 2010) on the draft final 600 area work plan (dated October 2010) were minor. Picatinny Arsenal responded to the comments on December 13, 2010 and by December 14, 2010 it had issued a final work plan.

The NJDEP had requested that soil in an area that had previously been covered by surface rock fill be “fully characterized.” The arsenal responded that the focus of the source area investigation was to identify the potential source of the 600 Area groundwater plume. The overall investigation approach was reiterated as follows by the Army:

“As part of the source area investigation, 10 of the proposed soil samples (collected from both surface and subsurface locations) will also be analyzed for TAL Metals, Baseline Explosives, and PAHs. Sample locations will be determined based on field observations

(including PID readings, soil staining, or debris indicative of a potential contaminant source) from the proposed test pits, where the location of the test pits will be determined from the results of the passive soil gas survey. The 600 Area FS, Proposed Plan, and Record of Decision will be completed based on the results of the VOC source area delineation. The remaining sampling results will be evaluated and if contamination is identified the Army will follow up with a separate Site Investigation. The SI will address the fill materials deposited at the site during the 1970s. It should be noted that the remainder of the Munitions Testing Area is slated to be investigated under the Military Munitions Response Program. All of the additional analytical parameters will be provided for use in the MMRP evaluation.” According to the transmittal letter accompanying the final work plan, the intention to treat contamination, if any, from the fill area as a separate SI and as a new site is consistent with Army policy.

The USEPA’s two comments related to the gore sorbers for the passive soil gas survey. The USEPA recommended the addition of

two more Gore Sorbers and those locations were added to the work scope by Picatinny Arsenal. In addition the USEPA requested that the results of the soil gas survey along with the proposed locations of trenches (test pits as referenced by the Arsenal) be submitted to the USEPA and the NJDEP before performing additional sampling. Picatinny Arsenal agreed to provide soil gas results and proposed trench/test pit locations to regulators in advance of the work. The installation of Gore Sorbers was scheduled for the week of December 21, 2010.



SURFACE WATER AND SEDIMENT MONITORING FOR GREEN POND/BEAR SWAMP BROOKS

On November 30, 2010 the USEPA issued its comments about an annual surface water and sediment monitoring report for Green Pond/Bear Swamp brooks. This particular report was dated August 2010 and it was the annual monitoring report for 2009. Monitoring included chemical and toxicity testing of water samples from the respective brooks.

The USEPA provided several general comments. For example, the agency pointed out that the use of the term “significant” has little meaning unless backed up by statistical analysis. The USEPA comment was as follows:

‘1. The Report concludes that concentrations of all contaminants of concern (COCs) in Regions 2, 3, and 4 are stable or decreasing. Data trend plots presented in Appendix B are said to support that claim. However, there is significant variability in the data, and it is difficult to determine whether the conclusion is supported. Data for Region 2, in particular, do not appear to consistently decrease over the three year monitoring period. It appears that, given the amount of variability displayed across sampling events, no trends can be discerned. In addition, the document repeatedly discusses what it terms “significant” trends. Without statistical analyses, the term “significant” has no clear meaning.’

Since statistical analyses were not specifically requested it is unclear how the document might be revised by Picatinny Arsenal.

The second general comment also related to testing results with statistical means to determine their representativeness. In this case, either the sample was not representative of site conditions or the results could be suspect and that therefore additional monitoring may be required. USEPA stated the following:

‘2. The Report discounts the results of toxicity tests for Chironomus dilutus, stating that they are not representative of Site

conditions. The Report notes that the 20-day survival and growth tests did not meet the minimum recommended criteria for growth and survival. However, the long-term survival and emergence test did appear to have sufficient survival rates (77%) to meet the recommended criteria. It may be appropriate to statistically evaluate the conclusion that the test results are not representative of conditions at the Site prior to discounting the results. Additionally, it may be useful to discuss the results with the caveat that they may be suspect and further monitoring is needed to help determine their validity. ‘



Finally, the USEPA pointed out a notable flaw in an argument that was used to suggest that toxicity was related to “low quality habitat” in a laboratory sample as follows:

‘3. The Report suggests that toxicity in samples with contaminant concentrations not exceeding remediation goals (RGs) was likely caused by other stressors, including low quality habitat. However, toxicity tests, in which the only known difference between the test and control samples is sediment quality, should provide evidence regarding whether contaminant concentrations in sediments at the Site are a causative factor of reduced survival or growth. Although the habitat assessments indicated that habitat quality (as measured by factors including available cover, pool variability, sediment deposition, channel flow, channel sinuosity, bank stability, bank vegetation characteristics, and taxa richness and diversity) at the Site was marginal or sub-optimal, and those factors could certainly affect macroinvertebrate diversity and abundance in

the field, it is not clear how those factors would impact survival in the lab. While it is possible that sediment geochemical characteristics (e.g., organic carbon content, grain size, or other factors) could be responsible for toxicity, in whole or in part, it does not seem reasonable to conclude that just because RGs were not exceeded, toxic effects are not evident.’

In one of the USEPA’s specific comments it appears that the conclusion of remedial actions having been effective at reducing concentrations of COCs is deemed by the agency’s analyst to be premature. Based on a comparison of results from 2009 to those from 2008, it would seem that the concentrations decreased. But the USEPA pointedly noted that results from 2007 were actually lower than those from both 2008 and 2009. Therefore the USEPA noted that “it is premature to conclude that the remedial actions have been effective at reducing concentrations of COCs” and also that “a significant trend has not been demonstrated in any contaminants measured.”

Mr. Ted Gabel (US Army Project Manager for Environmental Restoration) stated in a February 24, 2011 e-mail that the Army Team; which includes himself and such individuals as Mr. Tim Llewellyn of Arcadis and Ms. Laura Pastor of Weston, Inc.; offers the following relevant comments in reference to PICA 193 (Green Pond Brook):

“Additional sampling was conducted at all locations in 2010 and the Annual Report is being prepared. Sampling at these same locations is also planned for 2011. Following 2011, the 5 years of data will be comprehensively reviewed and the Army will present the findings and recommended future actions to the USEPA and NJDEP. These recommendations will be based on the agreed exit strategy that was presented in the Remedial Action Work Plan (Shaw, 2007) for this site.”

REMEDIAL ACTION REPORT FOR THE FORMER DRMO YARD SITE

It had been related in previous issues of this newsletter that the NJDEP's official representative to the PAERAB, Mr. Greg Zalaskus who possesses uniquely specialized knowledge of munitions, had on several occasions explained to that board during its meetings that the NJDEP lacked sufficient resources including suitably qualified personnel to permit it to more expeditiously examine and respond to documents relating to the environmental remediation of Picatinny Arsenal. Apparently few have the expertise required for the remediation of munitions and/or MEC contaminated sites. As a result the PAERAB finally

interceded by submitting requests to state officials, both within and without the NJDEP, to implement necessary corrective measures. The board synergistically offered its assistance and it included those officials in the TAPP Newsletter mailing list. Some of these officials were formally invited to personally address the matter at a public board meeting. In response, the NJDEP eventually implemented several helpful measures. Some of these were essentially administrative while others were related to a systemic restructuring effort then being conducted by the NJDEP. Among the measures taken was the retention of a uniquely qualified contractor to

focus exclusively on UXO issues:

Mr. Jim Pastorick
UXOPro
Alexandria, Virginia

For example, Mr. Pastorick was tasked with review of the Remedial Action Report for the former DRMO Yard ICM site. Mr. Pastorick's comments dated October 23, 2010 were primarily editorial in nature and related to such clerical issues as noting missing field logs. Editorial comments related to the presence of "non-standard terminology used throughout the document." Mr. Pastorick also noted some discrepancies between statements in different parts of the text. Overall,

incorporation of changes suggested by Mr. Pastorick should improve the readability and clarity of the document. Picatinny Arsenal responded to the NJDEP's comments on December 1, 2010. The Arsenal clarified some of the items called to question by the NJDEP's contractor and agreed to correct editorial issues. In some cases explanation provided in the response to comments was sufficient to resolve the matter. If the NJDEP accepts the comments the Army will provide a revised report that incorporates agreed to comments.

IAG SCHEDULE UPDATED

The Interagency Agreement (IAG) schedule was updated for December 2010 and submitted to the USEPA and the NJDEP by Picatinny Arsenal. Mr. Ted Gabel, Project Manager for Environmental Restoration at

Picatinny Arsenal, noted what he considered to be the highlights of the items in the schedule. Those highlights are as follows:

- Submittal of the 5-Year Review in March 2011;

- Highest priority regulatory review for 25 Site FS for PICA 01;
- Data from the Mid-Valley investigation will be provided 2 weeks before a technical meeting;

- 2010 Annual Reports will replace the 2009 Annual Reports submitted in 2010 and not yet reviewed.

IN THE FIELD [CONTINUED FROM P. 1](#)

600 Area: Installation of Gore Sorbers for passive gas soil survey. (December)

SITE 34 (PICA 002) GROUNDWATER DATA REPORT AVAILABLE

After 2 rounds of groundwater sampling ARCADIS has concluded that the results of that sampling are consistent with the results from prior sampling conducted in December 2003.

The first of the two rounds of groundwater sampling occurred in November of 2009 and it included nine of the 16 monitoring wells. The second round occurred in August of 2010 and it included 5 wells. Based on these two rounds of groundwater sampling, ARCADIS concluded that the

results had confirmed those from December 2003.

The December 2003 results are those upon which a risk assessment was based and upon which it was concluded in a ROD for the site that chemicals of concern (COCs) were not identified in groundwater.

Groundwater samples were collected from a newly installed monitoring well and from selected monitoring wells for analysis of total TAL metals and explosives. Selected wells were those that could be located, that

were not damaged and/or that did not require UXO clearance to access them in the November 2009 sampling round. Samples were collected using low-flow sampling methods. Exceedances of the respective levels of concern (LOC) for the following metals were reported: aluminum (10 wells), arsenic (all 15 wells), lead (1 well), manganese (14 wells), and iron (13 wells). No explosives were reported. Arcadis noted that all of the detections during the 2009/2010 sampling were

below those previously reported in 2003 - with the exception of manganese. Therefore, Arcadis concluded that the “results are consistent with the prior understanding of site conditions and it appears that on-going site operations are not negatively impacting groundwater quality.” Arcadis also concluded that the findings and conclusions of the risk assessment and of the Record of Decision were still valid.

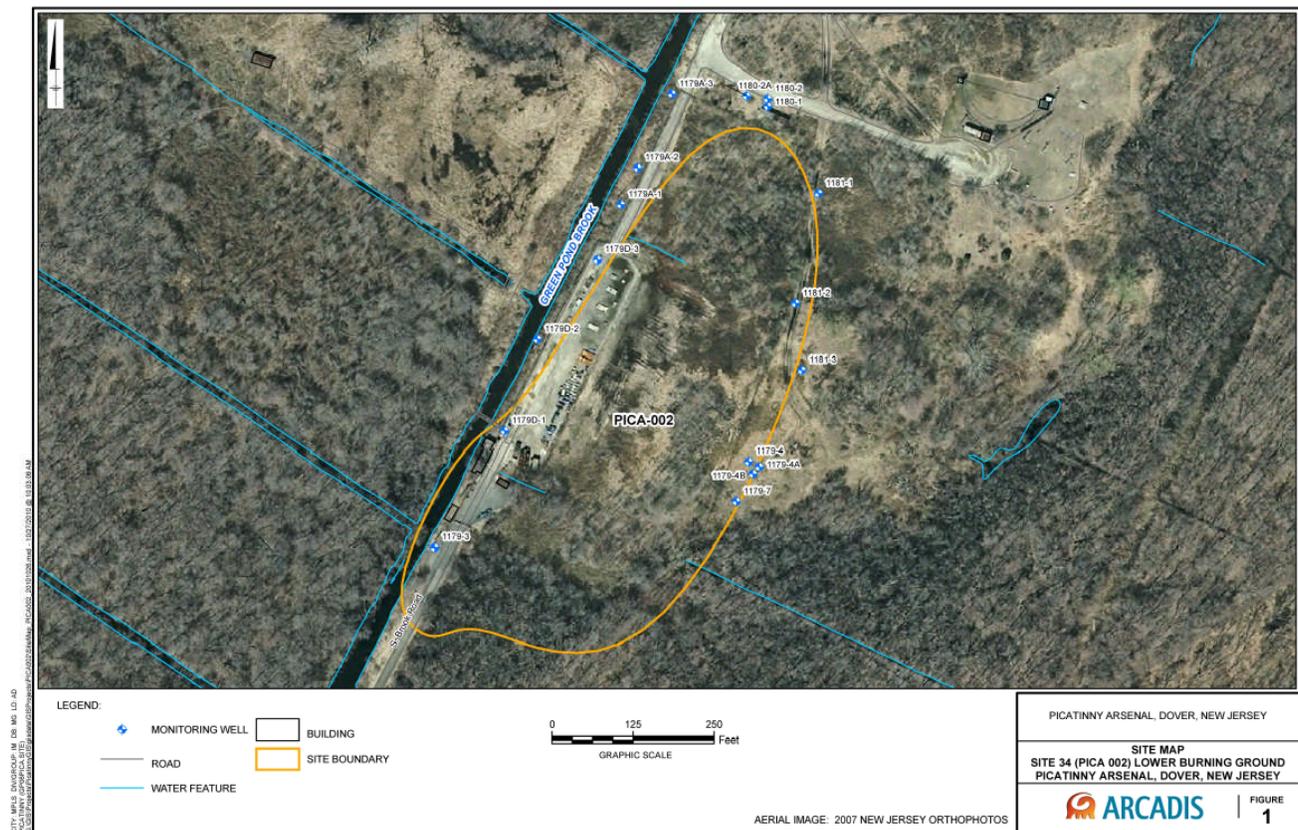


Image Courtesy of Arcadis : Figure 1 Site Map of the Monitoring Well Installation, Groundwater Sampling and Analysis Report for Site 34 Report dated 10/22/2010



SAY GOODBYE TO THE TREATMENT PLANT

Arcadis reported at the October 7, 2010 RAB meeting that the treatment plant formerly associated with Area D groundwater treatment had been decommissioned and disassembled during the period from June 23, 2010 to September 10, 2010. This treatment plant had formerly processed water from nearby recovery wells. The new

permeable reactive barrier (PRB) that was constructed beneath the golf course appears to be successfully treating VOC-contaminated groundwater passively. The Army had requested that the remedial design stipulate a treatment plant removal option. Its removal was agreed to - pending demonstration of the PRB's successful operation. When the PRB

was constructed the treatment plant had been "mothballed" temporarily in the event that the PRB failed and groundwater pumping would need to be reinstated. That day never came and therefore the treatment plant was permanently dismantled. The building that once housed the carbon filtration units is now used as storage and office space.

PAERAB MEMBERSHIP UPDATES

At the October 7, 2010 meeting of the PAERAB Mr. Chris Dour was unanimously confirmed as its newest member. The board welcomed Mr. Dour who will serve as Denville Township's official representative to the PAERAB now that Mr. Robert Crothers had retired after many years of dedicated service to the board as Denville's official representative. Mr. Crothers, who had represented Denville

since the PAERAB's inception, had announced his intention to retire during the board's October 29, 2009 meeting - despite effusive praise from both PAERAB Co-chairmen and also from Denville's Mayor P. Ted Husa who was in attendance. Mr. Dour who had attended several PAERAB meetings in previous years was subsequently nominated by Mayor Husa to serve as his community's

representative. Mr. Glaab offers the following comments:

"We welcome Mr. Dour and we are truly appreciative of Mayor Husa's interest in the environmental remediation effort at Picatinny Arsenal. We are also profoundly grateful to Mr. Crothers for his extensive service to the arsenal's cleanup effort. Indeed, Bob Crothers' able participation extends back to

the early stages of the Technical Review Committee, the precursor to the PAERAB. As a retired former employee at the arsenal Mr. Crothers is especially knowledgeable about its activities. He consistently expressed a preference for contaminant removal. Mr. Crothers' insightful and informed contributions to our deliberations will be missed."

MMRP KICKOFF MEETING [\(CONT'D FROM P.1\)](#)

deliberations. To be specific, the Weston-Pirnie team presented the objectives of the RI and then discussed each of the sites separately describing the investigative approach for each location. The overall goal of the project is to first "gather sufficient information to determine the nature and extent of MEC/MC and assess the potential risks/hazards to support the evaluation of a no further action or remedial action alternative (through a Feasibility Study)." To sum up, the RI objectives include conducting investigations to characterize



the following :

- MRSs (nature and extent of MEC)
- MC concentration and extent
- Risks
- MRS boundaries.

There are a total of eight munitions response sites (MRS). By far the most extensive site is that related to the 1926 explosion at Picatinny Arsenal. The 1926 explosion site comprises an on-site area (PICA-003-R-01) and an off-site area (PICA-004-R-01). Most of the off-site area is situated on property currently owned by Tilcon which is actively quarrying the property. The other MRS sites are as follows: **Shell Burial Grounds** (PICA-010-R-01), **Green Pond** (PICA-005-R-01), **Inactive Munitions Waste Pit** –

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MMRP KICKOFF MEETING [\(CONT'D FROM P.6\)](#)

Off-Post (PICA-014-R-01), **Former Operational Areas** (PICA-006-R-01), **Lakes** (PICA-008-R-01), and **Lake Denmark** – Off-Post (PICA-012-R-01).

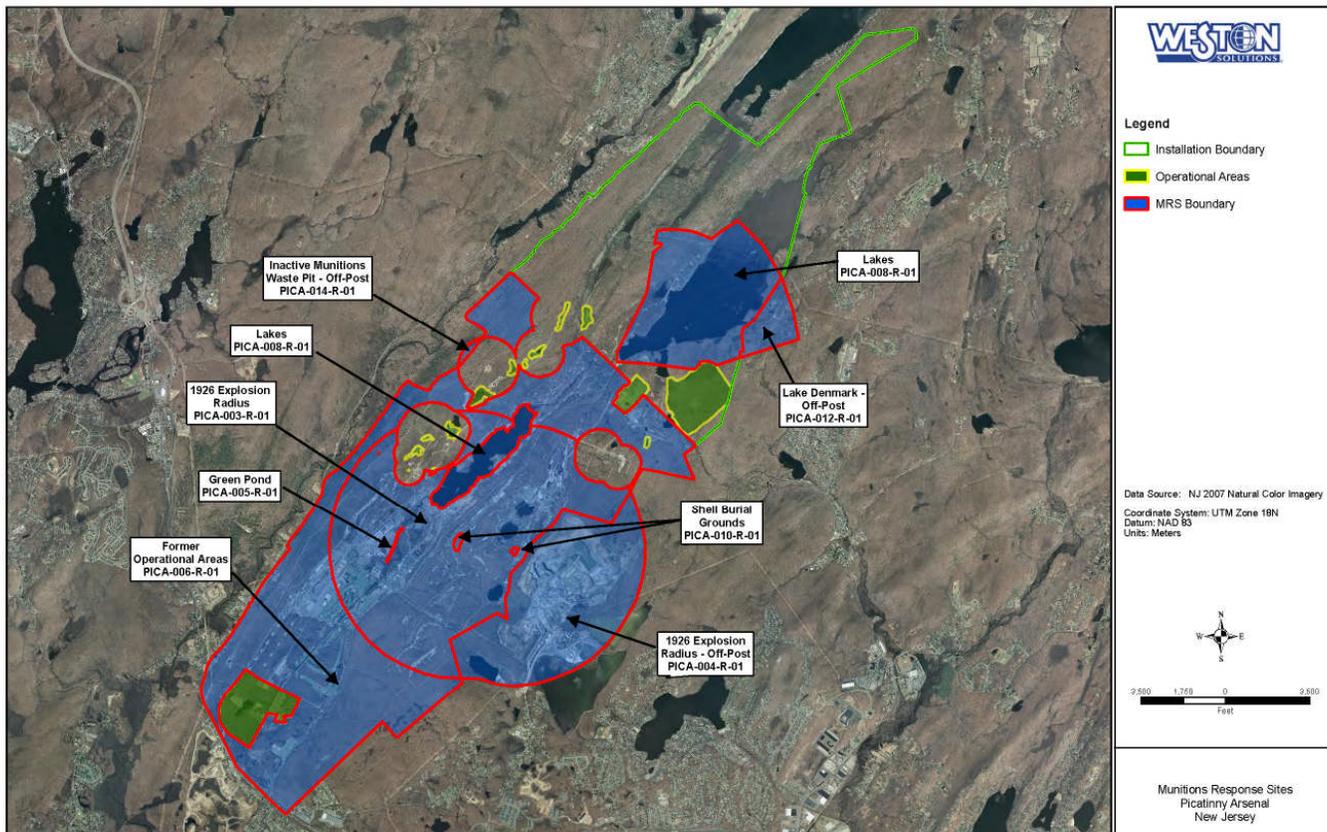
The project team is currently in the planning stage for the RI and a draft work plan is expected to be submitted to the Army in February 2011. Therefore team members discussed the work plan elements and received feedback from the meeting participants. For example, Mr. Cliff Morris, a PAERAB member who also represents Tilcon Quarry, was

given the floor to discuss his plans for proceeding with quarry activities that include field modifications of Tilcon property despite time critical removal action (TCRA) requirements. To be specific, the most recent phase of the TCRA at the quarry had been suspended by the Army. This particular TCRA was referred to at the MMRP meeting as Tilcon III and it is focused on the detection, identification and removal of munitions from approximately 10 acres of Tilcon property. The Tilcon property comprises the majority of the off-site 1926 explosion area. As such the MEC being found at Tilcon consists

mainly of naval munitions that have heavier cases than typical Army MEC. Although numerous precautions are taken during the destruction of munitions, the heavy casing could potentially create problems with the Army’s usual safety procedures. It is vital that appropriate measures be implemented to prevent the errant distribution of munitions’ fragments. This suspension of munitions destruction at Tilcon included an order to neither move the munitions to the arsenal nor to off-site locations for disposal or destruction. As a result no work could be

conducted until the matter was resolved. In the meantime Tilcon was anxious to proceed with such work on its own property as tree removal which can only be done in winter months due to ecological concerns. Given this impasse Tilcon wanted to cover the area that was to have been investigated — preferably by January 2011 so that their site operations could continue unimpeded. However, a long-term effort such as covering the area requires regulatory approval which may or may not

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“Munitions Response Sites” — Courtesy of Weston
February 2010

RECENT DOCUMENT APPROVALS

NJDEP Approvals

The 2009 Annual Land Use Certification (Final) dated June 2010 was approved by the NJDEP on October 29, 2010.

The Area B (PICA 205) Quarterly Data Report dated June 2010 was determined to be "acceptable as submitted" by the NJDEP on October 29, 2010. The NJDEP noted the following:

"Although the most downgradient well monitored, MW-08, is consistently showing the most contamination, there exists no evidence of a discharge to surface water."

The NJDEP also made the following comment:

"...downgradient unconfined monitoring well IW-10 should be sampled for TCE and degradation products. Monitoring well IW-10 is further downgradient of MW-08."

The Area C Groundwater, Round A Sampling report dated May 2010 was determined to be "acceptable

as submitted" by the NJDEP on October 28, 2010.

Tetrachloroethene and RDX were each detected in one sentinel monitoring well for the Southern Boundary Area and the NJDEP commented as follows:

"This is of some concern. Continued monitoring and evaluation should occur for the southern boundary."

The Area C Groundwater Interim Remedial Action Report dated August 2010 was determined to be "acceptable as submitted" by the NJDEP on October 28, 2010.

The 600 Area MTBE Groundwater Investigation Data Report dated August 2010 was approved by the NJDEP on November 4, 2010.

The Former Skeet Range Remedial Investigation Work Plan dated October 2010 was approved by the NJDEP on November 4, 2010.

The Former Skeet Range Investigation Data Report dated August 2010 was approved by the NJDEP on November 4, 2010.

Elements of the 600 Area Work Plan for Vapor Intrusion and Source Area Investigation dated October 2010 were approved by the NJDEP on October 26, 2010. The NJDEP approved the proposed TCE source area delineation at Site 12 and the indoor air and sub-slab soil sampling at Building 660.

However, the NJDEP requested that surface and subsurface soil characterization be completed in the area of Site 12 that had been formerly covered by rock fill. As such the work plan is unacceptable until the soil characterization is addressed.

The Biennial Certification Monitoring Report for a Ground Water Classification Exception Area (draft final) dated June 2010 was approved by the NJDEP on November 23, 2010.

On November 9, 2010, the NJDEP concurred with the recommendation for no further action contained in the Vapor Intrusion Evaluation for Area P – Site 78, Building 91 (draft final) dated December 2010.

USEPA Approvals

The Group 1 Sites Remedial Action work Plan dated

September 2010 was approved by the USEPA on September 21, 2010.

The Remedial Action Report for the ICM Site Located at the Former DRMO Yard dated September 2010 was approved by the USEPA on October 5, 2010.

The no-further action recommendation contained in the Vapor Intrusion Evaluation for Area P – Site 78, Building 91 (draft final) dated December 2010 was agreed to by the USEPA on December 14, 2010.

The Group 3; Sites 1,2 and 4 Remedial Design for Groundwater and Surface Water dated December 2010 was approved by the USEPA on December 21, 2010.



TRAINING OPPORTUNITIES



The Interstate Technical Regulatory Council (ITRC) has scheduled the following on-line courses:

- "LNAPL Part 1: An Improved Understanding of LNAPL Behavior in the Subsurface," December 9, 2010 from 11 am to 1:15 pm

- "LNAPL Part 2: LNAPL Characterization and Recoverability," December 14, 2010 from 2 to 4:15 pm

- "LNAPL Part 3: evaluation LNAPL Remedial Technologies for Achieving Project Goals," December 16, 2010 from 11 am to 1:15 pm

- "Use of Risk Assessment in Management of Contaminated Sites," January 25, 2011 from 2 to 4 pm

- "Phytotechnologies," January 27, 2011 from 11 am to 1:15 pm

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WHAT'S OLD IS NEW AGAIN.....

A variation on an issue that has developed repeatedly throughout the duration of the cleanup effort at Picatinny Arsenal has arisen again. This issue, a source of contention between the Army and the U.S. Environmental Protection Agency (USEPA), revolves around the applicability of land use controls (LUCs) and applicable or relevant and appropriate requirements (ARARs). On this occasion the matter has not been elevated to the legal dispute level but it has been the topic of correspondence between the Army and the USEPA. For example, this topic was the subject of discussion at the September 2, 2010 technical project meeting with representatives of Picatinny Arsenal, the USEPA, and the NJDEP. At the October 2010 PAERAB meeting, Mr. Ted Gabel provided a handout detailing the timeline for development of the issue. The following timeline is excerpted from Mr. Gabel's document with additional information from supplemental correspondence including the following: a letter from Mr. Walter Mugdan of the USEPA to Ms. Irene Kropp of the NJDEP dated May 12, 2010; the September 2, 2010 meeting minutes; and a letter from Ms. Angela Carpenter of the USEPA to Mr. James Daniel of the Army dated October 7, 2010.

August 2008: PICA 01 Feasibility Study (FS) for 25 Sites submitted to regulators by Picatinny Arsenal

August 2009: FS approved by USEPA. According to Picatinny Arsenal the document includes "...sites with acceptable levels of risk based on current land use and only LUCs"

December 9, 2009: Technical meeting. Picatinny Arsenal discussed sites and agreed to adjust remedies to include soil removal for lead.

December 13, 2009: Picatinny Arsenal provided a statement regarding

ARARs in an e-mail to regulators. This passage was intended to be included in pending and future documents concerning ARARs. The statement is as follows:

"Risks and hazards to human health and the environment at these sites are within the generally accepted risk range for the current and reasonably anticipated future use. However, the risks and hazards are not low enough to allow unrestricted use. Additionally, contaminant levels exceed the promulgated industrial NJSRS which are recognized as applicable chemical standards. Alternative SL-2/SD-2 (LUCs) meets these chemical specific ARARs by controlling exposure through institutional and engineering controls as necessary. These LUCs also control future changes in land-use thereby ensuring no unacceptable risks to humans."

December 17, 2009: The USEPA replied as follows in correspondence:

"...EPA is currently reviewing the NJ soil remediation standards to determine their applicability as ARARs so we cannot at this time agree with the proposed ARAR language... Other issues of concern that need to be further discussed with the state are the extensive use of existing vegetative covers as engineering controls, 6 inch soil covers (constructed), averaging of contaminants, and hot-spot lead removals to the 5X cleanup standard (i.e. are these methods consistently applied at other Superfund sites in the state)."

May 12, 2010: Letter from Mr. Walter Mugdan of the USEPA to Ms. Irene Kropp of the NJDEP. In the letter Mr. Mugdan discusses two issues – 1) "whether the USEPA should or must rely on the SRS [soil remediation standards] when deciding whether a remedial will be taken at a Superfund site in New Jersey" and 2) "whether the SRS are potential applicable or relevant and appropriate requirements ('ARARs') " under the provisions of

CERCLA. The USEPA concluded with the following:

"EPA will not rely on the SRS to make the threshold decision of whether to take a response action at a Federal-lead Superfund site. As a matter of policy, EPA generally uses the results of the baseline risk assessment to establish whether to take a remedial action using either CERCLA Section 104 or 106 authority."

Regarding the second issue, the May 2010 letter stated that "EPA has evaluated all the SRS and we have concluded that the numerical soil remediation standards for the ingestion/dermal exposure pathway are potential ARARs under CERCLA (except the standard for lead, and except when the future use of a site will be limited to recreation), to the extent they are more stringent than federal standards. In contrast, the SRS for the inhalation pathway are not ARARs."

The USEPA concluded with the following :

"Finally, New Jersey's methodologies for determining impact-to-groundwater soil remediation goals are not ARARs."

The rationale stated was that New Jersey relies on guidance documents to responsible parties to develop site-specific IGW soil cleanup goals and that the methodologies have not been promulgated. As such the "EPA may treat the New Jersey guidance documents as 'to be considered' ('TBC') materials or, alternatively, EPA can develop site-specific cleanup objectives using its own methods."

July 1, 2010: USEPA comments on the 25 Site FS revised April 2010 included

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WHAT'S OLD IS NEW AGAIN.....

the following general comment:

“The FS must be modified to reflect EPA’s letter from Walter Mugdan to Irene Kropp, NJDEP Assistant Commissioner, dated May 12, 2010 on the New Jersey Soil Remediation Standards (NJSRSs). Per the referenced correspondence, EPA does not recognize the soil cleanup standards based on the inhalation criterion. However, as pointed out in a June 17, 2010 e-mail from Bill Roach to Ted Gabel the inhalation pathway must still be considered when developing soil cleanup standards.”

July 22, 2010: Picatinny Arsenal responded to comments on the 25 Site FS. Picatinny Arsenal stated the following:

“Basically it [response to comments] includes the following general positions so all the Picatinny sites can move forward:

1 – Screening of Soil Data. In the comment response we propose to continue the use of all of the NJDEP SRS criteria as Levels of Concern to be used in screening data. I think the USEPA should be amenable to this position as long as we don’t call the NJDEP inhalation numbers ARARs at any point.

2 – Development of Site Cleanup Levels. In the comment responses we propose to not change the approach we have for the development of Site Cleanup Levels. In this approach we use all of the NJDEP SRS. However, in light of the USEPA comments we will make it clear that the NJDEP numbers based on dermal/ingestion are ARAR and the numbers based on inhalation are TBC.

3 – Compliance with Chemical-Specific ARARs. We will state in the compliance with ARARs section that the numbers based on dermal/ingestion area ARAR and that we comply with them through a combination of existing engineering controls and land use controls. This is only a wording change and does not change any of the proposed remedial alternatives.”

As is to be expected, USEPA policies and

guidance do change and evolve over time. For example, as is related in the [RENEWED FEDERAL FACILITY CLEANUP HEARINGS](#) article on page 14 of this newsletter, the USEPA had recently initiated a potentially significant review of its policies and guidance. Of perhaps more immediate consequence to the arsenal’s cleanup effort are the LUC and ARAR issues discussed during the September 2, 2010 technical meeting.

September 2, 2010: Mr. Bill Roach of the USEPA issued an e-mail on February 23, 2011 in which he clarified certain statements attributed to himself on page 4 of the minutes of the September 2, 2010 technical meeting. These statements concerned a letter from Mr. Walter Mugdan (Director of the Emergency and Remedial Response Division at EPA region 2) to Ms. Irene Kropp (Assistant Commissioner of the NJDEP’s Site Remediation Program) regarding ARARs. To be specific, Mr. Roach noted that the letter’s date is actually May 12, 2010. Referring to the letter’s contents Mr. Roach explained “...that, in fact, the 12 May 2010 letter from Walter Mugdan to Irene Kropp is still valid.” This particular letter provides vital clarification of USEPA guidance regarding ARARs and it is available for examination on the PAERAB’s website.

Also included on the same page of the minutes is the following:

“Document approvals (as recently as August 2010) are being reevaluated [sic] which includes the signing of the Group 1 ROD.”

The minutes explain that the reason why documents may be reevaluated is due to a disagreement concerning the application of ARARs and LUCs:

“EPA stated that in a recent telephone conversation between upper management, that NJDEP maintained

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that once risk was exceeded (greater than 10-4) at one single operable unit at Picatinny, then ARARs would need to be addressed facility wide. Furthermore, EPA HQs has stated that LUCs (other than some type of installed cover) do not address chemical –specific ARARs.”

Apparently the reason for a concession that SRS were considered ARARs was a result of negotiations. According to the meeting minutes at the meeting “it was agreed that USEPA needs to provide a final position on ARARs and how to apply LUCs for there to be any further progress at these sites.” Presumably with the intention of signifying that a resolution is being attempted the meeting minutes relate that:

“Mr. Roach briefed the group that USEPA and NJDEP upper management are scheduling discussions. USEPA and the Army (USAEC) are also trying to schedule a meeting to determine the application of Land Use Controls.”

October 7, 2010: Letter from Ms. Angela Carpenter of the USEPA to Mr. James Daniel of the Army. Ms. Carpenter clarifies the USEPA’s position on the use of LUCs as remedy components at Picatinny Arsenal. Ms. Carpenter also requested a copy of the document requested by the NJDEP – “a list of all the Picatinny sites where the SRS have been exceeded and that have proposed remedies of LUCs and/or ‘maintenance of existing engineering controls’ including a discussion of the existing ECs and why the Army considers these to be a protective remedy for each area under consideration.”

Ms. Carpenter first notes that CERCLA “requires that on-site remedial actions must attain Federal and more stringent State ARARs.” Furthermore she goes

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WHAT'S OLD IS NEW AGAIN..... [CONTINUED FROM P. 10](#)

on to state the USEPA position on LUCs and their relation to ECs and ICs as follows:

“LUCs are generally considered to be composed of both engineering controls and institutional controls. Engineering controls (ECs) can be proposed for wastes that pose relatively low risk or where treatment is impracticable. Institutional controls (ICs) are non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use and are generally used in conjunction with, rather than in lieu of, engineering measures such as waste treatment or containment. Where protectiveness depends on reducing exposure, ICs are a response action under CERCLA and where a record of decision (ROD) only requires the implementation of ICs, it is considered to be a ‘limited action,’ not a ‘no action’ ROD.

Furthermore, the National Oil and Hazardous Substances Pollution Contingency Plan cautions against the use of ICs as the sole remedy unless active response measures are determined to be impracticable.

In preparing risk assessments for the site, the Army has generally maintained that the reasonably anticipated future land use for the Picatinny site will remain the same as the current use, military/industrial. As such, an IC to preclude a change in future land use is necessary since these risk assessments generally do not assess an unlimited use, unrestricted exposure scenario. Since a response action, in this case an IC is required, ARARs must be met.”

According to Mr. Roach’s February 23, 2011 e-mail the summary requested from Picatinny Arsenal by the regulators had been submitted in December of 2010. We have been informed that if the USEPA is in agreement with what is provided by Picatinny Arsenal then the matter will not be elevated to dispute. However, the issue of NJDEP concurrence is uncertain. Resolution of the matter will allow cleanup to progress. However, without resolution the remediation of perhaps as many as 140 sites may be stalled. Unfortunately on numerous occasions disagreements of this nature (and all different variations on the definition of risk, utilization of LUCs, and the applicability of State criteria and State standards) have slowed down or halted progress on cleanup efforts. For example, the following past issues of this newsletter have addressed just such obstacles:

- “Over and Over Again...” (Winter 2006)
- “No Risk, No ARARs, No Remedy” (Fall 2006),
- “Unacceptable Risk, Unlimited Exposure and Unrestricted Use” (Spring 2008),
- “SRS vs. risk-Based Approach... Again” (Summer 2009),
- “LUCs FS for PICA 001” (Winter 2009).

MMRP KICKOFF MEETING [\(CONT'D FROM P. 7\)](#)

be quickly given. Accordingly, Picatinny Arsenal employees are working with USACE and USAEC representatives to find a way for the work to proceed – either by finding a solution for the MEC that need to be removed or by allowing a cover to be put in place in the affected area. Brief discussion ensued regarding the possibility of expediting the resolution process by seeking the assistance of individuals such as the base commander, General Maddux, and/or Congressman Frelinghuysen. Since then the board had been informed in an e-mail from Mr. Ted Gabel dated February 23, 2011 of the following recent developments:

“...contractors with the Baltimore Corps have now remobilized ... conducting the initial steps to implement Time Critical Removal Action for the remaining few acres of the recent Tilcon Time Critical Removal Action (TCRA) or Tilcon3. As you recall the action was stopped in Spring of last year because of the safety concerns. The concerns have been addressed.

Attached for your information is the Workplan Addendum that has been revised to reflect changes to the detonation process for the TCRA. The detonation procedures as outlined in the Explosive Safety Submittal have been approved by the Corps, the USACTES and DDESB. The intrusive work should begin by the middle of next week.”

As the meeting progressed the Weston-Pirnie team explained their sampling rationale for each of the MRSs. They expect to issue a Final Work Plan that will be available to the public in the summer of 2011. Until then the plans discussed at the meeting are considered draft and not available for public release.

MMRP MEC Characterization Tools

Of particular interest to the participants of the MMRP technical project meeting were the analytical tools and methodologies expected to be used to formulate the MEC sampling strategy.

Two statistical tools are expected to be used as part of the RI Work Plan to devise quantities and locations within a given area, as follows:

1. UXO Estimator
2. Visual Sample Plan (VSP) - developed by the US Department of Energy (DOE)

Information about VSP can be found at <http://vsp.pnl.gov>. This program was developed by the Pacific Northwest National Laboratory through the auspices of the DOE. It is claimed that VSP is useful for other applications besides the mapping of UXO sites. According to the above cited website VSP is intended to address the following questions: how many samples are needed, where should samples be taken, what decisions do the data support, and how confident should one be about those decisions. As a result, VSP has already been employed at some of the MRSs to develop “sampling plans at MRSs with potential MEC releases where locations are unknown.” In addition VSP was used to develop “transect spacing to guarantee with a specific confidence a pre-determined size and shaped MEC release is traversed and detected.”

The UXO Estimator is used to develop “sampling plans at MRSs with a homogeneous distribution of MEC” and it “determines investigation area based on MEC density and selected confidence level (95% for PTA MMRP RI).” [Picatinny Arsenal : PTA] The Army Team clarifies that 95% was the value proposed in the

TPP1 (Site understanding and initial evaluation) phase but that this particular value may in fact be revised.

There was considerable discussion at the meeting regarding how the two programs are to be applied and the significance of the results. The USACE suggested that a training program be conducted to give participants a greater understanding of the tools. Several MMRP training sessions had been conducted locally in the past including ones attended by PAERAB Community members and by the board’s TAPP Consultant. The USACE expects to invite representatives of Picatinny Arsenal and the regulatory agencies; a date for the training was not established at the meeting.

Work plans, reports, and data are included in the PAERAB’s online archive at www.paerab.us. This website provides convenient access to public information for all board members and interested citizens.

PAERAB'S WEBSITE ([WWW.PAERAB.US](http://www.paerab.us))

The PAERAB's website has been modified over the past year. As one might expect the website's repository of documents related, directly or indirectly, to the cleanup of Picatinny Arsenal has been significantly increased. There have also been several visual changes. For example, a new introductory webpage had been added to the website in the first quarter of 2010 to facilitate user access to notices, to announcements of board meetings and public hearings, to training schedules and to TAPP newsletters. The overall purpose of this particular change was to enable site users to quickly and easily become aware of current developments without having to delve too deeply into the website. During the latter portion of 2010 the new introductory webpage was modified to include a section dedicated exclusively to recently issued documents, data and correspondence. This change is intended to enable site users who are already familiar with older archived documents to expeditiously examine only the most recent correspondence, reports and/or data. Categorized by topic, this section displays specific site information on the right side of the page and more general information relating to the arsenal as a whole on the left side. Eventually, these documents will be archived and they will no longer be accessible from this section. Archived older documents will for the time being continue to remain accessible from the "LINKS" webpage of the main section. Work plans, reports, maps, data

tables, site plans, technical diagrams and photos are included in the archive.

The new introductory webpage also provides some cursory information about such topics as board membership and purpose. Hyperlinks are provided in suitable locations for users seeking more detailed information. These hyperlinks will typically transfer the user to appropriate segments of the main section of the website where more complete information, including older archived documents, is provided.

The website provides convenient access to public information for all board members and interested citizens. Most documents conform to the Adobe PDF format and are thus easily examined with Adobe Reader which is currently free and available to all. HTML versions of TAPP Newsletters, whose contents include technical analyses of cleanup documents, are maintained on the website for easy and fast viewing. PDF versions of these newsletters are available. To be publicly accessible information must conform to official security restrictions.

Mr. Michael Glaab, who had several years ago established both this website and the PAERAB's internet domain, serves as its webmaster and is responsible for both its maintenance and improvement. Included among his responsibilities are internet registration, internet service provider delegation, e-mail service, domain architecture design, backup, memory allocation, server administration,

database administration and the timely population of the website with relevant documents. Mr. Glaab offers the following comments :

"This website is an accessible electronic forum for disseminating vast amounts of information to board members and also to the public. Because of the website's existence multiple copies of the many documents constantly being generated need not be printed on paper and distributed to each and every board member. This affords the army and the regulatory agencies reductions in their printing and shipping expenditures. Of course, crucial to the usefulness of this website is the willingness of the principal environmental partners to duly inform the board in a timely manner about current developments in the arsenal's cleanup effort. This is typically done either by including us in e-mail address lists when sending e-mails, with or without attachments, or by sending us CDs containing voluminous amounts of data. Accordingly, the PAERAB is most appreciative of the truly commendable efforts of Mr. Ted Gabel (US Army), Mr. Jim Kealy (NJDEP), Mr. Joe Marchesani (NJDEP), Mr. Bill Roach (USEPA) and Mr. Greg Zalaskus (NJDEP); among others; for assuring that the public is kept duly informed in accordance with statutory requirements".

TRAINING (CONTINUED FROM P. 8)

- "Quality Considerations for Munitions Response Projects," February 15, 2011 from 2 to 4:15 pm
- "In Situ Bioremediation of Chlorinated Ethene – DNAPL Source Zones," February 17, 2011 from 11 am to 1:15 pm

The courses are free. Register on-line at www.itrcweb.org/ibt.asp.

The USEPA Technology Innovation Program has internet courses scheduled as follows:

- "Contaminated Sediments: new Tools and Approaches for in-situ Remediation – Session III," January 19, 2011 from 2 to 4 pm
- "Session 3 of 3: Your Role in Green remediation Implementation and

Case Studies in Green Remediation – This Year's Models and Tools," February 10, 2011 from 1 to 3:15 pm

Register for courses at <http://www.clu-in.org>

Internet courses may be archived at the respective websites for reference at the user's convenience.

RENEWED FEDERAL FACILITY CLEANUP HEARINGS

BY MICHAEL GLAAB

Throughout the time period of October 20 to October 21 of 2010 the Federal Facility Dialogue Committee (FFDC) conducted several potentially significant meetings in Washington DC. These meetings were hosted by the USEPA's Office of Solid Waste and Emergency Response. It was announced in formal invitations to these meetings that their immediate purpose was to provide a forum for diverse stakeholders qualified by virtue of their expertise and experience to :

"...discuss the progress, achievements and challenges surrounding the cleanup of federally-owned contaminated sites. Dialogue objectives include fostering effective communication among stakeholders, discussing and prioritizing challenges of federal cleanups, and establishing potential next steps for addressing the future challenges of federal facility site cleanups."

The participating stakeholders consisted of a wide variety of individuals serving on diverse technical review committees, restoration advisory boards, state and federal agencies situated throughout our nation: from Anchorage, Alaska to San Antonio, Texas; from Vieques, Puerto Rico to Livermore, California. In attendance, either as dialogue participants or as observers, were officials from the following federal agencies : US Dept. of Agriculture (USDA), US Dept. of Energy (USDoE), US Dept. of Interior (USDoI), US Dept. of Defense (DoD), USEPA. Among these were numerous officials serving a particular military service as well as representatives of tribal territories and/or nations.

The meetings were divided into two principal sessions. The first session began on October 20, 2010 and it was dedicated to those federal facilities which are primarily involved with activities of the USDoD and/or the USDoE. It is often asserted that most of the

contamination at federal facilities is due to the activities of the DoD and the USDoE. The second dialogue session began on October 21, 2010 and it was primarily concerned with federal facilities under the purview of the USDA and/or the USDoI.

All of these hearings were part of an ongoing extended effort to review and assess the efficacy of existing federal facility environmental remediation policies and procedures. The avowed ultimate goal is to devise, recommend and implement improvements to current federal facility cleanup policies and procedures.

Mr. Michael Glaab, a restoration advisory board (community) co-chmn. of the PAERAB who also serves as Jefferson Township's official representative to that board, had been invited to participate in the dialog session devoted to the environmental restoration of both DoD and USDoE federal facilities.

Accordingly, Mr. Glaab informed the board during its October 7, 2010 meeting of his intention to participate in the dialog committee's deliberations. In addition, he announced to his fellow board members his availability to them should any of them wish to contribute relevant comments and/or suggestions for consideration for referral to the dialogue committee. Striving to be inclusive of all PAERAB members, whether NJDEP or USEPA regulator, US Army official, or community representative he pointedly welcomed their insights. Notice of the meeting and Michael Glaab's expected participation was posted on the PAERAB's website inclusive of his solicitation for comments and/or suggestions.

Topics discussed during the dialogue session attended by Mr. Glaab ranged from TCE contamination to transuranic waste disposal; from FUIDS, TAG and TAPP funding to long term commitment to institutional controls; from database

compilation, master plan land management to tribal sovereignty.

Upon the conclusion of the dialog session attended by Michael Glaab its participants were invited by the dialogue session's presiding chairman, Ms. Kristi Parker Celico (of Rocky Mountain Collaborative Solutions and a former Managing Partner of the Keystone Center), to submit any additional subsequent statements in writing prior to a set deadline. Availing himself of this additional opportunity to hopefully contribute meaningfully Mr. Glaab submitted on November 12, 2010 the following e-mail that included an 11 page statement attached as an Adobe PDF document.

"Hello Ms. Celico:

Please note the attached PDF file that encapsulates my assorted reflections about the environmental restoration of federal facilities with an emphasis on military facilities.

*They are the accumulated result of my own **independently** arrived at conclusions combined with wisdom and insights imparted by numerous other individuals and derived from various informative, digital and paper, information sources.*

Looking forward to reading the final conclusions of your overall review.

*Respectfully,
Michael Glaab"*

The attached statement is available for perusal on the PAERAB's website. It was incorporated into the summary report of the dialog committee as one of its attachments: Attachment D.

The summary reports of the October dialogue sessions have been distributed to participating members as per the following e-mail received by Mr. Glaab:

"Friday, January 7, 2011 1:26 PM

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RENEWED FEDERAL FACILITY CLEANUP HEARINGS [\(CONT'D FROM P. 14\)](#)

Dear Participant of the Federal Facility Cleanup Dialogue:

Thank you for attending the Federal Facility Cleanup Dialogue (Dialogue). Your perspective was essential as we strive to improve the cleanup of federal facilities.

Attached is the summary of the Dialogue meeting held October 20, 2010, in Washington, DC. The document summarizes the Opening Comments, Substantive Themes, Discussion of Suggestions for a Path Forward, and Closing Comments. Also included in the attachment are the meeting agenda, list of participants with contact information and hand-outs from several participants. I attended the Dialogue as one of

my first activities as the Acting Director of the Federal Facilities Restoration and Reuse Office. I was inspired by the suggestions that I heard and challenged by the critiques of the Federal facility cleanup program. I admire the passion expressed by stakeholders for improving the cleanup and reuse process in a way that best serves communities. We are in the process of scheduling meetings with DOD and DOE, to keep the commitment that EPA made in October to meet with the other federal agencies after the Dialogue summaries were completed.

I look forward to working together in the next phase of the Dialogue.

Please do not hesitate to contact

me, ... if you have any questions or concerns.

Sincerely,

Reggie Cheatham, Acting Director
Federal Facilities Restoration and Reuse Office, USEPA ..."

It is expected that the summary reports will be made available on such official websites as that of the USEPA. The summary report of the first session is available on the PAERAB's website. Numerous assorted documents relating to the activities of the FFDC, the Federal Facilities Environmental Restoration Dialogue Committee and the Federal Facilities Restoration and Reuse Office are available at the following location: <http://www.epa.gov/fedfac/>

FFERDC GUIDANCE (PRE 2000) BY MICHAEL GLAAB

According to its own descriptive documents the Federal Facilities Environmental Restoration Dialogue Committee (FFERDC) was federally chartered on April 29, 1992 in accordance with the provisions of the Federal Advisory Committee Act (FACA) 5 U.S.C. App. 2 §9(c) under the U.S. Environmental Protection Agency (EPA) to develop consensus policy recommendations specifically intended to improve the federal facility environmental cleanup decision making process. [Some text has been rendered bold and italicized by this author for emphasis to facilitate reading — M.G.]

In August of 1995, the FFERDC issued fourteen guiding principles deemed by it to be the appropriate basis of the federal facility cleanup decision making process. The FFERDC asserts that these principles are intended to be complementary of one another. These 14 principles were included in the FFERDC's April 1996 Final Report titled [Consensus Principles and Recommendations for Improving Federal Facilities Cleanup](#). This report is available as an Adobe electronic PDF file

on the PAERAB's website. [Note that pages in the actual physical paper document are numbered differently from those in the electronic PDF file's version.] The 14 principles are presented on pages x-xiii (PDF - pgs. 9 to 12) of the 1996 report, and they are enumerated below as follows:

“1. Nature of the Obligation—The federal government has caused or permitted environmental contamination. Therefore, it has not only a legal, but an ethical and moral obligation to clean up that contamination in a manner that, at a minimum, protects human health and the environment and minimizes burdens on future generations. In many instances, this environmental contamination has contributed to the degradation of human health, the environment, and economic vitality in local communities. The federal government must not only comply with the law; it should strive to be a leader in the field of environmental cleanup, which includes addressing public health concerns, ecological restoration, and waste management.

2. Sustained Commitment to Environmental Cleanup—The federal government must make a sustained commitment to completing environmental cleanups at its facilities at a reasonable and defensible pace that is protective of human health and the environment and allows closing federal facilities to return to economic use as promptly as possible.

3. Environmental Justice—The federal government has an obligation to make special efforts to reduce the adverse impacts of environmental contamination related to federal facility activities on affected communities that have historically lacked economic and political power, adequate health services, and other resources.

4. Consistency of Treatment between Federal Facilities and Private Sites— Federal facilities should be treated in a manner that is consistent with private sector sites, especially in terms of the application of cleanup standards.

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FFERDC GUIDANCE (PRE 2000) [\(CONT'D FROM P. 15\)](#)

5. Cleanup Contracting—Federal facility environmental cleanup contracts should be managed as efficiently as possible by using contract mechanisms that specify, measure, and reward desired outcomes and efficiencies rather than simply reimburse for effort or pay for an end product. Federal agencies should strive to ensure that cleanup contracts and employment opportunities benefit local communities, particularly those that are lacking economic resources and have been disadvantaged by contamination. Contractors and agencies responsible for cleanup should work in partnership with local communities to achieve cleanup goals.

6. Fiscal Management—Funding mechanisms for cleanup should provide flexibility in the timing of expenditures and ensure that cleanup activities are conducted in a manner that is as efficient as possible.

7. Interdependent Decision-Making Roles and Responsibilities —Numerous institutions and people play very distinct and important roles in the decision-making process for federal facility cleanups. These include: facility level managers, national program managers, financial officers, and cabinet officials within the agencies responsible for conducting the cleanup; federal, state and tribal regulators; tribes as sovereign nations; local governments; local, state, tribal, and federal health officials; public stakeholders; and the President, Office of Management and Budget; and Congress. These roles are highly interdependent, reflecting both the site-specific and national dimensions of the federal facility environmental cleanup problem. The decision-making process must ensure that all of these roles are preserved and balanced if our

nation is to complete the mission of cleaning up federal facilities in an efficient, equitable, and timely manner.

8. The Role of Negotiated Cleanup Agreements —

Negotiated cleanup agreements in many instances play a critical role both in setting priorities at a site and providing a means to balance the respective interdependent roles and responsibilities in federal facilities cleanup decision making.

9. Consideration of Human Health and Environmental Risk and Other Factors in Federal Facility Environmental Cleanup Decision Making— Risk to human health and the environment is an important and well established factor that should continue to be a primary consideration in federal facility cleanup decision making, including setting environmental cleanup priorities and milestones. However:

a) Human Health and Environmental Risk—Risk assessments and other analytical tools used to evaluate risks to human health (including non-cancer as well as cancer health effects) and the environment all have scientific limitations and require assumptions in their development. As decision-aiding tools, risk assessments should only be used in a manner that recognizes those limitations and assumptions. Moreover, risk assessments ought not be used by any party as a basis for unilaterally setting aside legal requirements that embody public health principles and other important societal values.

FFERDC Final Report

b) In addition to human health and environmental risk, other factors that warrant consideration in setting environmental cleanup priorities and milestones include:

- cultural, social, and economic

factors, including environmental justice considerations;

- short-term and long-term ecological effects and environmental impacts in general, including damage to natural resources and lost use;
- making land available for other uses;
- acceptability of the action to regulators, tribes, and public stakeholders;
- statutory requirements and legal agreements;
- life cycle costs;
- pragmatic considerations, such as the ability to execute cleanup projects in a given year, and the feasibility of carrying out the activity in relation to other activities at the facility;
- overall cost and effectiveness of a proposed activity; and
- actual and anticipated funding availability.

The Committee believes that fiscal constraints do not justify failing to take actions to protect human health and environment, but may result in the need to set priorities about what cleanup actions can occur in any given year.

10. The Importance of Pollution Prevention and Pollution Control Activities —

Effective pollution prevention and pollution control activities are essential to prevent future environmental cleanup problems. Therefore, in carrying out their mission, federal agencies should view such activities as a cost of doing business and fully comply with environmental laws and regulations that are designed to accomplish these objectives.

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FFERDC GUIDANCE (PRE 2000) [\(CONT'D FROM P. 16\)](#)

11. The Role of Future Land Use Determinations in Making Cleanup Decisions—Reasonably anticipated future land uses should be considered when making cleanup decisions for federal facilities, provided that at the time of any land transfer there are adequate safeguards to protect land holders, those who will receive or lease the land, and surrounding communities. The communities that are affected by federal facility cleanups, along with their local governing bodies and affected Indian Tribes, should be given a significant role in determining reasonably anticipated future use of federal property that is expected to be transferred, and in how future use determinations will be used in making cleanup decisions.

12. The Role of Studies in the Cleanup Process—The identification and characterization of contamination and the evaluation of health impacts on human populations are essential parts of the cleanup process. Efforts to streamline the cleanup process should focus on reducing paperwork and moving away from adversarial relations toward cooperation, not the arbitrary capping of funding for studies.

13. The Need for a Systematic Approach to Decision Making and Priority Setting—Federal facility priority-setting decisions should be made in a manner that recognizes their interconnectedness to other environmental problems.

14. Stakeholder Involvement—Public stakeholders and local governments historically have not been involved adequately in the federal facility cleanup decision-making and priority setting process. Agencies responsible for conducting and overseeing cleanup and related public health activities must take steps to address this

problem, with the overall goal of ensuring that federal facility cleanup decisions and priorities reflect a broad spectrum of stakeholder input from affected communities including indigenous peoples, low-income communities, and people of color. Like pollution prevention and pollution control measures, **meaningful stakeholder involvement has in many instances resulted in significant cleanup cost reductions. It should therefore not only be considered as a cost of doing business but as a potential means of efficiently determining and achieving acceptable cleanup goals**".

In particular the 1996 report stressed the importance of assuring the transparency of the whole process. For example, the report specifies on page xiii (PDF - 12):

"...that all community involvement processes must be transparent, open, interactive, inclusive, and responsive. Committee members also stress that agencies need to develop a communications structure in which public concerns are communicated to both headquarters and field office levels".

The entire 1996 report comprises more than 150 pages. Whether in electronic or paper form, this document provides many informative recommendations and insights that are the fruit of previous deliberations and analyses. Indeed, this report deliberately explains on page xiv (PDF - 13) that its recommendations have evolved from "...the collective experience of the first two years of implementation of the Committee's original recommendations regarding advisory boards". For example, on pages xiv to xvi (PDF -13 to 15) the 1996 report provides the following clarification of the purpose and essential nature of a restoration advisory board:

"Establishment of Advisory

Boards—Federal agencies should establish advisory boards to provide independent policy and technical advice to the regulated and regulating agencies with respect to key cleanup decisions. Boards should be formed when an affected local, state, tribal or federal government entity requests the establishment of such a board, or when at least fifty residents of the community or region in which a facility is located sign a petition requesting an advisory board. When more than one advisory group exists for a facility or region, agencies should consider consolidating their activities, or establishing clear communication between the groups to determine if and how their scope of issues overlaps.

Federal Advisory Committee Act (FACA) 2—Whether or not agencies charter their advisory boards under FACA, the Committee recommends that boards and agencies comply with the spirit of FACA regarding maintaining balanced membership, holding open meetings, and providing public notice for the meetings in manners that are appropriate for the facility's community. For agencies that do charter their advisory boards under FACA, the Committee encourages agencies to make very judicious use of FACA authorities and do so in consultation with board members. Finally, chartering agencies should seek to reduce the bureaucratic burden of the law on the board members to the greatest extent possible.

Scope—Advisory boards should focus on protection of human health, cleanup, waste management, and technology development issues that are clearly relevant to the cleanup of the facility. **Boards should have the**

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FFERDC GUIDANCE (PRE 2000) [\(CONT'D FROM P. 17\)](#)

discretion to hear about the social, economic, cultural, aesthetic, public health, and worker health and safety effects of cleanup and waste management and technology development issues related to cleanup. Advisory boards should remain separate from local reuse authorities, but should work together with them wherever possible. Advisory boards should only address anticipated future land uses when they relate to cleanup decisions, and when efforts are made to involve stakeholders sufficiently with key interests in land use, such as local governments, in the discussions.

Agency Roles—The regulated agency should serve as the host of the advisory board and should provide administrative assistance, meeting facilities, and other logistical support as necessary. Regulated and regulating agencies roles should be defined in three ways. First, the most senior-level person available at the facility from the regulated agency should participate in board meetings. Second, **participants from the regulated and regulating agencies should be responsive to the concerns and advice of the advisory board or provide a reasonable explanation for not adhering to the advice.** Third, representatives from regulating and regulated agencies should serve as information sources to the board, providing updates and background as needed. Agencies should consider including contractor representatives as a part of their team particularly to help in this last function. However, contractor participation should never serve as a substitute for the participation of senior representatives of the regulated agency.

Membership—Advisory boards should reflect the full diversity of views, ethnicity, race, and distribution of income in the affected community and region and be composed primarily of people who are directly affected by facility cleanup activities. An open and fair membership selection process that leads to the creation of a diverse and balanced board should be used. Boards should develop procedures for adding, replacing, or removing members.

Operations—At the outset of the advisory process, the board should determine explicitly how it will make decisions about what advice and recommendations it should give, who should give the advice and, in particular, how to ensure that dissenting views are addressed. Advisory board members should develop appropriate ground rules and operating procedures to allow for the efficient and productive operation of the group. (The chapter outlines a number of specific rules and procedures to be considered.) Advisory boards should establish a self-evaluation process to address the goals of the board at the various stages of its development. **Federal agencies are also encouraged to support efforts that will assist communication between public stakeholders in various advisory board efforts across the country.**

Education and Training—An advisory board training needs assessment should be conducted for each advisory board. It should take into account needs for technical assistance notification, orientation, team building, and ongoing education.

Public Interaction—Members of the public must be given opportunities to be kept adequately informed of and involved in cleanup decisions affecting them.

Funding—The **regulated agency should provide advisory board funding for both administrative support and technical assistance.** Technical assistance funding should be used to complement, rather than duplicate, the technical programs of both regulated and regulating agencies. Boards must demonstrate a clear need to be eligible for technical assistance”.

The 1996 report begins, on page 23 (PDF - 42), to elaborate on risk and relative risk assessment with the following conclusions and recommendations:

“With the exception of emergency response situations, the Committee believes direct measures and estimates of human health and environmental risk are relatively more important in deciding whether to take action and, if so, what action should be taken, than in the case of deciding when the action should be accomplished. In using risk evaluation methodologies to determine the timing and sequence or, in the opposite case, delay of cleanup activities or projects, the primary focus should be on the relative risk reduction potential of those actions rather than the relative risk posed by the contamination. The relative risk is more appropriate to consider when deciding whether to take action and if so, what action.

As noted, the Committee believes the analytical tools that are currently available to evaluate human health and environmental risk have scientific uncertainties that are often not well understood or acknowledged by policy makers. Because of this, the Committee recommends that all key decision makers should adhere to the following when using risk assessments:

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- a. There are scientific uncertainties associated with the myriad of assumptions imbedded in these analytical tools. Moreover, it should be recognized that there are often limitations on the availability and quality of data necessary to make effective use of such tools. Risk assessment reports should clearly delineate these limitations in laymen's terms as part of the analysis.
- b. **Stakeholders should be involved in both the analysis of risk and risk reduction potential at the front end**, including exposure assessments, as well as the risk management and broader priority setting decisions that flow from such analyses. Such involvement should be accomplished in a way that does not overly complicate the nature of the data and methodologies being used or the decisions being made on the basis of these analyses. This involvement should be encouraged to focus the effort and maximize the benefit of the study.
- c. The assumptions used in conducting risk assessments should be communicated at the front end so the results may be better understood. Overly certain or emphatic statements concerning the results of any effort to analyze or compare risk or risk reduction potential such as those offering unqualified numerical precision should be avoided.
- d. Risk assessments should analyze appropriate carcinogenic and noncarcinogenic effects when evaluating the human health effects resulting from expected exposures.

If and when risk assessments are used, they should be used as a tool to help assess the risk to diverse populations (rather than averaging

risks across the general population) including:

- a. communities of color and low-income communities historically subjected to environmental, social, and economic injustice;
- b. particularly susceptible sub-populations such as pregnant woman, children, the elderly, and populations exposed to multiple hazards; and
- c. risks to workers, as well as the general population.

It should be recognized that it is impossible to develop useful ordinal rankings of sites or cleanup activities based solely on risk or risk reduction potential. At best, the Committee believes risk assessments can be used to categorize environmental contamination problems into broad groupings such as those that pose high, medium, or low risk. It may also be possible to group and compare cleanup actions into those that may result in high, medium or low risk reduction per dollar of expenditure. Further ranking of contaminated areas or actions using risk assessments makes consideration of other important factors (described in Principle 10b below and Chapter 5) difficult if not impossible".

On page 25 (PDF — 44) the 1996 report cautions in bold text that "fiscal constraints," presumably referring to budgetary considerations, should not be used to justify not taking appropriate environmental remediation measures:

"The Committee believes that fiscal constraints do not justify failing to take actions to protect human health and environment, but may result in the need to set priorities about what cleanup actions can occur in any given year.

As discussed further in Chapter 5, risk to human health or its corollary,

protection of human health is, at many sites, only a starting point for establishing cleanup funding priorities. The Committee also believes that in many other instances protection of the environment is the appropriate starting point for establishing cleanup funding priorities. Furthermore, in other cases, protection of human health and the environment is the appropriate starting point for establishing funding priorities for cleanup. The Committee strongly recommends that in those instances where protection of the environment is not used as a starting point for establishing cleanup funding priorities, it should be considered as one of the factors that are listed below.

Thus, while the Committee believes the comparison of **human health and environmental risk and risk reduction potential is appropriate in setting priorities for federal facility cleanups, they are not the only factors, and risk must be viewed in the context of other social values, environmental goals, and economic benefits**".

The 1996 report then elaborates by citing on page 26 (PDF—46) the following types of factors which should be considered when determining cleanup priorities:

"Some of the other factors that should be considered in setting priorities for federal facility environmental cleanup include, but are not limited to:

- a) cultural, social, and economic factors, including environmental justice considerations;
- b) potential or future use of the facility, its effect on the local communities' economy, vitality, livability and environmental quality;

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- c) the ecological impacts of the contamination and the proposed action to address it (in those instances where protection of the environment is not used as the primary basis for establishing cleanup funding priorities as further explained in Chapter 5);
- d) ***intrinsic and future value of affected resources*** (e.g., groundwater and fisheries);
- e) pragmatic considerations such as availability and continuity of skilled workers, labs, and cleanup contractors to complete the activity or the feasibility of carrying out the activity in relation to other activities at the facility (i.e., capacity and work flow logic), or both;
- f) the overall cost and cost effectiveness of a proposed activity and especially the relative risk reduction value obtained by the proposed expenditure;
- g) making land available for other uses, recognizing land uses may change over time;
- h) the importance of reducing infrastructure costs (e.g., \$300 million is spent each year to monitor tanks at Hanford and \$130 million is spent each year at Rocky Flats to safeguard special nuclear material);
- i) the ***availability of new or innovative technologies that might accelerate or improve the ability to achieve a permanent remedy***;
- j) Native American treaties, statutory rights (e.g., American Indian Religious Freedom Act), and trust responsibilities;
- k) regulatory requirements and the acceptability of the proposed action to regulators and other stakeholders;
- l) supporting accomplishment of other high priority agency objectives;

- m) life-cycle costs; and
- n) actual and anticipated funding levels, as explained in Chapter 5".

On page 27 (PDF—45) the 1996 report stressed process transparency, consensus building and flexibility of response with the following statements :

"These, as well as other factors that emerge should be considered by all key decision makers. This may occur concurrently with discovery of site-specific information and the recognition of stakeholder viewpoints. Care should be taken to ensure that the factors to be used are identified in advance of the need to make priority-setting decisions at the site-specific and national levels. Efforts to develop weights for each of these factors or to convert the priority setting decision-making process into an overly quantitatively driven process should be avoided. Rather, the Committee believes we as a nation should find ways to improve participation in the federal facility priority-setting decision-making process such that the decisions made reflect as broad a consensus as possible as to the appropriate path forward".

The 1996 report pointedly reiterates on page 28 (PDF—46) that financial concerns should not be used to justify not implementing appropriate cleanup measures:

"To the extent that funding can be isolated from other decision-making factors in determining the appropriate timing of an activity, funding should not be a reason to delay or avoid undertaking a preventative pollution control action. Rather, funding of preventative pollution control activities should be viewed as a cost of doing business and funded in conjunction with the activity causing the pollution".

On page 29 (PDF—48) of the report the following recommendation concerning the participation of local authorities was provided as line item f:

"When making cleanup decisions for properties remaining in federal ownership, **cleanup advisory boards, local planning and reuse authorities, and the public stakeholders should be consulted about reasonable anticipated future use assumptions**".

On the next page the 1996 report also provided the following recommendations concerning contaminant migration and groundwater:

- "g) If there is a danger that contaminants and other hazards will migrate to adjacent lands, the ***migration should be contained or the source eliminated***. If such migration has already occurred, the contamination should be addressed in accordance with the risk plus other factors priority-setting process in Chapter 5.
- h) Where appropriate, the designated ***groundwater use should have a greater impact on cleanup standard decisions than the future use of the facility***".

The 1996 report elaborates further with the following recommendation concerning sites subject to mixed uses:

- "i) In circumstances where reasonably anticipated future use includes mixed uses such as child care centers, medical facilities, and parks mixed with industrial or office areas, ***the implications for all uses should be evaluated when making cleanup decisions***".

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Regarding the potential additional cost due to cleanup delay and cost/benefit evaluations the 1996 report provides the following guidance:

"j) The cost and delay associated with **determining and evaluating the impact of future use may, in some cases, mean that selecting the most stringent cleanup standard or remedy** (e.g., one based on a unrestricted use) **is the most cost effective and least time consuming** approach to moving forward with the cleanup process when compared to the marginal savings that may result from using a less stringent cleanup standard or remedy. In other cases, this will not be true.

k) Land not cleaned up to standards permitting unrestricted use should be subjected to appropriate enforceable institutional controls (e.g., deed restrictions, zoning, physical controls, and/or monitoring for the life of the hazard). Such controls are necessary not only to protect human health and the environment, but also to preserve the integrity of the cleanup remedy. **The cost of such monitoring and controls should be considered in evaluating the savings achieved by implementing the less stringent cleanup standard.** The significant problems and costs posed by maintaining institutional controls over the extremely long life of contaminants such as certain radionuclides merit serious consideration in the decision on what action to take".

On page 38 (PDF—56) the 1996 report stated the following three principles concerning information accessibility:

- "Federal agencies have an obligation to ensure that information is provided to all

interested parties within applicable regulatory, resource, and budgetary constraints.

- Well developed information dissemination and exchange processes should ensure the timely release of information to public stakeholders and provide the basis for informed involvement in decision making. This should hold true for any facility, whether it is on the National Priorities List (NPL) or not.
- The information dissemination and exchange process must be consistent with Freedom of Information Act (FOIA) principles, providing full disclosure of available information. Classification of information on the basis of national security concerns should not be used to bar the flow of relevant cleanup information where security/ classification issues no longer exist. Such information should be declassified".

The 1996 report specifically recommends the establishment of local information repositories on page 43 (PDF - 61) where it also provides guidance concerning information security restrictions:

- "...**Local governments can establish and maintain information repositories** that make documents available to the public at the same time as they are made available to regulators;
- Designating locations for access to information appropriate and convenient for the affected communities, and make copies available for public stakeholders; and
- Applying FOIA exemptions narrowly; consistent with FOIA, any reasonably segregable portion of a document should be provided to the requesting stakeholder after deleting

portions of the document which are exempt".

The FFERDC's 1996 report claimed on page 47 (PDF—64) that more than 200 advisory boards addressing federal facility cleanup had been established. Eleven of these were site-specific advisory boards (SSABs) established by the USDoe. The DOD had established over 200 Restoration Advisory Boards (RABs).

On pages 54 to 55 (PDF - 71 to 72) the 1996 report defines the scope of an advisory board's interest as:

"...boards should focus on protection of human health, cleanup, waste management, and technology development issues that are clearly relevant to the cleanup of the facility. In focusing on cleanup, these boards may provide independent advice on issues identified in their mission statements such as:

- ensuring that appropriate measures (both interim and permanent) to protect human health and the environment against substantial and imminent risks are implemented as early as possible;
- identifying cleanup activities and projects;
- tracking progress on those activities/projects;
- providing information and perspectives on cleanup priorities;
- tracking possible implications for other communities along transportation corridors and in areas of waste storage facilities when discussing final waste disposition possibilities;
- evaluating possible employment opportunities and associated risks, local economic benefits provided by the cleanup process,

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and appropriate vehicles for providing this information to the public;

- addressing important issues related to cleanup, such as land use, level of cleanup, risk management strategies, waste management, technology and economic development issues related to cleanup; and
- developing cleanup strategies.

The **advisory boards should have the discretion to hear presentations on the social, economic, cultural, aesthetic, public health, and worker health and safety effects of cleanup and waste management and technology development issues related to cleanup. In addition, the Committee agrees that advisory boards should hear presentations on other environmental management decisions that advisory board members regard as relevant and appropriate**".

On pages 56 to 57 (PDF -73 to74) the 1996 report provides guidance regarding the diversity of an advisory board's membership:

"...advisory boards should reflect the full diversity of views in the affected community and region and be composed primarily of people who are directly affected by facility cleanup activities. Boards should also attempt to maximize participation from public stakeholders in a manner that reflects the ethnicity, race, and distribution of income within the affected communities. The Committee recommends the following public stakeholders, where they exist, be given the opportunity to be included as board members:

- individual residents that live in or own property around the communities or regions in which

a facility is located;

- representatives of citizen, environmental, and public interest groups whose members live in the communities or regions affected by the environmental contamination and related cleanup efforts at a facility;
- workers or representatives of workers involved in or affected by cleanup operations at the facility, with a priority for cleanup and production workers who are currently employed at the facility;
- representatives of Tribes and other indigenous peoples that have treaty or statutory rights that are affected by environmental contamination and related cleanup activities at the facility; and
- representatives of local government".

The 1996 report also considers on page 57 (PDF - 74) the possible involvement of affected private sector entities:

"...representatives of other federal, state, and local government agencies should be included on the board, as appropriate, to represent their interests as natural resource trustees, managers of adjacent or impacted public lands or recipients of lands. In some cases, **potentially responsible parties (PRPs) from the private sector directly involved in or affected by facility cleanup activities could participate at the discretion of the advisory board.** Advisory boards, in conjunction with their host agency, should clarify the specific role that each of these entities play, particularly in the board's decision-making process".

On page 66 (PDF - 83) the 1996 report provides recommendations about interagency agreements:

"...the **public should be informed of any efforts to negotiate formal**

cleanup agreements between regulated and regulating agencies (e.g., Interagency Agreements as per Section 120 of CERCLA). In addition, the agencies conducting the negotiations should make an effort to ensure that their negotiators are kept informed of community concerns and issues. In many cases, advisory boards offer regulated and regulating agencies a good opportunity for focused and meaningful input into the negotiations because of their background knowledge of issues at the facility, and their ability to respond quickly to negotiator's concerns and questions.

Appropriate information exchange includes any risk assessments having bearing on the negotiated cleanup, schedules for cleanup activities and their associated costs, priorities for cleanup that should be considered for enforceable milestones, and provisions for interaction with the public and the advisory board in future decisions.

Under ideal circumstances, the advisory board may develop priorities and timeframes related to cleanup efforts at the facility that can be used as input into the cleanup agreement negotiations. **Agency negotiators should communicate directly with advisory boards on issues of mutual concern.** For example, the Rocky Flats Citizens Advisory Board cosponsored public workshops on the draft Rocky Flats Cleanup Agreement. In addition, the agencies conducting the negotiations have used an information liaison as well as an on-line bulletin board system to keep the public informed".

On page 67 and 68 (PDF - 84 to 85) the 1996 report affirms the utilization of

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technical consultants by advisory boards:

"In many instances, citizen members serving on advisory boards lack the technical resources to monitor and comment effectively on the technical aspects of investigation and cleanup at these facilities. Also, some advisory members lack trust and confidence in the governments' technical advisors due to past environmental and health problems in their communities. Investing such funds in developing the knowledge and the expertise of the community can lead to more cooperative efforts and improved cleanups.

Therefore, to help ensure more effective and meaningful participation, the Committee **recommends that advisory boards receive technical funding** support in cases where there is a clear need. Specific examples of uses of such funding include: providing travel, per diem, and compensation for an outside expert to make a presentation to the board, **hiring a consultant to assist board members in reviewing documents**, and providing **local training courses to educate advisory board members regarding relevant regulatory processes**.

The Committee agrees that technical assistance funding should be used to complement, rather than duplicate, the technical programs of both the regulated and regulating agencies. Therefore, regulated and regulating agencies first have the responsibility to produce technical documents that are clear and concise, to the extent feasible. Further, to avoid duplication, advisory board technical assistance funds should not be used for performing additional sampling. In addition, the Committee agrees that technical assistance should not be

used to underwrite legal actions in any way, including the preparation of testimony or the hiring of expert witnesses. **The work of any advisory board technical consultant should occur concurrently with the on-going efforts of the regulated and regulating agencies** so as not to slow down or impede the process. It is the responsibility of the regulated agency to help coordinate this review process and to provide information to expedite the ability of the board to provide timely input".

Apparently intending to foster the generation of helpful synergistic processes on the national level this report recommends on pages 73 and 74 (PDF - 90 to 91) the following:

"...linking public stakeholders and agencies across the country may allow public stakeholders to share the burden of extensive technical and legal research that currently overwhelms many public stakeholders. **When advisory boards, agencies, and regulators share information, solutions can arise more quickly than when parties work in isolation. Often, this exchange of information can save time and money for all involved.** A network may also be used as a resource for communities and site level agency personnel looking for new cleanup remedies and clarification on environmental laws and regulations, pending legislation and budget updates.

Some efforts are already underway to establish communications between facilities in regions of the nation, as well as across federal agency complexes...

Specifically, the Committee encourages federal agencies to support efforts that will assist communication between public stakeholders at a national level.

For example, DOE guidance suggests that DOE headquarters may play a role in establishing communication among advisory boards across facilities, through the use of an electronic bulletin board.¹¹ Efforts to increase communication across facilities might include:

- Providing information to existing networks;
- A national electronic clearinghouse where information is posted almost as it is happening;
- **A newsletter that addresses the vast array of issues in federal facility cleanup;**
- Making effective use of the media, including the Internet, World Wide Web, local access television, local print media, and radio stations;..."

To discover additional documents issued by the Federal Facilities Environmental Restoration Dialogue Committee and/or the Federal Facilities Restoration and Reuse Office consider first examining those publicly available documents provided at the following location:

<http://www.epa.gov/fedfac/>.



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- Ms. Katrina Harris - RAB Secretary: Bridge
Consulting Corp.
- Ms. Barbara Dolce, CPG - TAPP: Subsurface
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If you have any questions or require additional information on any of the subjects in this newsletter, please contact Barbara Dolce at Subsurface Solutions LLC. Subsurface Solutions LLC is the Technical Assistance for Public Participation (TAPP) contractor for the Picatinny Arsenal Environmental Restoration Advisory Board (PAERAB).

In accordance with federal regulations PAERAB meetings are open to the public and attendance by the community is encouraged. The date and time of an upcoming PAERAB meeting are advertised in local newspapers and also on the board's website: www.paerab.us. For further information please contact Michael Glaab (PAERAB Community Co-Chair) at 973-663-9605 (michaelglaab@att.net) or the Environmental Affairs office at Picatinny Arsenal (Ted Gabel, PAERAB Army Co-Chair at 973-724-6748).

The TAPP - Technical Assistance for Public Participation program is a DOD program that provides a mechanism for community members of Restoration Advisory Boards and Technical Review Committees to obtain technical assistance. Its purpose is to provide citizen and/or community groups with professionals to assist them in their review of environmental issues at military installations. For example, a TAPP process may involve helping the public understand environmental remediation alternatives by providing an unbiased technical analysis and recommendation.

The newsletter is intended to provide an update on newly drafted documents, field activities at Picatinny Arsenal, upcoming events related to environmental issues at the site, and discussions at technical meetings. In addition, notice of new or revised Federal or State regulations may also be included.

The PAERAB maintains a website at <http://www.paerab.us>.

HOT OFF THE PRESS....

- 600 Area Work Plan for Vapor Intrusion and Source Investigation, Draft Final, October 2010.
- Area C Groundwater Long Term Monitoring, Round B; Draft, October 2010.
- Former Skeet Range Remedial Investigation Work Plan, Draft, October 2010.
- 600 Area Work Plan for Vapor Intrusion and Source Investigation, Final, December 2010.



Documents can be reviewed by the public at the Rockaway Township Library and Morris County Library.

Both sites maintain a repository of Proposed Plans and Records of Decision. Other documents and final reports are in the Administrative Record which is maintained in Building 319 at Picatinny Arsenal. Call ahead to schedule to review the record.