

ENVIRONMENTAL HAPPENINGS AT PICATINNY ARSENAL

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PERFORMANCE-BASED CONTRACTING – DETERMINING THE PATH FORWARD

Performance-based contracts (PBC) are increasingly being used by the Army and, also other branches of the military, for environmental projects. Picatinny is expected to be added to the roster of bases where PBCs are employed.

A meeting and site tour was held at Picatinny on December 1st through December 3rd for the purpose of assessing the viability of PBCs for the various environmental sites at the base. Experts from the Army Environmental Center (AEC) as well as AEC consultants convened to evaluate what sites lend themselves to PBCs.

Richard Isaac, Army Environmental Center (AEC), stated at the October 2004 technical meeting that the government finds contractor "costs to complete" are approximately 25 percent below Army projected costs. As an example, Mr. Isaac stated that the Army entered into a \$17.9 million PBC for groundwater cleanup

with a private contractor at the Aberdeen base. He noted that IAP costs to accomplish the same objective were estimated at \$27 million.

AEC experts will prepare a report summarizing their evaluation of the base and recommendations on which sites are favorable for PBC. AEC will make a final decision on which sites should be included in a PBC and then the job of preparing a scope of work will be sent to the Army's procurement experts. The work is still expected to be solicited in 2005. Once such a contract is let, the successful bidder will be responsible for designing and implementing remedial activities and responding to the regulatory agencies. However, approval for implementation still rests with the Army. Additional information on the PBC process can be found at the AEC website at <http://aec.army.mil/usaec/cleanup/pbc00.html>. Frequently asked questions are listed on the website.



IN THE FIELD.....

Recent field activities for October, November and December 2004 include the following:

- Area E: Groundwater sampling as part of long-term monitoring.
- 600 Area: Investigation focuses on the 660 area located near the production well. Drilling in various areas and installation of a bedrock monitoring well near Bldg. 641G.
- Area B: groundwater sampling.
- Area D: groundwater sampling.
- Site 20/24: Cutting of phragmites around cap.
- Sump/Dry Well Investigation: Excavation, sampling, and backfilling at various areas.
- Bldg. 31/33: Groundwater sampling to evaluate effects of ORC injection.

POINTS OF INTEREST:

- About a dozen RAB members, guests, and support staff attended the field trip at Picatinny on October 7, 2004. At the culmination of the trip the group was able to enjoy the scenic panorama atop the Precision Armaments tower at the base – 215 feet above the ground!
- A technical meeting was held on October 20, 2004 between representatives of Picatinny, the USEPA, the NJDEP, the Army Corps of Engineers, and Shaw Environmental. Subsurface Solutions LLC attended the meeting as did community co-chair, Michael Glaab.
- A public meeting to solicit public input on the proposed plans for Area E groundwater, Site 22, and Site 25/26 was held on December 8, 2004. Deadline for comments - January 8, 2005.
- Representatives of the USEPA including Bill Roach and John Malleck, Branch Chief, visited Picatinny on October 28, 2004 to discuss the status of several sites and to evaluate expedited review of key documents by USEPA upper management.

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NJDEP PROPOSES NEW GROUNDWATER STANDARDS

The NJDEP proposed new groundwater standards in the October 4, 2004 issue of the New Jersey Register. Corrections to the rule proposal appeared in the November 15, 2004 issue of the New Jersey Register.

The basis and background document for the proposal along with a complete copy of the proposal can be found in PDF format on the NJDEP's website at

<http://www.state.nj.us/dep/>.

Some notable changes, both increases and decreases, which could affect sites at Picatinny are listed to the right in units of micrograms per liter (ug/L):

Constituent	Current Standard	Proposed Standard
Acetone	700	6,000
Ammonia (total)	200	3,000
Arsenic (total)	8	3
Beryllium	20	1
Carbon tetrachloride	2	1
Chloroform	6	70
Chromium (total)	100	70
Lead (total)	10	5
Vinyl chloride	5	1

FIND NEWLY
PROPOSED SOIL
STANDARDS ON
THE WEB AT
www.state.nj.us/dep/

IMPACT OF NEWLY PROPOSED NJDEP SOIL REMEDIATION STANDARDS ON PICATINNY ENVIRONMENTAL CLEANUP

The NJDEP proposed sweeping revisions of the soil remediation standards in the July 19, 2004 New Jersey Register. Existing NJDEP regulations stipulate that previously remediated sites must be revisited when new standards are enacted. If the newly enacted standards differ by an order of magnitude from pre-existing standards, then the site can be re-opened by the

NJDEP. In those cases the NJDEP can hold the responsible party to the more stringent standard. At present few sites have actually progressed far enough that cleanup can be considered complete. However, there are many sites where the investigation stage has been completed and various remedial alternatives are being considered or a remedial alternative has been selected.



Initial results of the pilot study look favorable for the application of sodium lactate.

SODIUM LACTATE SPEEDS CLEANUP IN SITE 78 PILOT STUDY

Sodium lactate was introduced into injection wells as part of a pilot study intended to accelerate degradation of dichloroethene and vinyl chloride at Site 78. Lactate was selected for this site because it dissipates relatively quickly; there was concern that other more long-lived electron donor compounds such as HRC could impact nearby,

downgradient Green Pond Brook. Post-injection monitoring continues; preliminary results indicate successful reduction in contaminants. Ongoing monitoring will be used to evaluate rebound effects and to design a full-scale application.

AREA D READY

The Record of Decision (ROD) for Area D was the subject of public notice in Morris County papers on September 31, 2004. No comments were received and the existing ROD remained unchanged. The Army Corps of Engineers is expected to award a contract for the work by the end of April 2005. The Area D remedial project is funded for this fiscal year.

NANO-IRON BLASTS CONTAMINATION AT SITE 2

Carbon tetrachloride is the main contaminant targeted in a pilot study using nano-iron particles to speed the reductive dechlorination process. Nano-iron consists of submicroscopic particles of iron combined with a surface catalyst to accelerate reaction in the environment. The particles are created in a proprietary process by PARS Environmental. Elsewhere on the base iron filings were injected into the ground with little success. The results available so far for the nano-

iron pilot appear favorable. Nano-iron was injected into several wells in September 2004. Three downgradient monitoring wells are included in sampling to evaluate the effectiveness of the nano-iron. An upgradient monitoring well was also included. Samples in the downgradient wells have been or will be collected at 3 days, 14 days, 28 days, and 4 months after injection. Results reported at the October 2004 technical meeting included those from 28 days after

injection. In well 2MW-10 located 6 feet downgradient of the injection point, the concentration of carbon tetrachloride was reduced from 210 parts per billion (ppb) at the onset of the pilot study to 35 ppb at 28 days after injection. Similarly, the concentration in Well 2MW-18, located 16 feet downgradient of the injection point, was reduced from 240 to 88 ppb in 28 days. Results so far look promising; stay tuned for more results in a few months.

UPCOMING PUBLIC NOTICE

The Record of Decision (ROD) for the Post Farm Landfill was signed by the U.S. Environmental Protection Agency in December 2004. The Army posted public notice of the ROD execution in January 2005. Notices appeared in Morris County newspapers. Funds for the work were allocated for the present fiscal year.



SOIL REUSE AT THE BASE

Picatinny recently requested approval from regulatory agencies to re-use soil from the lead removal action at Site 161. Both the NJDEP and the USEPA expressed concern about the creation of "new" sites by moving soil around. Both agencies would prefer that contaminated soil be reused at sites with existing contamination such as the Burning Grounds. The USEPA

said that areas of concern should be eliminated where possible instead of creating new areas of concern. The USEPA also commented on the multitude of sites that will be encumbered with institutional controls and the difficulty of tracking all the sites. Although soil re-use can result in cost savings and eliminates the need for off-site disposal, soil re-use can have its own set of

associated problems. Some of the possibilities for soil reuse include use as fill, for grading purposes, and as road base. Use of the soil at existing contamination sites is preferable given the immense task of tracking contamination sites at the base.

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REGENESIS HRC® KNOCKS DOWN VOCs IN AREA B AND AREA D

HRC® (Hydrogen Release Compound) was introduced into the subsurface in Areas B and D. HRC® is a proprietary compound manufactured by Regenesis. The compound is a viscous liquid that is typically emplaced by direct-push techniques such as a Geoprobe. The compound is gradually used up over

time. Its viscous nature makes it last longer than aqueous solutions such as sodium lactate. Whereas sodium lactate travels from the point of injection because it is a liquid, HRC does not move very much beyond the point of injection. One of the goals of the pilot study is to determine the spacing for the injection points. The use of HRC® was intended

to accelerate degradation of chlorinated solvents in the groundwater in these areas. After the HRC was applied, sampling of groundwater in selected wells was performed at a high frequency during the first month after application. As of the October 2004 technical meeting, a month of monitoring showed positive results. Monitoring will

continue on a monthly basis for four months and then shift to a bimonthly frequency until the end of the pilot program. Monitoring results will be evaluated to determine the parameters for full-scale application. For information on HRC® refer to the Regenesis web-site at www.regenesis.com.



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PICATINNY ARSENAL IS ON
THE WEB

<http://w4.pica.army.mil>

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. For further information please contact Michael Glaab (PAERAB Community Co-Chair) at 973-663-9605 (michaelglaab@worldnet.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 also maintains a website at <http://www.paerab.us>.

HOT OFF THE PRESS....

- Phase III & Phase I 2A/3A Sites Ecological Risk Assessment Work Plan, Final, October 2004
- Proposed Plan for Area E Groundwater, Final - Revision 1, November 2004
- Proposed Plan for Site 22, Final - Revision 1, November 2004
- Proposed Plan for Site 25/26, Final - Revision 1, November 2004
- Site 20/24 Wetland Mitigation Report, Final, December 2004
- Record of Decision Green Pond Brook/Bear Swamp Brook, Final, December 2004
- Land Use Control Record of Decision for Soils at Sites 19, 28, 44, 49, 86, 106, 124, 135, 141, 143, 163, 182, and 183



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.