

**Picatinny Arsenal Environmental Restoration Advisory Board
Meeting Minutes, Thursday, October 24, 2013
Hilton Garden Inn – Rockaway, New Jersey**

Attendees

Name	Organization
-------------	---------------------

Members

Ted Gabel	Government Co-Chair, Picatinny Arsenal
Mark Hiler	Community Co-Chair, Rockaway Twp. Env. Commission
Tom Brackin	Community Member, Rockaway Township
Chris Dour	Official representative of Denville Township
David Forti	Community Member, Rockaway Township resident
Michael Glaab	Community Member, Official representative of Jefferson Twp.
Peter Lederman	Official representative, NJIT (ret.)
Pat Matarazzo	Community Member, Township of Verona; NJ Clean Water Council
Virginia Michelin	Official representative, Morris County, Planning & Development
Jim Kealy	NJ Department of Environmental Protection (NJDEP)
William Roach	U.S. Environmental Protection Agency (EPA)
Peter Tabbott	Official representative of Rockaway Township
Tom Trapasso	Official representative, Borough of Rockaway
Henry VanDyke	Community Member, Rockaway Borough
Lisa Voyce	Community Member, Mine Hill resident

Members of the Public, Support Staff for RAB, Picatinny, EPA and NJDEP

Tom Solecki	Picatinny Environmental Management Division
Frank Misurelli	Picatinny Public Affairs Office
Fred Sanchez	Picatinny Environmental Management Division
Mr. Larry Brady	Picatinny Arsenal Legal
Tom Crone	ARCADIS
Lisa Szegedi	ARCADIS
Neil Julian	Picatinny/ARDEC
Barbara Dolce	Subsurface Solutions
Katrina Harris	Bridge Consulting Corp.

Mr. Ted Gabel convened the meeting at 6:34 p.m. He welcomed all to the meeting and thanked everyone for attending.

Attendance

Ms. Harris took attendance of the Restoration Advisory Board (RAB) members. Mr. Gabel advised Mr. Fran Coulters from the Army Environmental Command had been replaced by Mary Ellen Maly; however, they had not yet received travel funding for this fiscal year so she was unable to attend the meeting. Mr. Gabel also advised the date for the meeting had been selected as the majority of community members were available, but Ms. Anne Pavelka from the New Jersey Department of Environmental Protection had indicated she was not available. Mr. Gabel welcomed Mr. Jim Kealy who was attending in Ms. Pavelka's place.

Correspondence

Mr. Gabel confirmed with Ms. Harris that no new correspondence had been received since the last meeting, and Ms. Harris agreed. Mr. Michael Glaab stated he had received information from the New Jersey Department of Environmental Protection on the renewal of Picatinny's incinerator permit and the public comment period.

Resolutions, Motions, Significant Events

- A motion was made by Mr. Mark Hiler, seconded by Dr. Peter Lederman, and passed to approve the June 19, 2013 meeting minutes. Two members abstained from the vote.
- Mr. Mark Hiler was elected community co-chair for a term of one year.
- The next meeting timeframe was set for January 2014.

Agenda

Slide 1 (of Mr. Gabel's presentation): Agenda for October 24th Picatinny Arsenal RAB

Mr. Gabel reviewed the meeting agenda. He noted Ms. Virginia Michelin had asked an update on the incinerator be included on the meeting agenda, but since that topic was not under the Board's purview, an update would be given during a break in the Board meeting.

Technical Assistance for Public Participation Contract

Slide 2:

Mr. Gabel gave an update on the status of the Technical Assistance for Public Participation (TAPP) contract with Subsurface Solutions. He stated the second and final year of the contract had been awarded September 19, 2013 and would run until September 2014. He noted approximately \$14,000 had been spent on the first option year contract. Mr. Gabel reminded the Board that this year is also the final year of the second waiver that had been granted for the Board to have a technical assistance grant.

Mr. Gabel asked Mr. William Roach if he had been able to gather additional information on whether the Board would be eligible for a Technical Assistance Grant (TAG) from EPA. Mr.

Roach said he had some preliminary discussions with EPA staff, and the initial input was that it would be difficult for an Army Restoration Advisory Board to obtain a TAG. Mr. Roach said he could further explore the possibility if there was interest.

Mr. Glaab expressed a concern about the Army making revisions to documents prepared by the TAPP contractor. Mr. Gabel said the Army has always reviewed the contractor's documents to ensure facts were correct and current. He said the Army did not change how the information was presented or the conclusion but checked the documents to be sure all the information was factually correct, such as how sampling was performed or the long-term monitoring plans, to ensure nothing had been misinterpreted. Mr. Gabel and Mr. Hiler agreed the Army should continue to fact check reports, and Mr. Hiler requested Mr. Gabel provide him with a copy of the Army's comments.

Mr. Glaab expressed a desire for the funding for technical assistance to come from EPA.

Mr. Gabel reviewed the list of documents for which the TAPP contractor had recently prepared reports and a list of documents that would be released soon. Mr. Gabel asked if the Board would like him to continue sending out Executive Summaries followed by a Doodle poll on whether they would like the TAPP contractor to review the document, and the Board concurred they would like this process to continue.

Installation Restoration Program/Former Lower Burning Ground Update:

Slide 1 (of Mr. Crone's presentation):

Mr. Gabel introduced Mr. Tom Crone of ARCADIS to give an update on the Former Lower Burning Ground Remedial Design and Remedial Action.

Mr. Crone stated the purpose of his presentation is to update the Board on the progress made with the site since the last briefing in February. He noted a conceptual design had been discussed at the February meeting, along with recent changes to the stormwater rules which impacted the design and its implementation.

Slide 2: Mr. Crone showed the location of the site on several maps, noting it was in the southern portion of Picatinny near the main gate. He stated approximately eight acres would be part of the cap and cover. He noted the site overlaps another environmental site at Picatinny, Site 180. Mr. Crone advised Site 180 was closed out in 2007 with land use controls, but part of the requirement is that the cap for the Lower Burning Ground extend onto Site 180. Mr. Crone stated the Lower Burning Ground operated from 1960 until 2011. He pointed out a hatched area on the map where opening burning occurred until 1985, following by the use of burn pans until 2011. He stated debris and waste piles exist at the site and are part of the remedial action.

Slide 3: Mr. Crone displayed a list of the contaminants at the site which resulted from the historical operations. He stated surface soil was the most contaminated media at the site, with polycyclic aromatic hydrocarbons (PAHs), metals, polychlorinated biphenyls (PCBs), and dioxins/furans detected in the surface soil. Mr. Crone said four PAHs were identified in the sub-

surface soil, along with dioxins/furans. He stated no contaminants of concern were identified in the groundwater, but there is a recognition that metals in soil could leach to the groundwater.

Mr. Glaab asked about the concentrations of dioxins/furans detected and the locations of the detections. Mr. Crone said he would retrieve this information and provide for the meeting minutes. [After the meeting, Mr. Crone provided the following information. At the Lower Burning Grounds, 51 samples were analyzed for dioxin/furans. Eight samples were non-detect or below the EPA's residential regional screening level of 4.5 parts per trillion. Thirty nine samples exceeded the industrial screening level of 1.8 parts per trillion. Most of the samples analyzed nearest Green Pond Brook, where the majority of the historical burning took place, exceeded the industrial screening level. These samples ranged from 50 to 100 feet from Green Pond Brook, and these impacted soils will be capped by asphalt. Locations where samples exceeded the residential screening level will also be capped with soil. Dioxins in soil are not expected to leach to groundwater given dioxin's very low water solubility.]

Slide 4: Mr. Crone discussed where the site is with respect to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process. He stated the Remedial Investigation was completed in 1998, followed by the completion of the Feasibility Study in 2001. He noted there were some additional investigations and sampling conducted in 1999, 2003, 2009 and 2010. Mr. Crone said a Proposed Plan and public meeting occurred in 2004, and a Record of Decision was signed in 2005. Mr. Crone stated New Jersey had revised their stormwater standards which included reclassifying Green Pond Brook as a Category 1 waterway and thus a more protected waterway. He said the changes resulted in a procurement change for designing the remedial action to the current standards which was completed in June 2013. Mr. Crone said an internal draft Remedial Design and an Explanation of Significant Differences were submitted to the Army in September 2013. He stated the Army is reviewing the internal draft documents, and drafts will be provided to the regulators next month.

Mr. Crone stated that Phase 1 of the Remedial Action, which consisted of clearing all the vegetation and any munitions and explosives of concern or surface munition debris from the eight acres, had been completed in 2012, and Phase II is ongoing. He pointed out a copy of the design document and drawings on the table at the front of the room, and advised Phase II consists of installing the cap and cover.

Slide 5: Mr. Crone said he next would be discussing the major components of the design and action and the schedule.

Slide 6: Mr. Crone showed a figure of the remedy that was included in the 2005 Record of Decision. He explained it showed approximately seven acres of asphalt being installed, and stormwater being routed around the asphalt and discharged to Green Pond Brook.

Slide 7: Mr. Crone explained because of the new stormwater rules, the Army needed to develop a new Remedial Design to meet those requirements and found the best answer to be a hybrid cover. Mr. Crone stated the new design includes two acres of asphalt and six acres of soil, about two feet thick, in lieu of the seven acres of asphalt. He noted the asphalt will be placed over the most contaminated soils, the same land-use controls required by the Record of Decision will be

in place, and the same long-term monitoring requirements for groundwater will be met. Mr. Crone said the new remedial design limits the impermeable surface in this floodplain and provides a better remedy for the environment.

Slide 8: Mr. Crone displayed an aerial photograph showing what the remedy would look like conceptually. He noted the asphalt cap covers the area where the highest levels of lead and dioxins/furans were detected with an impermeable surface. He pointed out the new direction of the stormwater flow so no stormwater will flow off the asphalt area into Green Pond Brook. Mr. Crone said a berm will be constructed on the cover to divert stormwater to a bio-retention pond that will remove the suspended solids from the stormwater before discharge in accordance with New Jersey requirements. Dr. Lederman asked about the kind of storm the design anticipated and whether it was adequate, in spite of what the regulations call for. Mr. Crone said he would review the proposed design and provide information for the meeting minutes. [After the meeting, Mr. Crone provided the following information. The proposed stormwater management system (basin, swales, and berms) meets regulations set forth in NJAC 7:13-11.2 (c). The system was designed to function properly during non-flood (1.25-inch, 2 hour storm event) and flood (100-year, 24 hour storm event) conditions. The infiltration basin will sufficiently drain the stored runoff within 72 hours (as required). Where stormwater cannot be discharged outside of the special resource protection area (300 feet on both sides of Green Pond Brook) stormwater will be treated to a 95% reduction in total suspended solids. Where stormwater can be discharged outside the special resource protection area, stormwater will be treated to an 80% reduction in total suspended solids, as required by New Jersey regulations.]

Slide 9: Mr. Crone advised CERCLA requires an Explanation of Significant Differences (ESD) be prepared to address the change in design from what was included in the Record of Decision. He stated a copy of the draft ESD was available on the front table. Mr. Crone said a public notice is required when the document is final which will probably be in the January 2014 timeframe.

Slide 10: Mr. Crone displayed a list of the five major components of the remedy (vegetation clearing, removal of debris and buildings, install cap, mitigate wetland loss, and long-term monitoring and land-use controls).

Slide 11: Mr. Crone advised the vegetation clearing was about 90 percent completed in March 2012 in anticipation of the remedy being completed in 2012. He showed several photographs of the work being performed in March 2012. He noted the remaining work consists of re-cutting brush that has re-established and removing trees in the area of the bio-retention pond.

Slides 12 and 13: Mr. Crone said the next component is the removal of debris and four buildings. He showed photographs of a debris pile and the buildings. He advised any debris which is too large to be incorporated into the sub-surface of the cap will be taken away by truck to a landfill for proper disposal.

Slides 14 - 16: Mr. Crone advised the next component is the installation of the soil cover and asphalt cap along with the stormwater ditches and berms. Mr. Crone showed photographs from a site at Picatinny where similar work was performed. He noted a geotextile fabric would be put

down first over the two-acres, followed by 12 inches of gravel sub-base, and then topped with a 4-inch hot mix asphalt. He said for the soil cover a geotextile fabric also would be put down first, followed by 18 inches of soil cover and six inches of topsoil.

Slides 17 - 20: Mr. Crone next discussed the wetland loss mitigation. He advised four acres of wetlands will be impacted by the remedy and will be filled in by the soil cover. He stated New Jersey and the Army have agreed that 12 acres (a three to one ratio) of wetlands elsewhere on Picatinny will be enhanced to mitigate for the four acres of wetlands impacted by the remedy. He explained wetlands which are deemed to be of low value will be enhanced through eradication of invasive species and re-grading to improve the hydrology of the site. Mr. Crone said because of timing, the first application of herbicide was performed in September. He said there would also be an application next spring.

Slides 21 and 22: Mr. Crone discussed the final component of long-term monitoring and land-use controls. He advised groundwater will be sampled from nine wells consistent with RCRA requirements due to the burning conducted at the area under a RCRA permit. He said surface water sampling will be performed in Green Pond Brook. He noted the required sediment sampling was completed as part of the Green Pond Brook action. Mr. Crone said the land-use controls are similar to those put in place at many of the sites at Picatinny. He noted the controls prohibit excavation through the cover, maintain the integrity of the asphalt cap, and require annual inspections and certifications to the regulators.

Mr. Hiler asked if there would be any activity on the soil or asphalt cover. Mr. Gabel responded that the previously discussed solar panel project had been funded, but the details not yet in place as to where exactly they will be placed. He added that Picatinny's Department of Public Works is currently reviewing the draft Remedial Design.

Slide 23: Mr. Crone reviewed the schedule of upcoming activities and noted the draft Remedial Design and Explanation of Significant Differences will be sent to the regulators in November. He stated the dead phragmites will be removed as part of the wetland mitigation, and the brush and trees removed where the cover will be installed. Mr. Crone said the estimated timing for the installation of the cap is April through July of 2014. He noted the final Remedial Action Report will be submitted in September 2014.

Installation Restoration Program/Mid-Valley Groundwater Update:

Slides 1 - 3 (of Mr. Crone's second presentation): Mr. Crone discussed where the Mid-Valley Groundwater site is in relation to the CERCLA process, noting the groundwater treatment remedy is at the end of the process in the long-term operation, monitoring and maintenance phase. Mr. Crone said his presentation would focus on the results from the first two rounds of quarterly data and a discussion of some of the long-term monitoring data. He said he would also be following up on the presentation by Mr. Llewellyn on the RDX plume soil investigation at the June meeting. Mr. Crone said he would also discuss the next steps to be taken at Mid-Valley.

Slide 4: Mr. Crone showed the site location on a map. He reviewed the in-situ bioremediation and monitored natural attenuation for TCE remedy which had been selected for treating

groundwater at the Mid-Valley site. He explained there are 18 wells at the site where emulsified vegetable oil is injected as a carbon food source for the microbes which start the breakdown of contaminants. He stated calculations show this remedy will achieve the remedial goals in about 35 years versus 190 years if no treatment was implemented. He also explained that monitored natural attenuation was the selected remedy for the other groundwater plume which contains RDX, and the estimated timeframe for this remedy is also 35 years. Mr. Crone said the third component of the remedy is removal of soil containing RDX.

Slide 5: Mr. Crone displayed the regional conceptual site model and noted the geology is glacial valley fill with bedrock uplands.

Slide 6: Mr. Crone showed a map of the plumes in the deeper groundwater containing both TCE and RDX. He stated groundwater flow is from the top right of the map to the bottom left. He pointed out a circled area where the highest concentrations of contaminants have been detected and stated this was the area where the bioremediation portion of the remedy is focused, with the monitored natural attenuation remedy focused on the balance of the plume where the low level concentrations of contaminants have been detected.

Slide 7: Mr. Crone advised that wells were installed in February and March of 2013 and the first injection of emulsified vegetable oil was completed. He stated two quarterly groundwater monitoring events have been completed since the first injection; the events were performed in May and August 2013. He noted the data for the monitoring events is being prepared to be submitted to the regulators. Mr. Crone said the next quarterly monitoring event will be in November.

Slides 8 – 21: Mr. Crone explained the injection system consists of three lines, with the first two lines each having three wells and the third line having six wells. He noted the wells are installed fairly deep, ranging from 120 feet deep in line one into the fractured bedrock. He stated line three has two targeted depths, 90 feet and 190 feet.

Mr. Crone then showed a series of graphs depicting the results of the monitoring of the groundwater after the injection. He explained the monitoring wells are separate wells from the injection wells. He continued explaining the graphs show the results for TCE, cis-1,2-DCE (a daughter product which appears as the microbes break down the TCE), and dissolve organic carbon or DOC which increases when the emulsified vegetable oil is injected.

Mr. Crone reviewed the results from each of the wells and noted where decreases of the contaminants have occurred and where DOC has increased. He stated the results are encouraging and would improve with another injection. Mr. Crone said the next injection event is planned for November.

Slides 21 and 22: Mr. Crone next discussed the results of the RDX plume soil investigation. He displayed a map showing the location. He stated a removal action was performed at the source area, but some of the data in the area suggested another removal action should take place so an investigation was completed this past summer.

Slide 23: Mr. Crone displayed some highlights of the history of the area. He noted areas were selected for sampling based on previous investigations and a site visit with New Jersey Department of Environmental Protection staff.

Slides 24 and 25: Mr. Crone showed photographs of the area.

Slide 26: Mr. Crone stated 12 borings were installed into the groundwater table or bedrock, whichever was encountered first, with samples being collected every two feet. He said a total of 68 samples were collected, with RDX being detected in only 10 of the samples, at a maximum concentration of 20.3 parts per million. Mr. Crone said the action level which would have triggered excavation is 26 parts per million so the conclusion was no removal action was needed. In response to a question by Mr. Glaab, Mr. Kealy said 26 parts per million is the New Jersey interim standard.

Mr. Gabel stated the soil at this site was part of the 25 Sites Proposed Plan which proposed no further action. He said New Jersey requested the Army re-look at the soil at this site as part of the Mid-Valley work so the additional investigation and sampling was performed.

Slide 27: Mr. Crone summarized the next steps at Mid-Valley by stating the initial results from the emulsified vegetable oil injection were encouraging and a second injection in November will help with the carbon loading. He said the groundwater sampling and monitoring will continue. Mr. Gabel added the results will continue to be reported to the Board throughout the next year.

Community Co-Chair Election

Mr. Gabel opened the floor for nominations. Mr. Mark Hiler was nominated. Mr. Gabel asked for any other nominations, and none were offered. Mr. Hiler accepted the position of community co-chair.

Installation Restoration Program and Military Munitions Response Program /Updates

Slide 3 (of Mr. Gabel's Presentation): Mr. Gabel stated he would be giving a brief overview of the Installation Restoration Program projects, as well as the Military Munitions Response Program projects.

Slide 4: Mr. Gabel stated most of the remedial investigations are complete under the Installation Restoration Program. He noted the Lake Picatinny sampling required by NJDEP and EPA was performed in September, and the results will be available in December. Mr. Gabel said the Marsh Report Site Investigation Report had been submitted to the regulators in the late summer, with comments received from NJDEP. Mr. Gabel said additional samples are being collected per comments from NJDEP. He reminded the Board the Marsh Report was done on a site near his office that was discovered during the DRMO investigation.

Slides 5 and 6: Mr. Gabel noted the 600 Hill Groundwater Feasibility Study was reviewed and approved by the regulators and discussed at the last Board meeting. He stated the Lakes

Feasibility Study will be revised again based on the benthic sampling, and the sampling data will be available in December. Mr. Gabel said the Army submitted to the regulators the 45 Site Feasibility Study and proposed two alternatives—No Action and No Action with Monitoring. He noted NJDEP has provided comments, and EPA is still reviewing an earlier response to comments. Mr. Gabel advised the non-Lakes Sites Feasibility Study concluded there was no unacceptable risk and no further action was needed; the Army is awaiting comments from NJDEP and EPA. Mr. Gabel said the Army and EPA have gone to formal dispute regarding the 5 Sites Feasibility Study. He advised there are position papers by both the Army and EPA, and he had copies of both papers. Mr. Larry Brady said he would need to check whether the position papers are releasable. Mr. Gabel said he would advise the Board of the decision by email and provide copies by email if they are determined to be releasable. Mr. Glaab stated the Board should be informed when there is a dispute between the agencies, and Mr. Gabel said that was why he was discussing the issue at the Board meeting. Mr. Gabel summarized the dispute as relating to what soil contaminants need to be addressed when risk is unacceptable at a site.

Slide 7: Mr. Gabel displayed a list of upcoming Proposed Plans and stated the draft 600 Hill Groundwater Proposed Plan and the draft PICA 111 No Further Action Proposed Plan were submitted to the regulators, but their finalization will have to be done under a new contract to be procured in 2014. [After the meeting, Mr. Gabel advised the 600 Hill Groundwater Proposed Plan had not yet been submitted to the regulators.] Mr. Gabel advised a draft 26 Sites No Further Action Proposed Plan was submitted in June 2013, and comments received in August from EPA and NJDEP. He noted responses to the comments will be submitted soon. He stated the Board was briefed on this Proposed Plan at the last meeting, and he anticipated moving forward with a public notice by the next Board meeting.

Slides 8 and 9: Mr. Gabel advised a Record of Decision for 26 Sites has been signed by Picatinny's Colonel and submitted to EPA. He advised EPA will not sign the document until the risk assessments are reviewed by EPA Headquarters as requested by the NJDEP. Mr. Gabel showed a map with the location of sites with signed Records of Decision.

Slide 10: Mr. Gabel displayed a list of Remedial Action Reports and Long-Term Monitoring Reports, as well as the sites where certifications of land-use controls are done.

Slides 11 and 12: Mr. Gabel said the Remedial Investigation Report for the Military Munitions Response Program will be submitted in November of 2013. He noted the objective of the Remedial Investigation was to define the nature and extent of munitions and explosives of concern and munition constituents. Mr. Gabel showed a map with the nine Military Munitions Response Program on-post and off-post sites and stated they total about 5,800 acres.

Slide 13: Mr. Gabel displayed a chart summarizing the Remedial Investigation, noting 58 miles of magnetometer survey and digging were done for the survey.

Slide 14: Mr. Gabel showed an aerial photograph depicting some of the grids that were investigated.

Slides 15 and 16: Mr. Gabel discussed the Lake Denmark off-post site and advised Department of Justice approval was needed to do intrusive work on a portion of the site under receivership. He said an agreement was made with EPA and NJDEP to do visual transects to see if there was anything under the brush, and 30,000 feet of visual surveys had been completed. Mr. Gabel advised no munitions and explosives of concern were found.

Mr. Gabel said he would be suggesting the TAPP contractor review the Remedial Investigation Report when a draft is submitted.

Slide 17: Mr. Gabel discussed programmatic developments. He stated a new Installation Action Plan was prepared which gives a brief summary of each site. He stated for the MMRP sites, the cost to complete does not extend past the Record of Decision if a Feasibility Study is not available. He stated the Plan is on Picatinny's Environmental Web Site. He stated the Plan reflects that no action is expected for more than 100 sites under the Installation Restoration Program.

Mr. Gabel said the two-year work plan under the Memorandum of Agreement with the State has been drafted. He explained the State receives funding from the Department of Defense for their oversight of Picatinny's environmental sites.

Mr. Gabel advised fiscal year 2014 will include a major performance-based contracting effort. He stated ARCADIS' contract ends in December of 2014.

Next Meeting

The Board agreed to a timeframe of January for the next meeting perhaps in conjunction with a Proposed Plan meeting.

A motion was made, seconded, and unanimously approved to adjourn the meeting at 8:02 p.m.

**Picatunny Restoration Advisory Board Meeting
 October 24, 2013
 Pending/In Progress Action Items**

Date Created	Action Item	Person Responsible	Status
10/20/2011	Discuss available documents for review by TAPP consultant at each Board meeting	Ted Gabel	Ongoing
10/24/2013	Schedule next RAB meeting for January	Ted Gabel/Katrina Harris	Pending
6/19/2013	Check whether the Picatunny RAB can apply for a TAG.	William Roach	Initial information provided at October 2013 meeting.
10/24/2013	Advise the RAB of the decision regarding the releasability of the Army's position paper	Ted Gabel	Pending