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Mr. Ted Gabel
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Picatinny Arsenal. New Jersey 07086-5000

March 7, 2013

Mr. Walter Mugdan
Division Director
USEPA-Region 2
290 Broadway, Floor 19
New York, NY 10007-1866

Re: The New Jersey Department of Environmental Protection's (Department) Review of the Department of the Army's (Army) February 6, 2013 Final Proposed Plan (25 Sites PP) for 25 Picatinny Sites within PICA 001, 006, 022, 085, 143, 146, 163, 171, 192, and 199 at Picatinny Arsenal, Dover, New Jersey

Dear Mr. Gabel and Mr. Mugdan:

The Army's February 6, 2013 25 Sites PP, which proposes no further action with monitoring of land use, is not acceptable to the Department as it is not protective of human health or the environment. The 25 Sites PP does not address significant contamination that is present in several areas of concern and avoids using Applicable or Relevant and Appropriate Requirements (ARARS).

It is the Department's position that the Army's proposed plan is also precedent setting and will have negative impacts on remedial decisions made at other National Priorities List sites, Federal Facilities and other responsible party sites across the country. The United States Environmental Protection Agency (EPA) should reconsider the ramifications of choosing a no action remedy of monitoring and existing land use controls for sites where significant contamination is present above the State's duly promulgated remediation standards. Below are the Department's concerns with the 25 Sites PP.

General Concerns

The Department issued comprehensive technical comments to the Army on September 29, 2011 regarding the Feasibility Study for the 25 sites addressed in this proposed plan. To date, the Department's comments have not been addressed in any detail. Significant contamination has been identified in many of the areas and the remedial investigation and delineation has not been completed. In summary, a proposal for no action is not supported by the data. The Feasibility Study comments must be adequately addressed and the 25 Sites PP be amended accordingly.

The Army has proposed that contamination at the sites in the 25 Sites PP is within 10^{-4} to 10^{-6} risk range and, therefore, no action is proposed. The Department disagrees with this assessment regarding the risk posed by these areas. An evaluation of the risk assessment indicates that data from many specific discharge areas were inappropriately averaged over large areas of the individual sites, including a large number of samples that were not impacted, thus diluting the average contaminant levels, and therefore masking the true risk to human health and the environment. Under the proposed plan, contamination would remain in surface soil in some areas that the Department considers hotspot or source material which clearly requires active remediation. Contaminant levels in surface soil include but are not limited to, lead at 19,500 ppm and polychlorinated biphenyls (PCBs) up to 143 ppm, barium 100,000 ppm, mercury 600 ppm, arsenic 251 ppm and DDT 16 ppm. Contaminated soils (PCBs and metals) in some areas have impacted sediments in Picatinny Lake and other wetland areas. These soils are not controlled and may continue to migrate into surface water/sediments in the future.

In a letter dated November 27, 2012, the Department was notified that discussions regarding the 25 Sites PP had concluded between EPA and the Army and that compliance with ARARs would not be necessary provided that certain institutional controls and monitoring are in place. Specifically, the Army and EPA's agreement includes existing land use controls and proposed land use monitoring as necessary requirements for the no action proposals. The Department was not part of the discussions that lead to these agreements. In accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) guidance, a baseline risk assessment (OSWER 9355.0-30) "should not assume institutional controls or fences will account for risk reduction". The Department considers monitoring and institutional controls [See Institutional Controls: A guide to Planning, Implementing, Maintaining and Enforcing Institutional Controls (OSWER 9355.0-89)] to be response action under CERCLA which trigger ARARS. In 2009 EPA and the Army signed the Record of Decision (ROD) for Area C Ground Water at Picatinny Arsenal. This ROD considered monitoring a response action. Besides being counter to current EPA policy, the 25 Sites PP is not consistent with past remedial decisions at Picatinny Arsenal.

Finally, the Army has evaluated the site by separating it into hundreds of areas rather than evaluating site wide risk to determine what ARARs are appropriate. The Department agrees that remedial decisions should be evaluated on an area by area basis; however, ARARs must be addressed site wide. The Department's position is that ARARs have been triggered pursuant to CERCLA since significant contamination remains that require remedial action(s).

Listed below are specific examples of sites which require a response action and other issues which must be addressed by the Army in the 25 Sites PP. For a more detailed discussion all the sites that require a response action, as well as additional Department concerns, see the attached September 29, 2011 letter to the Department to the Army regarding the 2009 draft Feasibility Study.

Specific Site Concerns

Site 108, Ordinance Facilities and Flare Testing Area: In the draft Feasibility Study, the Army/Arcadis proposed an 18-inch vegetated soil cap on 'Flare Island' to reduce some of the exposure potential due to the elevated concentrations of contaminants noted in soils on 'Flare Island' and sediments in Picatinny Lake surrounding this peninsula. Surface soils at Flare Island contain Mirex 300 ppm, lead 4480 ppm, arsenic 787 ppm, PCBs 2.2 ppm, mercury 610 ppm, and barium 100,000 ppm. Sediment data in Picatinny Lake exhibit similar impacts. As has been stated in the past, the risk assessment for Site 108 is flawed because clearly there is unacceptable risk to ecological and human receptors exposed to this

unprotected source area. The Human Health Risk Assessment (HHRA) and Ecological Risk Assessment (ERA) were both inadequate and did not properly assess the current and future risks associated with the high concentrations of contaminants detected in soils on the shore of Picatinny Lake and the sediments in Picatinny Lake. Contaminant delineation was incomplete when the risk assessment was conducted. Also, based on the historic usage, the distance between 'Flare Island' and the rest of Site 108 and the different constituents of concern in the two areas, the human health and ecological risk at 'Flare Island' should have been evaluated as a separate site from the rest of Site 108.

Area K, Site 199, Abandoned Pistol Range: The document states on page 14 that 'the carcinogenic risk range is within the generally acceptable range of 1E-04 and 1E-06, the non carcinogenic hazard is less than 1, lead is not a concern at this site, and no ERA was conducted because potential contaminants are not bioavailable'. The Department disagrees with all of these statements. Lead is clearly a concern at this site and in fact is present in surface soils at concentrations up to 16,000 ppm. Arsenic is present at concentrations up to up to 50 ppm; and polynuclear aromatic hydrocarbons (PAHs) are also elevated (benzo(a)pyrene {BaP} up to 42 ppm, Avg BaP= 3.9 ppm). This site is a large vacant wooded area with obvious ecological receptors and the Army has provided no evidence to support the claim that contaminants at this site are not bioavailable. In addition, no assessment of potential risk due to exposure to lead contaminated soils has been performed. The Department believes that it is premature and unacceptable to plan a no action remedy for this site when the human health and ecological risk has not been properly evaluated.

Site 35 Nitroglycerine Processing Area: There were five process buildings located on this 1.5 acre site. Remedial Investigataion (RI) data document several hotspots with lead (up to 19500, 8820, 6440 mg/kg) and PCBs (up to 143 mg/kg) in site surface soil and sediment. There are four areas with discrete and limited lead / PCB hotspots at this site, which are related to wastewater discharges. The lead contamination detected in soil and sediment at this site is related to improper wastewater discharges from site operations. The contamination is not dispersed throughout the site and it is therefore inappropriate to average all the lead sample data at the entire site. The Department has previously noted that there may be flaws in the HHRA conducted for this site. The HHRA used an average lead surface soil concentration of 456 mg/kg to evaluate the adult lead model results. However, according to the 25 Site table, the data suggests that the average lead surface soil concentration is 736 mg/kg. This discrepancy has not been explained. The Department continues to believe that the lead and PCB hotspots at this site must be remediated to meet the New Jersey Soil Remedation Standards (NJSRS), which are ARARs.

Site 189 Apple Trees Recreational Area: The RI report indicates that arsenic and pesticides are elevated in surface soil: arsenic range 20.5 ppm to 251 ppm and pesticides - 4,4,DDT up to 16 ppm. The current and future land-use indicated that this area is recreational with Army housing on the outer borders. The Army evaluated the site risk using a recreation exposure assessment. Due to the proximity of residences, the Department continues to believe that the risk scenarios evaluated in the recreational risk assessment may not be representative of the actual risk at the site. The Department does not agree with the proposed 'no action' remedy for this site. This site is easily accessible to site workers, residents and visitors and is located in a busy and accessible area of Picatinny Arsenal, near residences and the base cafeteria. The Department requires a more protective remedy, due to the elevated arsenic and pesticides present in surface soils and the proximity of the site to high human traffic areas.

Site 17, Northern Teteryl Pits: This 1.88-acre site had a removal action to remediate teteryl (an explosive compound) contaminated soils in 2002. Remaining soils contain lead (max= 6750 mg/kg), PAHs (max BaP

= 1.76 ppm), and one arsenic exceedance at 24.4 ppm. The average lead concentration is currently 986 ppm with numerous hotspots > 1000 up to 6750 ppm. The contamination at this site is localized around the former disposal pits. Averaging of lead soil samples throughout the 1.88 acre site is not appropriate due to the nature of contaminant distribution at this former disposal site. The Department believes that the appropriate remedy requires excavation / removal of the lead hotspots to achieve the NJ non residential SRS / ARAR of 800 ppm.

Other Issues

ARARs: The Department's Remediation Standards (N.J.A.C. 7:26D et. seq.) implement the provisions of the Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-12, and other statutes, by establishing minimum standards for the remediation of contaminated ground water and surface water, and by establishing the minimum residential direct contact and non-residential direct contact Soil Remediation Standards. These are promulgated standards and are to be considered ARARs. In addition, while the 25 Site PP uses a baseline risk range of 10^{-4} to 10^{-6} , it should be noted that by law, the Department is required to use a target risk of 10^{-6} for each individual carcinogen. The Department considers that the target carcinogenic risk of 10^{-6} is an ARAR. For more information on Soil Remediation Standards, please visit the Site Remediation's web site for remediation standards guidance at <http://www.nj.gov/dep/srp/guidance/rs/> and a copy of the rules at Remediation Standards Rules.

Remedial Actions: Department regulations require that a remedial action be implemented when the concentration of any contaminant exceeds applicable remediation standards and / or the concentration of any contaminant exceeds aquatic surface water quality standards or ecological screening criterion (Technical Requirements for Site Remediation {N.J.A.C. 7:26E et. seq.} and Administrative Requirements for the Remediation of Contaminated Sites Rules {N.J.A.C. 7:26C et. seq.}). The 25 Sites PP selected preferred response action of "no action" for all 25 sites which is unacceptable. Department rules require a minimum of institution controls and appropriate engineering controls if the Army is leaving any contamination at concentrations greater than the applicable NJ Remediation Standards.

As noted above, according to Department regulations, a remedial action is required at many of these sites. These actions include engineering and institution controls for soils (N.J.A.C. 7:26C- 7.2), which are considered a response actions under CERCLA. Therefore, according to CERCLA, ARARS are applicable and the Department's Soil Remediation Standards must be applied.

Sediment Criteria: The document notes that Sediment Ecological Risk was screened based on Canadian Interim Sediment Quality Guidelines and New York State Sediment Criteria. The Department has repeatedly requested that the ecological screening criteria at <http://www.nj.gov/dep/srp/guidance/ecoscreening/> be used to evaluate sediment and soil in ecologically sensitive areas.

Risk Assessments: The risk assessments should be revised to evaluate the cumulative risk from all relevant media and exposure routes associated with current and future users at Picatinny Arsenal. This is appropriate according to CERCLA guidance.

Impact to groundwater (IGW): The Department's Remediation Standards (N.J.A.C. 7:26D-1.1) and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-1.3) require the person responsible for conducting the remediation to develop site-specific soil remediation standards that are protective of

ground water. A site-specific IGW soil remediation standard must be developed when a discharge to soil is known or suspected. This has not been completed at the sites addressed in the 25 Sites PP.

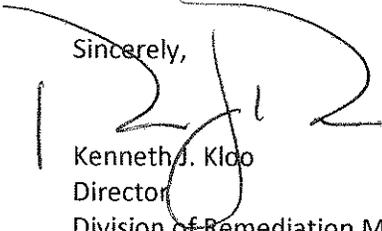
Ground Water Remediation Standards (GWRS): The GWRS are the minimum standards to which ground water shall be remediated. For Class II ground water, the Ground Water Quality Standards (GWQS) developed pursuant to N.A.C. 7:9C-1.7(c) and (d) are the GWRS. The GWQS are the higher of the Ground Water Quality Criteria and the Practical Quantitation Limit. Page 11 of the 25 Sites Plan, in the Levels of Concern Section, must be revised to reflect this.

Summary

As stated above the Department has a number of issues with the 25 Sites PP. Many of these issues have been brought to the attention of Army and EPA over the years during reviews of the remedial investigation and feasibility study related to the sites covered by the 25 Sites Proposed Plan. The Department would like to work with the Army and EPA to resolve these issues in the spirit of protecting human health and the environment.

If you have any questions, please contact Anne Pavelka, Case Manager, at 609-292-3007.

Sincerely,



Kenneth J. Kloo
Director

Division of Remediation Management

CC: Council President John J. Quinn, Rockaway Township
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