

NJDEP 11-10 14 Comments on the draft No Further Action with Monitoring of Land Use Proposed Plan for Areas F, G, I, and L Sites, including PICAs -075, -108, -122, -134, -135,- 136, -147, -200, and -209, September, 2014

The New Jersey Department of Environmental Protection (Department) has completed review of Picatinny Arsenal's draft No Further Action with Monitoring of Land Use Proposed Plan for Areas F, G, I, and L Sites, including PICAs -075, -108, -122, -134, -135,- 136, -147, -200, and -209, September, 2014. The Department has commented previously on various drafts of the associated 48 Site Feasibility Study and various response documents prepared by the Army in May 13, 2013, September 26, 2013, March 10, 2014 and July 8, 2014 letters and a May 30, 2014 email. Also the Department presented its position on the NFA with monitoring of land use remedies in a March 7, 2013 letter to the Army and EPA.

This document has not been reviewed Department management, who may have additional comments at a later time.

The draft proposed plan is not acceptable. The Department continues to disagree with the proposed no further action with monitoring of land use remedies for a number of the sites in this proposed plan for the reasons outlined below.

In general, 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 (SRS). These are promulgated standards and are to be considered ARARs. In addition, while the Army 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.

The main issue regarding remediation is that the 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 (see the Technical Requirements for Site Remediation (Tech Regs) N.J.A.C. 7:26E and the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) Rules N.J.A.C. 7:26C). The recommended response actions for the sites in this proposed plan are not acceptable since the Department rules require a minimum of institutional controls and, as appropriate, engineering controls if the Army is leaving any contamination at concentrations greater than the applicable NJ Remediation Standards.

The NJ 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 impact to ground water soil remediation standard must be developed when a discharge to soil is known or suspected. The purpose of the site-specific IGW soil remediation standards is to prevent unacceptable risk to human health from the ingestion of contaminated ground water, caused by the migration of contaminants from the unsaturated soil zone to the ground water. Although the Army has previously evaluated groundwater quality conditions during the remedial investigation (RI) on a regional basis at a number of these sites, the Department requires that site specific IGW standards be developed to protect against future contamination of ground water from contaminated soils that the Army proposes to leave at these sites. The standards are to be developed using the applicable health-based ground water quality criterion (GWQC) for the ground water where the site is located. The procedures that are provided in the guidance documents are all designed to be protective of Class IIA ground water.

The Army has evaluated the risk at Picatinny Arsenal on an AOC basis. The Department's position is that the risk should have been evaluated on a site wide basis. Once it was determined that there is unacceptable risk for the site, the appropriate N.J. SRS would be applied to the entire site as ARARS.

EPA's proposal to determine the need for remedial action based on risk and to ignore exceedances of N.J. promulgated SRS is 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 Department has already seen remedial proposals by other Federal Facilities in New Jersey to make remedial decisions based on risk, instead of the Department's SRS.

Below are the Department's comments on specific sites in the draft proposed plan.

On page 2, bottom of column 1, please remove the reference to the **New Jersey Department of Environmental Protection** with respect conducting human health and ecological risk assessments.

The Department has reviewed the following sites:

Area F: Sites 111, 126, 138, 139, 140, and PICA Site 209

Area G: PICA Site 210

Area I: Sites 30, 47, 70, 71, 79, 82, 83, 90, 102, 137, 158, and 159

Area L: Sites 36, 188, and PICA Site 200

The Department agrees with No Further Action with Monitoring of Land Use for the following sites: Site 30, Site 36, Site 47, Site 70, Site 71, Site 79, Site 83, Site 90, Site 111, Site 159, and PICA Site 200.

Listed below are the Department's concerns on the other sites.

1. PICA Site 210, Building 321: Arsenic and PAHs are present along the former rail lines at this site. The Department requires that the contamination related to the former rail lines at this site be further delineated and if necessary remediated.
2. Site 140, PICA 108, Buildings 427 and 427B. This site contains elevated concentrations of arsenic (up to 53 mg/kg) and 2,4-Dinitrotoluene. The draft proposed plan states on page 5 that the contamination remaining is minimal and limited in potential exposure. However, the soil contamination has not been fully delineated according to Tech Regs. In addition, the soil impact to groundwater pathway has not been assessed as required by the Tech Regs. The Department requires that delineation of arsenic and RDX be completed at this site.
3. PICA 075, Site 102, Building 3050, Former Enlisted Men's Barracks : Two USTs (1000 gallon fuel oil UST and another 500 gal UST) were identified and removed during the RI. RI data indicates that the surface soils contain scattered exceedances of PAHs and lead. Site surface soils contain PAHs (Max BaP = 40 ppm), two arsenic exceedance at 24 and 25.9 mg/kg. The FS states that the average lead concentration is 849 ppm with 3 hotspots > 1000 ppm up to 2800 ppm. The average lead concentration is below the Army calculated lead PRG of 1092 mg/kg. DDT was detected at 18 mg/kg which is above the NJ SRS of 8 mg/kg at the same location where lead was detected at 2800 mg/kg. The majority of the lead and PAH contamination along with the single DDT hit, is localized to the north of the building. The proposed response action is not acceptable, active remediation is required.
4. PICA 075, Site 188, Former Coal Storage Area, Building 1375: RI data shows elevated concentrations of PAHs and arsenic throughout the former coal storage area (Max BaP = 15 mg/kg; max concentration of arsenic = 98.4 mg/kg). The proposed response action is not acceptable, active remediation is required.
5. PICA 108, Site 139, Building 424 Propellant Processing Plant, This site is located 1000 ft. southwest of Picatinny Lake. RI data shows scattered contamination around this site including PCBs up to 6 mg/kg DDT to 8.2 mg/kg respectively, mercury up to 175 mg/kg, lead up to 24,000 mg/kg, Picatinny Lake sediments contain 2,4-dinitrotoluene up to 320 mg/kg, lead up to 1710 mg/kg, mercury up to 110 mg/kg and arsenic up to 30 mg/kg. Surface water samples also contain elevated concentrations of mercury, lead, arsenic and pesticides. The proposed response action is not acceptable, active remediation is required.
6. PICA 108, Site 137, General Administration Building: This 1 acre site is used as a general administration building. Surface soils at the site contain arsenic in an area near a former rail bed in surface and subsurface soils at concentrations ranging from 23.3 up to 210 mg/kg with an average concentration of approximately 58 mg/kg. The proposed response action is not acceptable, active remediation is required. The Department requests that

the Army further evaluate soil contamination related to the rail lines that run throughout all of Site 108.

7. PICA 122 / Site 126, Building 197, Propellant Testing: There is a 60x30 ft hotspot area on the north side of Building 197 containing elevated concentrations of Cadmium well above NJ SRS. The RI data shows Cadmium was detected in a discrete area of surface soils at concentrations ranging from 81.4 – 1980 mg/kg. Cadmium was used as a stabilizer in propellant manufacture at this site and the contamination is related to discharges that occurred during building operations. The Department requires that Picatinny propose an active remedy to remediate the Cadmium hotspot at this site.
8. PICA 135 / Site 82, Building 908, XRay Processing Lab : RI data indicates that surface soils in the vicinity of Picatinny Lake have elevated concentrations of arsenic ranging from 22 to 58 mg/kg. Picatinny Lake sediments in the vicinity of this site have been adversely impacted by historic discharges of spent photographic fixer from the x-ray developing unit and silver recovery unit. Silver is found in Picatinny Lake sediments at levels up to 1100 mg/kg and strontium up to 110 mg/kg. The proposed response action is not acceptable, active remediation is required to remediate arsenic contaminated soils near the lake.
9. PICA 135 / Site 158 – Building 926, High Explosives Magazine: This structure is built into the shore of Picatinny Lake and reportedly contains a lead plated loading platform that extends into the lake. Building 926, referred to as the cave, was used to store lead azide, lead styphenate, and mercury fulminate until the early 1980s. It should be noted that adjacent sediment samples from Picatinny Lake contain lead up to 1100 mg/kg, and mercury up to 28.2 mg/kg. Based on the site history, the fact that only one soil sample was collected for metals analyses, and the elevated concentrations of metals detected in adjacent sediment samples, the Department does not have confidence that this site has been adequately evaluated to accept the proposed no further action remedy.
10. PICA Site 209, Building 430, Propellant Systems Facility: This site was used as a propellant process laboratory. Process wastes flowed into lead lined catch tanks with overflow pipes that drained directly onto the ground and into an intermittent drainage ditch that leads to nearby Green Pond Brook. RI data shows elevated concentrations of 2,4-Dinitrotoluene (up to 870 mg/kg) and lead (up to 2300 mg/kg) in surface soils and sediments around this building. Figure 3-97 shows that the most downgradient sediment sample had the highest concentration of DNT contamination (870 mg/kg). This indicates that the horizontal extent of contamination may not have been adequately delineated. The risk assessment showed a carcinogenic risk of 10^{-3} and a hazard index of 8 for current and future adult residents. There is also a potential ecological concern due to the potential of contaminant migration from the drainage ditch into Green Pond Brook. In addition, the impact to groundwater pathway has not been assessed, as required by the Tech Regs. The proposed response action is not acceptable, active remediation is required to prevent contamination from migrating to Green Pond Brook. Also the impact to groundwater pathway needs to be assessed.

11. PICA Site 209, Building 462A, General Purpose Magazine: This site was used for explosives storage and as a neutralizing house for the guncotton line. The site is within 700 feet of Green Pond Brook. RI data shows sediment contamination in an area on the southwest side of Building 462A containing elevated concentrations of 2,4-Dinitrotoluene (DNT) at concentrations up to 67 mg/kg. The DNT contaminated sediments appear to be related to a sump discharge into a drainage ditch from historic site operations. It is not clear if the downgradient/ horizontal extent of the contamination has been adequately delineated. The proposed response action is not acceptable, active remediation is required to prevent contamination from migrating to Green Pond Brook. In addition, the impact to groundwater pathway has not been assessed, as required by Tech Regs.
12. PICA 108(107)/Site 138 –Buildings 404, 407 & 408, Chemical Lab & Propellant Plant: Twenty-nine surface soil samples had detections of at least one SVOC at concentrations greater than its respective NJ SRS. Maximum concentrations of benz(a)anthracene=(100 D mg/kg). benzo(b)fluoranthene = (200 D mg/kg), benzo(k)fluoranthene = (90 mg/kg), and indeno(1, 2, 3-c,d)pyrene = (70 mg/kg) were detected at location FSS138-6. Maximum concentrations of benzo(a) pyrene (78 mg/kg) and dibenz(a,h)anthracene (13 mg/kg) were detected at sample location F-138-SS-036. The maximum concentration of naphthalene (20 mg/kg) was detected at sample location F-SS138-9. PCBs were detected above the NJ non-residential SRS at 1.8 mg/kg in one surface soil sample location. Arsenic was detected at sample location F-SS138-10 at a concentration of 20.5 mg/kg, and manganese was detected at a concentration of 8500 D mg/kg at sample location F-SS138-6. The proposed no further action remedy is not acceptable. A remedy must be proposed to address PAHs and all other NJ SRS exceedances at Site 138.