



## State of New Jersey

CHRIS CHRISTIE  
Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOB MARTIN  
Commissioner

KIM GUADAGNO  
Lt. Governor

Bureau of Case Management  
401-05F  
P.O. Box 420  
Trenton, NJ 08625-0420  
Phone #: 609-633-1455  
Fax #: 609-633-1454

Mr. Ted Gabel  
Project Manager for Environmental Restoration  
Environmental Directorate, B319  
U.S. Army IMA-NERO Garisson  
Picatinny Arsenal. New Jersey 07806-5000

February 27, 2015

Re: Final Picatinny Arsenal ORAP Phase II Quantitative Assessment Report, US Army Operational Range Assessment Program, Quantitative Operational Range Assessments, November, 2014 (submitted January 7, 2015), Picatinny Arsenal, Dover, New Jersey

Dear Mr. Gabel:

As requested by the Army, the New Jersey Department of Environmental Protection (Department) has completed the review of the above assessment report. The Department also reviewed your cover letter, which stated that you did not agree with all the recommendations in the report.

In summary the Department agrees that additional investigation should be done at all the recommended ranges except Range 9, which was extensively studied under the IRP Program. The Department is also concerned that this report only looked at receptor impacts and did not investigate the source areas on the ranges themselves. The Army should consider source area investigations for the contamination detected in the groundwater, surface water and sediment samples.

Below are the Department's detailed evaluation of all the ranges recommended for further evaluation in the ORAP report.

**1. Ranges 1 and 2:** The document notes that Range 1 and 2 are "referred" for additional investigation due to groundwater exceedance for RDX at 0.62 ug/L in MW-03 downgradient of Range 1 and RDX at 1.2 ug/L in MKW-02 downgradient of Range 2. Ted Gabel notes that he disagrees with these "referrals" because all the detected RDX levels in these three wells were below the 2ug/L criteria used in the Mid Valley and Group 1

RODs. The Department does not agree with Mr. Gabel's point regarding the low concentrations of RDX detected. It appears that the data evaluated in this ORAP may represent the downgradient or sidegradient edge of a potentially more significant plume of contamination that may be present on one or more of these ranges. Since the ranges have not been investigated in this report, these potentially significant plumes / source areas may remain unidentified and uncharacterized. All the data evaluated in this report appears to have been collected from downgradient of the ranges in question and it does not represent source area data. Therefore, there is good reason that the Project Action Limits (PALs) should be conservative. The fact that the concentrations detected may be lower than previously agreed to cleanup numbers for other sites should not be used as a rationale to eliminate these sites from further evaluation. These ranges should be retained for further evaluation.

2. **Range 1:** The Department needs to restate previously voiced concerns commented on in the 45 Site Feasibility Study and other related documents regarding the lead contamination that remains in surface and subsurface soil in the area around the former slug butt at PICA 175 (Range 1). In addition to being a direct contact risk to human and ecological receptors, this hotspot of soil contamination apparently extends throughout the soil column to groundwater and may pose an on-going risk due to potential on-going transport to groundwater and or surface water/sediment in the downgradient Bear Swamp Brook. It appears that the potential of off-site transport from this soil hotspot may not have been adequately evaluated in the ORAP report. Note that Figure 5-1a shows that no sediment data was collected downstream from Range 1 and 2 in the Phase II sampling. Previous RI sampling at PICA 175 indicates that elevated concentrations of lead are present in Bear Swamp Brook in this vicinity. Range 1 needs to be investigated further.

3. **Ranges 5 and 6:** The report refers Ranges 5 and 6 due to surface water exceedances of RDX at 1.1 ug/l and 2.6 ug/L compared to the PAL of 0.61 ug/L. Mr. Gabel asserts that he believes that these sites should not be referred because the Department /EPA previously approved No Further Action for the 600 Area RDX Investigation Data Report and also approved the 600 Hill Area Groundwater Feasibility Study Report. The Department believes that these previous approvals regarding the 600 Area Reports are not relevant to this document because the 600 Area Investigation did not evaluate potential source area contamination at Ranges 5 and 6. The 600 Area Investigation was focused on determining a source for the contamination detected in the 600 Area groundwater and did not assess other potential source areas of contamination that may be present on Ranges 5 and 6. The Department accepts the recommendations of this ORAP requiring additional investigation at Ranges 5 and 6.

4. **Range 7:** The ORAP Report refers Ranges Range 7 for further evaluation due to previous detections of RDX (9.1 ug/L) and lead (6.9 ug/L) in a surface water samples collected downstream of potential source areas associated with Range 7. Mr. Gabel

disagrees with this referral because the samples were collected as part of the 600 Hill Investigation and he states that lead was not targeted as a COPC or COC in that study. Since the 600 Area groundwater investigation and did not collect data from Range 7 and did not evaluate any potential source areas of contamination that may be present on Ranges 7, the Department disagrees with Mr. Gabel and agrees with the recommendations of this ORAP requiring additional investigation at Ranges 7.

5. **Range 8:** The Report refers Ranges Range 8 (the Gorge) for further evaluation due to previous detections of RDX (up to 23 ug/L) and Lead (3.58 ug/L) in a surface water and Lead in groundwater (390 ug/L) all from sample locations downstream of potential source areas associated with Range 7. Mr. Gabel disagrees with this referral because he says the data used in the report is decades old and newer data shows lower concentrations of lead and RDX. The Department disagrees with Mr. Gabel. Evaluation of the most recent data from the Gorge RCRA sampling indicates that RDX and Lead remain as contaminants of concern in groundwater and surface water downgradient of Range 8. NJDEP agrees with the recommendations of this ORAP requiring additional investigation at Range 8.

6. **Range 9:** The ORAP refers Range 9 for further evaluation due to previous detections of RDX (99.2 ug/L) in a 1996 groundwater sample and lead (6.9 ug/L) in a 1996 surface water sample. Both were collected downstream of potential source areas associated with Range 9. Mr. Gabel disagrees with this referral because the samples were collected in 1996 and evaluation of more recent RI data from this area, discussed in the 48 Site FS indicates that RDX and Lead were not present at concentrations that require a remedial action. Page 6-4 of the ORAP indicates that Range 9 is apparently collocated and completed contained within PICA 050 and which indicates that it was evaluated as part of the remedial investigation for this area. Since this Range was included in PICA 050 and has already been thoroughly evaluated in the IRP program, the Department agrees with Mr. Gabel, that additional investigation is not required at this range.

If you have any questions, please contact me at (609) 292-3007.

Sincerely,



Anne Pavelka PG, CHMM

Case Manager

Bureau of Case Management

cc: William Roach, USEPA  
Joe Marchesani, BGWPA  
Jim Kealy, BEERA