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State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Mr. James Ott
SELFM-EH-EV
Department of the Army
Headquarters CECOM Fort Monmouth
Fort Monmouth, NJ 077703-5000

Dear Mr. Ott:

APR 0 4 1996

Re: Weston Remedial Investigation Report
DERA Sites - Fort Monmouth Army Base
Tinton Falls, Monmouth County

The NJDEP has reviewed the Site Investigation Report submitted by Roy F. Weston, Inc., dated December 1995 and our comments are stated below.

GENERAL COMMENTS

Landfills. All Base landfills must comply with NJ Solid Waste Management Act N.J.A.C. 7:26-2A et seq. If Fort Monmouth is able to document that the appropriate solid waste closure procedures were followed, no additional action is required other than the DEP approved monitoring. However, if an approved closure was not performed at the landfill, it is recommended that a minimum soil cover of one foot be extended over all areas of documented disposal activities. Also, the approximate boundaries must be established and annotated in the Declaration of Environmental Restriction (DER).

Soil. Soils determined to be contaminated above Residential Direct Contact Soil Cleanup Criteria will either have to be remediated or, where appropriate (i.e. consistent with the Industrial Site Recovery Act/Hazardous Discharge Site Remediation Act 58:10B-1 et seq.), DERs will have to be established.

Ground Water. Where determined appropriate, remedial actions consistent with the Ground Water Quality Standards (N.J.A.C. 7:9-6 et seq.) must be implemented. As stated in the report, natural remediation may be the most viable option. In these instances remedial alternatives such as those stated in Section 6.6, Classification Exemption Areas (CEA), must be applied for in all areas in which ground water has been found to contain one or more constituent standard for the given classification which is not being met or will not be met in the localized area.

TICs. As agreed to in the Work Plan for these investigations, specific analysis of TAL/TCL plus 30 (TAL/TCL +30) TICs were to be performed. Reference graphs/tables for the TICs could not be located, particularly within the text. Please provide this information.

Background. Use of background samples to compare likely regional or indigenous compound levels with those found at each site are acceptable practice. However, the NJDEP does not consider "Maximum Monmouth County background" concentrations to be applicable to an area where other samples taken only feet away showed minimal compound concentrations. Where necessary and appropriate, DERs and CEAs will have to be applied to all areas where compounds are detected above NJDEP criteria.

Averaging Concentrations. Future reports must provide 95% confidence limits in place of average concentrations found.

Data Package. The attached data package (Appendix D) is confusing and appears to be incomplete and indistinct. For instance, cross-referencing samples and respective concentrations was often difficult to impossible. Samples which are shown in the text tables to be highly concentratated in some compounds appear to be reported as being at the detection limits in the Appendix. While this may be a referencing problem, it is much to difficult and time consuming. An explanation or additional will have to be provided. If the NJDEP determines that the data truly is inaccurately referenced in the Appendix, another, more readable format will have to be provided.

In addition, several samples appear to be missing (MP:MW-1, background sediment samples).

There is also a question regarding why the Contract Required Detection Limits were often higher than the applicable criteria. All such data would be concluded to potentially contain contaminants above the applicable criteria. Please explain these discrepancies. Future analytical methods must be capable of detecting to at least the applicable criteria.

Holding Times. There were numerous exceedences of required compound analysis holding times. Since future sampling will have to be performed in these areas anyway, the NJDEP will not require a resubmission of the data. The Technical Regulations for Site Remediation require that certain restrictions be placed on this data. Future exceedences will result in outright denial of data.

Data Analysis. Future analysis must reliably detect compound concentrations below the more stringent of Federal or State action levels/requirements.
The report has stated that all of the surface water and ground water samples which were determined to have detection limits which exceed the most stringent NJDEP criteria are recommended to be re-sampled. This is acceptable to the NJDEP.

Soil Averaging. In several instances it appears as though soil averaging was performed on samples from the same depths but different sites. This is not appropriate. Please refer to the guidance for all of the required parameters. Note that when the required parameters were followed, the averaged contamination was determined to be within acceptable limits.

SPECIFIC COMMENTS

1) Page 4.1-18, Line 25. Landscaping fill is not generally considered as indigenous, and therefore would not be considered as a representative background sample. Please provide some discussion as to why samples taken in landscaping fill should be considered background, if no appropriate reasoning can be provided, resampling may be required.

2) Site M-2. Page 4.2-16, Line 24. The Report states that monitor wells MW-2 and MW-3 are down-gradient of the M-2 area. With respect to figure 4.2-4, and the suggested flow of ground water in the direction of Mill Creek, monitor wells M-2 and M-3 appear to be more side gradient than down gradient of the M-2 Landfill. Clarification is required.

3) Site M-2. Page 4.2-21, Line 10. It is stated that the lead concentration exceeded the criteria in the filtered sample but was not detected above criteria in the unfiltered sample. Since this seems to be an odd occurrence, please explain how this can arise.

4) Site M-2. Page 4.2-23, Recommendations. The recommendation for long term monitoring of ground water at Site M-2 Landfill is appropriate, however DEP does not agree that the existing monitoring wells are positioned properly to intercept contaminated ground water emanating from the landfill. DEP recommends that either one additional well be added between M-2 and M-3 or as an alternative, the ground water discharging to Mill Creek must be sampled directly from beneath the stream bed utilizing either a series of stream piezometers or seepage meter sampling devices.

5) Site M-3. Page 4.2-40, Recommendations. Prior to implementing formal landfill closure procedures, it is recommended that Fort Monmouth conduct a series of borings or test pits within the suspected historical disposal area in order to determine whether soil contamination actually exists and if so, to what extent it may be acting as a source to ground water contamination. Soil samples should be collected and biased to stained or obviously contaminated soils. Laboratory analysis should include full TCL and TAL parameters plus 30 TICs.

6) Site M-4. Page 4.2-67, Line 2. The NJDEP does not recognize MW-11 as an "upgradient" well. Furthermore, the fact that the well had PCE contamination as high as 109 ppb (GWQC 1 ppb) is disturbing at the least. Such contaminant levels alert us to the fact that we have picked up an unknown source. Sources of ground water contamination other than the site landfills must be investigated and fully delineated. In order to assist in the placement of additional ground water monitoring wells, the collection of ground water samples may be conducted by use of either hydropunch or geoprobe sampling devices. Please provide some explanation and remedial action consistent with NJDEP regulations and policy.

7) Site M-4. Page 4.2-67, Line 18. The NJDEP recognizes the argument that since there are no human receptors, remedial action priority is not automatically required. However, no discussion as to the amount of risk posed to environmental receptors is mentioned or discussed. Please provide comment.

8) Site M-4. Page 4.2-67, Recommendations. As previously discussed in the General Comments section, appropriate landfill closure requirements should be addressed. Also stream sampling devices (piezometer, seepage meter sampling devices) are recommended for monitoring ground water from beneath the stream bed.

9) Site M-6. NJDEP concurs with the remedial actions proposed.

10) Sites M-8, M-12, and M-14. Each of these sites has contamination in excess of the NJDEP criteria (particularly M-8). Each landfill must meet landfill closure requirements. Hydropunch and geoprobe devices may be useful technologies in placing wells designed for long-term monitoring.

11) Sites M-15, M-16, and M-18. The NJDEP concurs with the remedial actions proposed.

12) Site AOC-3. The NJDEP concurs with the recommendation for no further action.

13) Pre-1941 Sanitary Treatment Plant (STP). Page 4.2-172, Table 4.2-21. The sediment data for STPSD-1 should be compared to both the ERL and the ERM criteria, in order to determine the severity of the sediment contaminant data within the range of sediment guidance values. Discussion and results should be provided as appropriate.

14) Site CW-1, CW-2, CW-3 and CW-3A. NJDEP concurs with the recommendations for these areas. However, it is suggested that Fort Monmouth consider the use of a geoprobe or hydropunch ground water sampling method rather than the soil gas approach.

15) Page 4.3-69, Line 7; Page 4.3-83, Line 11. See general comment "soil averaging".

16) Site CW-4, CW-5, CW-6, and CW-9. NJDEP concurs with the recommendations proposed for these areas.

17) Page 4.3-88, Line 22. Please explain why samples were not taken at the surface, but rather from intervals ranging from 8-14 feet below ground surface. The NJDEP approves the no further remedial action proposal for site AOC-7.

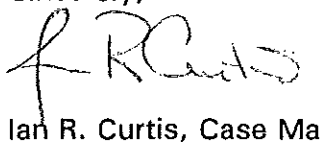
18) Page 4.3-94, Table 4.3-16. Sample CW07-TR01 showed soil contamination above the impact to ground water soil cleanup criteria. Remedial actions proposed for the Charles Wood PCB Transformers should take impact to ground water potential into account when soil removal is performed. Ground water monitor wells are not necessarily required unless further investigations dictate. The proposed remedial actions are acceptable to the NJDEP.

19) Page 5-18, Lines 7 to 10. As confusing as these sentences were, the NJDEP has determined that 59% of the soil duplicate results were within 10% of the routine sample. This is in no way "reasonable agreement". Please provide an explanation and comment.

20) Appendix D, Page 12. Excessive holding times for analysis are noted in this table. A discussion on the effects that this will have on the results should be provided.

As we have discussed in the past, I would like to review these comments with you prior to getting a formal response. If you should have any questions or require any additional information, please do not hesitate to contact me at (609) 633-7232.

Sincerely,



Ian R. Curtis, Case Manager
Bureau of Federal Case Management

c. John Prendergast, BEERA