



**State of New Jersey**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Remediation Management & Response  
P.O. Box 413  
Trenton, New Jersey 08625-0413

JON S. CORZINE  
Governor

LISA P. JACKSON  
Commissioner

October 24, 2007

Mr. Joseph Fallon, CHMM  
Directorate of Public Works  
ATTN: IMNE-MON-PWE  
167 Riverside Ave.  
Fort Monmouth, NJ 07703

RE: Remedial Investigation Report and Remedial Action Workplan  
Site 283  
Fort Monmouth, NJ

Dear Mr. Fallon:

The NJDEP Division of Remediation Management & Response (DRMR) has completed its review of the report titled "Remedial Investigation Report and Remedial Action Workplan, Site 283", dated October 28, 2005, by Versar Inc. Our comments are attached.

NJDEP approves the proposed injections of oxygen release compound (ORC) to accelerate the degradation of volatile organic contamination in ground water at Site 283, based upon our review of the RIR and RAW. However, we have several requirements regarding additional investigation of the site, as outlined in the attached comments.

This approval letter shall constitute a permit-by-rule for discharges to ground water in accordance with N.J.A.C. 7:14A-7. This permit-by-rule will be in effect for 180 days, commencing at the start of the proposed injections of ORC at Site 283.

You or your staff may contact me at 609-633-0766 with any questions on the enclosed comments, or any other site remediation matters at Fort Monmouth.

Sincerely,

Larry Quinn, P.E., CHMM, Case Manager  
Bureau of Design and Construction

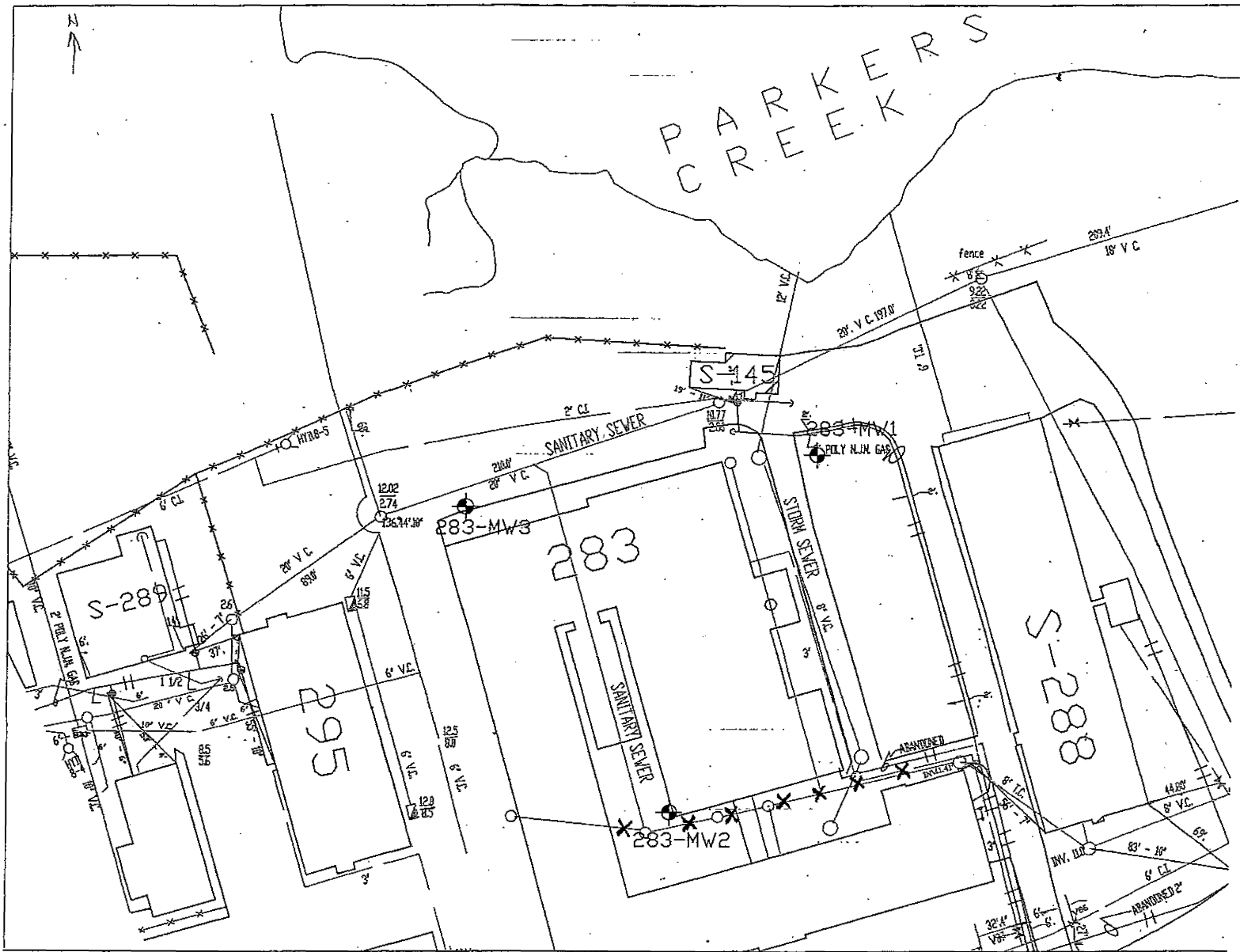
Attachment

**NJDEP COMMENTS ON**  
**RI REPORT and RA WORKPLAN for SITE 283**  
**FORT MONMOUTH, NJ**

1. General. The NJDEP finds the proposed remedial action of ORC injection at the Site 283 source area to be acceptable. However, the approval is given under the condition that additional remedial investigations shall also be conducted as outlined in the comments below. These investigations can be conducted concurrently with the proposed remedial action.
2. Section 2.4.2 (Hydrogeology): The report identifies tidal influence as one of the factors that could be influencing shallow ground water flow. Fort Monmouth shall comment on whether a tidal study was ever performed pursuant to N.J.A.C. 7:26E-3.7(e)3iv(3). If a tidal study has not been conducted, Fort Monmouth shall conduct a tidal study.
3. Section 3.2 (Ground Water Sample Collection Activities): The report states that sampling and decontamination procedures were conducted in accordance with the December 1997 Fort Monmouth Standard Sampling Operating Procedure. All future sampling procedures and equipment decontamination must be conducted pursuant to the most recent version of the NJDEP Field Sampling Procedures Manual per the requirements of N.J.A.C. 7:26E-4.4(d).
4. Section 3.2 (Ground water Sample Collection Activities): The report is deficient pursuant to N.J.A.C. 7:26E-4.8(c)7. Information regarding the purging and sampling of the monitoring wells was not provided in the report. At a minimum, the purging and sampling information for the last 4 quarters of sampling must be submitted to NJDEP. The information should be submitted for all 21 sampling events if available on compact disc.
5. Section 5.1 (Ground Water Sampling Results): The ground water investigation was deficient pursuant to N.J.A.C. 7:26E-2.1(c). Fort Monmouth failed to analyze ground water samples obtained from the monitoring wells for MTBE and TBA. The tank removed from Site 283 contained gasoline. Therefore, MTBE and TBA analysis is required for future sampling rounds of all Site 283 wells.
6. Section 5.1.1 (VOCs): The report states that the NJDEP has no criteria for VOC TICs in ground water. The Ground Water Quality Criteria for VOC TICs are as follows: 100 ppb for individual TICs, and 500 ppb for total TICs.

**NJDEP COMMENTS ON**  
**RI REPORT and RA WORKPLAN for SITE 283**  
**FORT MONMOUTH, NJ (continued)**

7. Vapor Intrusion. Pursuant to N.J.A.C. 7:26E-4.4(h)3viii., Fort Monmouth is deficient in not evaluating Building 283 and adjacent subsurface utilities for vapor hazards associated with contaminated ground water. A vapor intrusion investigation is warranted based on the concentrations of benzene found in well 283-MW2. Fort Monmouth shall refer to the Department's October 2005 Vapor Intrusion Guidance Document for conducting a vapor intrusion investigation. The document is available online at [www.state.nj.us/dep/srp/guidance/vaporintrusion/](http://www.state.nj.us/dep/srp/guidance/vaporintrusion/).
  
8. Sanitary Sewer. Pursuant to N.J.A.C. 7:26E-4.4(e), Fort Monmouth was deficient in not properly locating all ground water sampling points. A 20-inch diameter sanitary sewer is located near the former UST location and well 283-MW2. The cross section on Figure 4-2 shows the sewer located below the water table. It is likely that the soils surrounding the sewer pipes are more permeable than the silty clays, fine sands and clayey silts identified in the boring logs for well 283-MW2. Ground water could be flowing preferentially along the sewer lines. Therefore, Fort Monmouth must install and sample well points along the sanitary sewer to the east and west of monitoring well 283-MW2. The approximate locations of the well points recommended by NJDEP are shown on the attached figure. Fort Monmouth shall submit a remedial investigation workplan pursuant to the applicable requirements of N.J.A.C. 7:26E-4.2. If the results of the investigation show contaminant migration along the sewer, complete delineation via additional well points and/or monitoring wells will be required.
  
9. Parkers Creek: Because of the proximity of ground water contamination to Parkers Creek, a surface water and sediment investigation and a Baseline Ecological Evaluation must be conducted in accordance with the applicable requirements of N.J.A.C. 7:26E-4.5 and 4.7. NJDEP understands that Fort Monmouth is considering an overall investigation/evaluation of Parkers Creek (and possibly Mill Creek and Lafetra Creek) that will address all potentially-contributing AOCs including Site 283 and the M-18 Landfill. NJDEP concurs with that approach.



X Location of well points recommended by BGWPA for sanitary sewer investigation