

**Technical Review Panel (TRP)  
Decision Document  
Site Remediation and Waste Management Program**

Technical Review Request #4

Panelists: Barry Frasco, Assistant Director, Hazardous Site Science Element  
Ed Putnam, Assistant Director, Remedial Response Element  
Kevin Kratina, Acting Assistant Director, Responsible Party Remediation Element

Remediating Party: Shell Oil Products, US  
Consultants: Geologic Services Corporation  
8A South Gold Drive  
Hamilton, NJ

Date of Request: 11/26/03  
Date of Meeting: 2/24/04

Site Address: Shell Service Station  
Route 46 East and Franklin Avenue  
Rockaway, Morris County  
Incident Number: 90-01-03-1336  
PI#:003471

**Background:**

This case came to the Department's attention as a result of gasoline contaminated soils discovered during the removal of a waste oil UST. Subsequent ground water monitoring wells installed in April 1990 showed total BTEX up to 98,000 ppb and MTBE up 34,900 ppb. Multiple rounds of soil samples have been collected to evaluate the tank field, piping runs, dispenser islands and to delineate the soils showing elevated xylene contamination located near the former dispensers. In addition, eight monitoring wells and one temporary well point have been installed and an additional monitoring well on a downgradient service station property have been used for delineation purposes. This site continues to operate as a retail service station with three active 10,000 gallon, fiberglass, gasoline underground storage tanks.

**Disputed Technical Issues Per the Technical Review Request**

As part of a 1999 Remedial Action Workplan approval, the Department requested a vertical delineation well. A narrow diameter point was installed and was sampled from 28'-30'. Total BTEX was detected at 6.2 parts per million (ppm). In response, the Department requested three additional sampling points; one at the location of the temporary well point at a depth of 25'-30', one downgradient of the temporary well point at a depth of 25'-30' and another vertical point 35'-40' at the same location of the temporary well point. Shell installed the deeper vertical delineation point (MW-9R) at

the location of the temporary well point and sampled the interval from 35'-40'. Three rounds of data from MW-9R were below the state's Ground Water Quality Standards. Shell continued to dispute the need to install a further downgradient vertical delineation point citing the results showing levels below the GWQS obtained from the shallower downgradient monitoring wells screened across the water table (MW-7, MW-8 and Hess Well 4). Shell also raised the concern for the active case associated with the downgradient service station. Shell claims that the original results from the temporary well point were either artificially high or have degraded over time as evidenced by the results from the deeper results from MW-9R. Combined with the decreasing results from other wells, Shell requested no further action.

### **Decision of the Technical Review Panel**

The Technical Review Panel agrees that vertical delineation at the temporary well point has been accomplished with the installation of MW-9R and that monitoring wells MW-7, MW-8 and Hess Well 4 provide horizontal delineation across the water table. However, there are no downgradient monitoring wells screened vertically below the water table and none downgradient comparable to the temporary well point or MW-9R. The Technical Review Panel offers Shell the option of either:

- 1) installing a well screened from 35' - 40' at the location of Hess Well 4; or
- 2) install a boring as far downgradient on the corner of the Shell property at the intersection of Franklin Avenue and Route 46 and vertically sample the ground water at the intervals 28' - 30', 35' - 37' and 43' - 45'. If no contamination is discovered leaving the Shell property as a result of this vertical profiling, further downgradient well installation would not be required.

As part of this decision, the TRP did not discount the results obtained from the temporary well point at 28' - 30' as Shell proposed. In addition, successful implementation of any natural remediation compliance program insures confirmation of vertical and horizontal delineation and the degradation of any identified contamination. In this case, there are no downgradient points screened deeper than Hess Well 4 and it is unknown if contamination seen in MW4, MW5, MW6 or the temporary well point could be migrating below Hess Well 4. The above options should provide the data to insure that either contamination is not leaving the site at the selected deeper intervals or that it is fully defined at depth in the vicinity of Hess Well 4.