Pinellas Environmental Restoration Project
Northeast Site
Non-Aqueous Phase Liquids
Interim Measures Progress Report
April through June 2006

July 2006
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1.0 Introduction

This quarterly report for the in-situ thermal remediation of non-aqueous phase liquids (NAPL) at the Northeast Site covers the period of April through June 2006. Previous reports provided background information for the site, a description of the remediation process, and a description of planning, construction, and operations activities for the treatment system at NAPL Area B (Figure 1).

The subcontract for Area B NAPL remediation was awarded to the team of WRS Infrastructure and Environment, Inc., McMillan-McGee Corporation, and PPM Consultants, Inc. in late February 2004. The subcontractor completed the final conceptual design for Area B NAPL remediation in early April 2004, and this was submitted to Florida Department of Environmental Protection (FDEP) in mid-April as the Addendum to the Interim Measures Work Plan for Remediation of Non-Aqueous Phase Liquids at the Northeast Site (Area B Conceptual Design) (DOE 2004). FDEP approval of this document was received in June 2004. Final design drawings were submitted to FDEP at the end of June 2004. Construction activities began in early July 2004. Construction was completed in early August 2005, and operations began in mid-August 2005. All heating operations were completed by May 15, 2006. Cool down operations were completed on June 9, 2006, and all system operations ended on June 12, 2006.

2.0 Summary of Activities

Active heating was originally scheduled to end by late February 2006, but interim soil and ground water sampling data indicated that isolated areas of elevated contaminant concentrations remained at that time. Therefore, operations continued, with the strategy of focused heating and vapor extraction at the isolated areas. Additional data collected at the end of March indicated that the numerical remediation goals had been met, thereby ending the maintenance phase of heating operations.

Although the remediation goals had been met by the end of March, significant contaminant mass was still being recovered from the subsurface, mainly in the vapor phase. Therefore, DOE decided to continue with heating isolated areas of elevated contaminant concentrations. Concurrent with the extended heating operations, cool down of the remainder of the remediation area began. Cool down operations consisted of continued extraction of vapor and ground water, with the goal of cooling the subsurface to below 100 °C. Extended heating of isolated areas ended on May 15, 2006. Cool down operations were completed on June 9, 2006, and shut down of the entire system occurred on June 12.

Measurements of the flow rate of vapor and ground water from the subsurface are used along with weekly laboratory analytical data to estimate the mass of contaminants removed from the subsurface. At the end of operations, approximately 14,000 pounds of contaminants had been recovered in the vapor phase and 4,000 pounds of contaminants had been recovered in the ground water, for a total of approximately 18,000 pounds of contaminants removed.
2.1 Confirmatory Sampling

Currently, confirmatory sampling is being conducted to verify that remediation goals were met throughout the remediation area. Confirmatory sampling consists of collection of soil and groundwater samples from the interior and the perimeter of the remediation area.

Following completion of cool down activities, 32 confirmatory monitoring wells were installed at random locations within the remediation area. Three ground water sampling events will be conducted: an initial event approximately 6 weeks after active heating of the entire area has stopped, followed by 12-week and 24-week sampling events. The 12 perimeter wells will also be sampled during each of the three events. The first confirmatory ground water sampling event was conducted in late June and early July 2006.

The confirmatory soil sampling event will be conducted in two stages: eight perimeter soil borings and two soil borings under Building 1400 will be collected during installation of the monitoring wells, just after cool-down is complete, and the 32 interior soil borings will be collected approximately 8 weeks after the end of active heating. The eight perimeter soil borings and two soil borings under Building 1400 were collected in late May 2006.

3.0 Deviations

No deviations were encountered during this quarter.

4.0 Problems

No problems were encountered during this quarter.

5.0 Upcoming Activities

Confirmatory sampling will continue. The interior soil borings samples will be collected in early to mid July 2006. The second ground water sampling event is scheduled for August 2006. The third ground water event is scheduled for late September 2006.

6.0 References

Figure 1. NAPL Area B Remediation System Layout