

MEMORANDUM

**TO: RIVANNA SOLID WASTE AUTHORITY
BOARD OF DIRECTORS**

FROM: THOMAS L. FREDERICK, EXECUTIVE DIRECTOR

SUBJECT: IVY LANDFILL ENVIRONMENTAL STATUS UPDATE

DATE: JULY 28, 2008

Corrective Action Plan (CAP)

DEQ approved the amendment to Permit 125 incorporating the CAP on October 29, 2004. The groundwater elements of the CAP started with a pilot study of engineered, enhanced bioremediation (EBR) in the vicinity of MW-17, along with intrinsic bioremediation (IBR) at the remaining GPS-exceeding wells. Following the results of the pilot study, the CAP was designed to move toward site-wide implementation of EBR. Additionally, the CAP incorporated components to provide specific remedial efforts in the Paint Pit Area (Paint Pit Interim Measure), to monitor surface water during CAP implementation, and to monitor and evaluate the Pump and Treat System (PTS), located on the western side of the landfill, until EBR were implemented in that area.

EBR

The implementation and monitoring of the full-scale EBR program continues as per the VA DEQ-approved Corrective Action Plan. The injection program has been active since October 2007. Groundwater samples to evaluate the performance of the injection program have been collected on a monthly basis. **Insufficient analytical data has been collected and too-short a period of time has elapsed to provide adequate information on the performance of the program as yet.**

IBR

In situ Bioremediation (IBR) which was used as an interim remedial measure prior to EBR implementation has been discontinued as per the CAP. Environmental Standards has prepared a summary report (a Corrective Action Site Evaluation [CASE] report) that has been submitted to VA DEQ. As yet, no response by VA DEQ has been received.

Paint Pit Interim Measure (Soil-Vapor Extraction System)

The purpose of the SVE is to proactively extract volatile organic compounds (VOCs) from the soil in the Paint Pit area to prevent further contamination of groundwater. This is accomplished by pulling vapors from the soil and through a flare design to destroy the VOCs. The SVE has been running since October 20, 2006 and is undergoing periodic maintenance and monitoring activities as required under the VA DEQ Operating Permit. Environmental Standards continues to maintain and operate the SVE system. Current activities include successful efforts to reduce the quantity of supplemental propane usage by the system. The purpose of this effort will be to reduce operational cost and maximize the environmental benefit of the system. **The SVE system continues to be operated to maximize destruction of organic vapors from the Paint Pit area.**

Surface Water

The specific objectives of the Surface Water Monitoring Program proposed in the CAP are to evaluate and document the chemical, physical, and biological integrity of the surface water and define the overall ecological integrity of the Site's surface water system. **The efforts are underway to collect Summer 2008 surface water samples and conduct the visual survey of Broad Axe Creek.**

PTS

The operation and maintenance of the existing pump and treat system (PTS) located on the western border continues to be monitored. Results of PTS monitoring and system upgrades have been presented to VA DEQ in quarterly Site Evaluation Reports (SER). As part of the VA DEQ-approved CAP, operation of portions of the PTS has been discontinued. These consist of the Interceptor Trench and the 9 groundwater pumping wells. The rationale for their removal from the system is that their operation would interfere with the successful deployment of EBR, which is now active in this area. The sole remaining active portion of the PTS consists of the Underdrain collection system and the air stripper treatment system. VA DEQ-required monitoring and reporting of this component of the PTS continues

Non-CAP Groundwater Monitoring

The Fall groundwater monitoring event has been completed and the VA DEQ-required semiannual and annual reports have been submitted. **The Spring 2008 compliance groundwater monitoring event has been completed and reports have been submitted to VA DEQ.**

Cell 3 and Leachate Collection and Treatment System

As a result of higher than normal leachate levels discovered in Cell 3-Lined and Cell 3-Unlined, RSWA authorized the design of a new leachate collection system for these cells. When sampling of this leachate confirmed that it contained a high biochemical oxygen demand and ammonia concentration, a proposal to install a package pretreatment unit for biodegradation and odor control of this leachate was also developed. The intent of this program is to further the aims of the site bioremediation program and odor abatement program by restoring normal leachate and gas management to these two waste cells. These proposed improvements require a Major Permit Amendment from VA DEQ, and the application was filed in December 2006. VA DEQ completed its technical review of the application in October 2007 and initiated a public review process in January that ended on March 14. **Notification of the Approval of the Major Permit Amendment was received from VA DEQ on March 18, 2008. Activities are currently underway to prepare for the installation of the horizontal drains in Cell 3-Lined and Cell 3-Unlined in the late summer timeframe.**

Gas System Upgrade and Ambient Air Sampling

The Authority completed the Gas System Upgrade to connect the remaining passive gas wells on the site to the active collection system in November 2006. Maintenance activities are ongoing.

Following the completion of the Gas System Upgrade, the ambient air sampling was expanded from annual to quarterly for one year and confirmed that the project was very successful in improving odor control for the site. Ambient air sampling is now back on an annual schedule with the next sampling scheduled for approximately August 2008. **No change in status.**