

**REGULATORY COMPLIANCE SUBMISSIONS
AND
POST-CLOSURE CARE MAINTENANCE ACTIVITIES
AT THE GUDE LANDFILL**

A summary description of recent MDE regulatory compliance submissions and site maintenance activities are provided below for the Gude Landfill:

- Stormwater Compliance at Outfall 006 – During a January 23, 2009 site inspection, MDE and DSWS representatives identified a potentially non-compliant stormwater discharge located along the southeast property boundary of the Gude Landfill. Specifically, the location was at the HDPE Manhole that collects stormwater and discharges to Outfall 006. Outfall 006 discharges to Southlawn Branch Stream. The potentially non-compliant stormwater discharge was documented in an inspection report by MDE and provided to DSWS. DSWS submitted a corrective action work plan to MDE via email on February 2, 2009 to investigate and correct the potentially non-compliant stormwater discharge as well as perform stormwater and surface water sampling and laboratory testing.

The sampling was conducted on February 2, 2009. The sampling results were received on March 11 and indicated several exceedences (chlorides, iron, and manganese) for only secondary maximum contaminant levels (MCLs), which are not considered compliance violations. The corrective action work plan was implemented and completed during February 24-25, 2009. Weekly inspections were performed during February and March to document existing conditions at Outfall 006, which were recorded and provided to MDE in a March 12, 2009 letter along with the sampling results and corrective actions.

During the March 27, 2009 site inspection, the DSWS representative documented flow entering the HDPE Manhole through the previously capped 4-inch drain line penetration. On April 9, 2009 this area adjacent to the HDPE Manhole was hand-excavated. The PVC cap on the 4-inch drain line was found to be cracked, thus allowing subsurface drainage to enter the Manhole. Each end of the 4-inch drain line and penetration through the HDPE Manhole were filled with concrete and capped. Following capping, the outer 4-inch drain line extension was encased with concrete to provide a permanent seal. The HDPE Manhole was also cleared of all vegetative debris. In an April 15, 2009 site visit, MDE observed the corrective measures and noted in an April 17, 2009 email that no further corrective action at Outfall 006 is needed at this time. EA Engineering may perform additional sampling as necessary at this location for the Nature and Extent Study. Site inspections at Outfall continued through the remainder of March – April. DSWS provided a summary report to MDE on April 23, 2009.

- Landfill Gas Monitoring Plan – A DSWS Contractor (SCS Engineers) performed a Surface Fugitive Emissions Scan on December 2-3, 2008. DSWS received a letter from MDE dated December 12, 2008 requiring the submission of a formal plan for monitoring landfill gas along the Gude Landfill property boundary. DSWS submitted the Landfill Gas Monitoring Plan (LFGMP) to MDE on February 10, 2009. The LFGMP was developed in accordance with MDE requirements and Code of Maryland Regulations (COMAR) – 26.04.07.03B(9). DSWS received MDE comments on the LFGMP in a letter dated March 2, 2009. A DSWS Contractor (SCS Engineers) performed a Bar Punch

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Study on March 3-5, 2009 and submitted Amendment No. 1 to the LFGMP on April 2, 2009 to comply with MDE comments on the Plan. DSWS received one final comment from MDE via email on the LFGMP on April 15, 2009 regarding the placement of three (3) additional landfill gas monitoring wells. DSWS transmitted the required documentation to MDE via email on April 15 (considered to be Amendment No. 2 to the LFGMP). DSWS received official approval of the LFGMP from MDE on April 22, 2009.

- Groundwater and Surface Water Monitoring Plan – DEP received a letter from MDE dated January 28, 2009 requiring the submission of a formal plan for groundwater and surface water monitoring at the Gude Landfill. DEP submitted the Groundwater and Surface Water Monitoring (G&SWM) Plan to MDE on March 27, 2009. DEP is awaiting MDE's comments and concurrence with this Plan. The G&SWM Plan was developed in accordance with MDE requirements and COMAR – 26.04.07.08B (17) and 26.04.07.09F.

The G&SWM Plan incorporates all of the chemical substances recommended in the January 28, 2009 letter from MDE as provided in Tables 1 and 2. The existing groundwater and surface water monitoring program currently implemented by DEP for that past 20 + years has a more comprehensive list of chemical substances (e.g. pesticides) that have been analyzed for over the years, but have not been detected. The new G&SWM Plan would allow DEP to remove these other substances from the monitoring requirements and laboratory testing. The new G&SWM Plan will also require re-sampling to verify any indication of new or significantly increased MCLs, action levels, or other health standard exceedences, as well as notification to MDE. Semi-annual reporting of all monitoring results to MDE is also a new requirement.

- Post-Closure Care Maintenance Activities – During a February 12, 2009 site inspection, MDE and DSWS representatives identified two leachate seeps: one located on the northwest slope (Leachate Seep #1) and one located on the southeast slope (Leachate Seep #2) of the Gude Landfill. The leachate seeps were documented in an inspection report by MDE and provided to DSWS. In accordance with MDE timelines for corrective action, the repairs to the leachate seeps were performed during February 16-20, 2009.

DSWS received a letter from MDE dated February 24, 2009 requesting that DSWS immediately repair any active or reoccurring leachate seeps at the Gude Landfill. An area holding ponded stormwater was also regraded during the same time period as the leachate seep repairs on the northwest slope. A summary of the above referenced leachate seeps and site grading repairs were transmitted to Mr. Edward Dexter of MDE in a March 5, 2009 letter from DSWS.

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MDE re-inspected Leachate Seep #1 on March 27, 2009 following a recent rain event that occurred on the previous day. The area encompassing Leachate Seep #1 was damp and there were minor expressions of leachate below the erosion control matting. Vegetative cover was just beginning to grow as the original repairs were performed approximately one month prior. DSWS provided a written response to MDE in an email dated April 2, 2009 to address the re-seeping at this location on the northwest slope. The area encompassing Leachate Seep #2 was also re-inspected on March 27 and was noted to be damp with vegetation cover starting to grow. There was no evidence of leachate seepage in this area.

MDE and DSWS met on-site on April 15, 2009 to review alternative corrective actions for Leachate Seep #1. During the site visit, MDE observed damp conditions and minor expressions of leachate at this location following recent rain events; however, there was no evidence of leachate migrating beyond the landfill property. DSWS will initiate site grading improvements to improve surface stormwater drainage off of the landfill soil cap to reduce the potential for infiltration. DSWS will also continue to monitor existing conditions at Leachate Seep #1 to observe if the regrading activities eliminate the leachate seep. If existing conditions worsen at Leachate Seep #1, DSWS shall coordinate with MDE to review and implement further alternative corrective measures.

During the April 15, 2009 site visit, MDE observed no evidence of leachate seepage in the area encompassing the stormwater site regrading repairs; however, EA Engineering may perform additional investigations with respect to potential leachate impacts for the Nature and Extent Study. Also during the April 15 site visit, MDE also observed the non-vegetated area along the gas line right-of-way near Crabbs Branch Stream. There was no evidence of leachate seeping at this location; however, EA Engineering may perform additional investigations of the area with respect to potential leachate impacts and stream sampling for the Nature and Extent Study. There was evidence of tire rutting in this area, which has allowed minor amounts of stormwater to collect in the vicinity.

DSWS will continue to perform best management practices for post-closure care at the Gude Landfill during the Remediation Project for: stormwater management, landfill gas management, erosion and sedimentation control, leachate seep corrections, and good house-keeping.