



DEPARTMENT OF ENVIRONMENTAL PROTECTION

Isiah Leggett  
*County Executive*

Robert Hoyt  
*Director*

April 29, 2009

Martha Hynson, Chief  
Landfill Operations Division  
Solid Waste Program  
Maryland Department of the Environment  
1800 Washington Blvd., Suite 605  
Baltimore, MD 21230-1719

Re: Gude Landfill – Remediation Approach

Dear Ms. Hynson:

In accordance with your letter dated January 28, 2009 to Mr. David Lake and our February 26, 2009 meeting, the Montgomery County Department of Environmental Protection (DEP), Division of Solid Waste Services (DSWS) is providing our formal approach to remediation at the Gude Landfill for review and approval. This remediation approach complies with the 90 day submission deadline (i.e. April 30, 2009) from receipt of the January 28, 2009 letter. The initial phase of the remediation approach will include Field Survey, Waste Delineation, and a Nature and Extent Study to assess any potential adverse environmental effects from the low level groundwater contamination at the site and other potential environmental releases to surface water and the atmosphere. The Gude Landfill is located at 600 E. Gude Drive in Rockville, Maryland.

Provided below is our remediation approach, which is divided into several subheadings: Project Sequence and Schedule, Technical Support, Project Funding, and Coordination with the Maryland Department of the Environment (MDE), Community and Other Jurisdictional and Public Agencies. We have also provided a subheading to reference recent regulatory compliance submissions and post-closure care maintenance activities.

**Project Sequence and Schedule**

The principal phases of the Gude Landfill remediation approach are outlined below, including a preliminary schedule for implementation and completion:

---

Division of Solid Waste Services

16101 Frederick Road • Derwood, Maryland 20855 • 240-777-6560 • 301-840-2385 FAX  
[www.montgomerycountymd.gov/solidwaste](http://www.montgomerycountymd.gov/solidwaste) • Located at the intersection of Route 355 and Shady Grove Road

 printed on recycled and recyclable paper

Phases of Work for Remediation	Preliminary Schedule	Duration
0. Survey and Limit of Waste Delineation	May 2009 – July 2009	3 Months
I. Nature and Extent Study	June 2009 – November 2009	6 Months
II. Remediation Alternatives Investigation and Preparation of Formal Remediation Plan <sup>(1)</sup>	December 2009 – May 2010	6 Months
III. Prepare Design, Permitting, and Construction Bid Documents for Selected Remediation Alternative(s). This work may be phased <sup>(1)</sup>	June 2010 – August 2011	15 Months
IV. Construction of Stage I Remediation Work <sup>(2)</sup>	September 2011 – August 2012	12 Months
V. Construction of Stage II Remediation Work <sup>(2)</sup>	September 2012 – August 2013	12 Months
VI. Construction of additional Stages of Remediation Work and Site Reuse Options <sup>(2)</sup>	Schedules to be determined	---

- 1) Schedule may be affected by budget review and approval process, permitting reviews and approvals, public coordination efforts, and other unforeseen public obligations. Actual durations may be shorter or longer depending on such factors.
- 2) While the specific remediation work and site reuse options are not defined yet, this schedule recognizes a phased implementation with respect to professional services, funding and construction that will be updated after review of the remediation work with MDE.

Document review and comment time for MDE, Community, and other applicable Jurisdictional and Public Agencies is incorporated into the remediation approach schedule. A formal remediation plan for implementation will be developed and submitted to the MDE following the Nature and Extent Study (Phase I) and the Remediation Alternatives Investigation (Phase II).

**Technical Support**

DEP/DSWS has an Intergovernmental Agreement (IGA) in place with the Northeast Maryland Waste Disposal Authority (Authority) to provide “technical, engineering, operations, procurement and marketing assistance to the County with respect to the County’s Solid Waste Management System and in furtherance of the County’s solid waste activities.” The Authority has several pre-qualified firms under contract with expertise in hydrogeology, surveying, landfill design, permitting, construction, closure and remediation. DEP/DSWS and the Authority are in the process of securing a specific proposal and cost from EA Engineering, Science, and Technology (EA Engineering) to take the principal role in the Nature and Extent Study and the identification of remediation alternatives. The County has divided the initial assessment into two initial work phases that will overlap: Aerial Survey, Field Survey, and Limits of Waste Delineation; and the full Nature and Extent Study. Copies of the Scope of Work for each work segment are enclosed as Attachments 1 and 2 to this letter.

DEP/DSWS also has SCS Engineers under contract for landfill gas monitoring and collection system maintenance services, including operation and maintenance of the existing enclosed Flare Station. SCS Engineers is also currently in the construction phase for the Landfill Gas-to-Energy Facility at the Gude Landfill, which previously received a permit-to-construct by the MDE Air and Radiation Management Administration (ARMA) on September 5, 2008. In addition, as noted in the Landfill Gas Monitoring Plan (LFGMP), upon official approval of the

plan by MDE (received April 22, 2009), SCS Engineers will be authorized to initiate design and installation of 24 new landfill gas monitoring wells along the landfill perimeter property boundary. The existing contractual arrangements with the Authority and SCS Engineers will allow DEP/DSWS to initiate the respective activities of the Nature and Extent Study and the landfill gas monitoring well work without delay.

### **Project Funding**

With respect to financial commitments, DEP/DSWS has already reallocated \$1.3 million dollars of FY09 funds to cover costs associated with the Survey and Waste Delineation, Nature and Extent Study, and the Remediation Alternatives Investigation. Approximately \$200,000 of FY09 funds have also been allocated for use under an existing contract with SCS Engineers for the installation of the 24 new landfill gas monitoring wells along sections of the landfill perimeter property boundary not already served by existing landfill gas monitoring wells. DEP/DSWS will be working with the staff of the County Executive and County Council to develop a Capital Improvement Program (CIP) Project Description Form (PDF) to plan the resources required for the remediation of the Gude Landfill. This will happen later in FY10, after the Nature and Extent Study has been completed and a remediation alternative selected, so we can better estimate the cost and duration of the project. The PDF will include a funding schedule that presents capital and maintenance costs over the subsequent six (6) years.

### **Coordination with MDE, Community and Other Jurisdictional and Public Agencies**

DEP/DSWS is currently working closely with MDE on site inspections, repairs, and the development and approval of formal plans for Landfill Gas Monitoring (approved April 22, 2009) and Groundwater and Surface Water Monitoring (currently under review by MDE). DEP/DSWS will continue to work closely with MDE to create a baseline schedule to outline submission requirements for other potential plans, documentation, and timelines for work related to the remediation approach.

DEP/DSWS is maintaining regular communications with the Gude Landfill Concerned Citizens (GLCC) group and is incorporating funds for public presentations and meetings in upcoming contract work for the Nature and Extent Study. DEP/DSWS will also coordinate the development of the formal remediation plan, to be provided in greater detail after the Nature and Extent Study is completed, with the Maryland-National Capital Park and Planning Commission (M-NCPPC). This will be incorporated into the Mandatory Referral process, including the consideration of potential future site uses with the remediation plans. The County Executive and County Council will also play an integral role in proposing future uses for the site and seeking public input through public hearings on the CIP project and other forums.

### **Regulatory Compliance Submissions and Post-Closure Care Maintenance Activities**

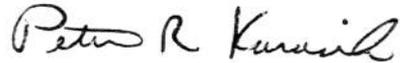
A summary description of recent MDE regulatory compliance submissions and site maintenance activities for the Gude Landfill are provided in Attachment 3. DSWS will continue to perform best management practices for post-closure care at the Gude Landfill during the

Ms. Martha Hynson  
April 29, 2009  
Page 4 of 4

remediation project for: stormwater management, landfill gas management, erosion and sedimentation control, leachate seep correction, and good house-keeping.

Please contact me at 240-777-6569, or at [peter.karasik@montgomerycountymd.gov](mailto:peter.karasik@montgomerycountymd.gov) if you have questions or comments concerning this letter.

Sincerely,



Peter R. Karasik, P.E.  
Section Chief, DEP/DSWS Central Operations

PRK:pk/gudelf\_remediation\_approach (4-29-09).doc

Enclosures

cc: Karen Kumm Morris, Maryland-National Capital Park and Planning Commission  
Keith Ligon, Gude Landfill Concerned Citizens  
Robert Hoyt, Director, Department of Environmental Protection  
Daniel Locke, Chief, DEP/DSWS  
David Lake, Special Assistant/Office of the Director, DEP  
Stephen Lezinski, Engineer III, DEP/DSWS

**ATTACHMENT 1**



**SCOPE OF WORK  
FOR  
AERIAL SURVEY, FIELD SURVEY AND LIMIT OF WASTE DELINEATION  
AT THE GUDE LANDFILL**

EA will subcontract and manage an aerial survey/mapping firm and a professional land surveying firm to provide the services detailed in this scope of work. Applied Mapping Solutions will coordinate the aerial photography and provide mapping services. J.A. Rice will perform property research and field surveying, including setting targets for the aerial photogrammetry, a metes and bounds survey, and surveying site features that aerial photogrammetry cannot capture.

For the survey, the horizontal datum will be NAD 83, the vertical datum will be NAVD 88, and the coordinate system will be Maryland State Plane (feet).

**Task 1 – Aerial Photography and Mapping**

Task 1 will begin as soon as Notice-to-Proceed is issued so the aerial photography can be taken as soon as possible. The aerial photography is most effective when there is no foliage on the trees. Specific scope items include:

- Establish targets and ground controls needed for the aerial survey within one week of NTP. Provide graphical representation of area for aerial survey for approval by county before flyover (showing the limit of mapping).
- Perform aerial photography of Gude Landfill at an approximate photo scale of 1"=450', using high resolution, high precision, photogrammetric aerial camera. The photography will cover the area shown in blue in the attached figure, "Gude Landfill Control."
- Provide geo-referenced, color TIF of site at 1-ft pixel resolution. Provide 2 CD-ROMs of the electronic photo for review before any hardcopies are provided.
- Provide 2, 36" x 48" aerial photos mounted on gator board and PDFs of photos, based on the coverage requested by the County after review of the electronic photos. Photos to be geo-referenced.
- Map site physical and topographic features, including:
  - 1"=100' mapping with 2-ft contours within site and to 500-foot limit beyond property boundary
  - Visible and identifiable features to be collected include:
    1. Buildings and other structures (including fence and building corners of the enclosed stack flare station and former power plant building.
    2. Fence lines.
    3. Tanks and major pieces of stationary equipment.
    4. Utility poles and visible utilities (manholes, etc.).
    5. Stockpiles.
    6. Edge of roads, trails, paved areas, and gravel areas.
    7. Grade breaks/tops and bottoms of slopes and mass points to support generation of contours at 2' intervals, to meet National Map Accuracy Standards.
    8. Roadways and rail lines.

**SCOPE OF WORK  
FOR  
AERIAL SURVEY, FIELD SURVEY AND LIMIT OF WASTE DELINEATION  
AT THE GUDE LANDFILL**

9. Above-ground landfill gas extraction system piping.
  10. Tree lines and significant vegetation.
  11. Edge of streams and other water.
  12. Other major site features.
  13. Areas obscured by vegetation, shadow, or other features will be identified, but may not meet accuracy requirements and will be field-checked as needed under Task 2.
- Provide 3 draft prints of mapping to the County for review.
  - Provide 5 final prints and 2 final mylars and PDFs of survey to the County. Provide 2 CD-ROMs of electronic files in AutoCAD R14 compatible format to the County.
  - Provide all proofs to the County once the photography and mapping is approved.

**Task 2 – Field Surveying**

Task 2 will commence after Notice-to-Proceed is issued and ground controls are set for Task 1. Specific scope items include:

- Perform property research and prepare a property mosaic or compilation showing the Gude Landfill and surrounding property owners within a ½-mile radius of the site.
- Perform a metes and bounds survey of the Gude Landfill and recover or re-establish property corners. Place permanent monuments (brass plates on concrete showing elevation and northing and easting coordinates) at the property corners and steel pipe markers approximately every 500 feet along other segments of the property line as-needed to provide line-of-site from one monument to the next.
- Survey limit of waste on the County property delineation flags, stakes, or other field markers placed by others as coordinated by EA Engineering (assume 1 month in the field with combination of hand auger and excavator).
- With the County's direction, mark the potential outline of the yard trim processing area.
- Field survey site features that will not be captured on an aerial survey, but captured during the field survey include:
  - Topography of open drainage features including benches, swales, downchutes, and ponds.
  - Horizontal location and inverts of culverts, storm drains, and pond risers.
  - Horizontal location, top of casing elevation, and ground surface elevation of existing landfill gas and groundwater monitoring wells.
  - Horizontal location and ground surface elevation of existing gas extraction wells.
  - Horizontal location and elevation of landfill gas header pipe junctions.
  - Topography and survey of site features in areas obscured from aerial photography.

**SCOPE OF WORK  
FOR  
AERIAL SURVEY, FIELD SURVEY AND LIMIT OF WASTE DELINEATION  
AT THE GUDE LANDFILL**

- Survey the entire landfill property boundary and other areas of the site including the exterior of the landfill gas enclosed stack flare station and former power plant building with a certified utility locator for a period of one (1) week.

**Task 3 – EA Coordination**

Task 3 will include one (1) month or twenty (20) days of a staff member's field time for EA Engineering to coordinate, observe, and document the limits of waste investigation as well as any office time to overlay the results on a site map. EA shall perform testing pitting with heavy equipment or via hand excavation. Equipment is to be rented for a one (1) month period. EA Engineering 's staff time to coordinate and manage Tasks 1 and 2 shall be listed under Task 3 in separate line items in the cost proposal.

**ATTACHMENT 2**



**SCOPE OF WORK  
FOR THE  
NATURE AND EXTENT STUDY  
AT THE GUDE LANDFILL**

**I. Nature and Extent Study**

- A. Collect, review and analyze groundwater and surface water monitoring and laboratory testing data, as provided by the County, including any County trend analyses and well boring construction completion logs.
- B. Field review and evaluate available information related to the existing groundwater monitoring wells. Inspect the groundwater monitoring wells to determine current physical condition and assess the need for any potential maintenance including: well casing, well screen, potential for sedimentation occurring at the well screen, etc. Also evaluate the current number of groundwater monitoring wells and their placement with respect to acquiring usable and application data for background conditions and regulatory compliance.
- C. Field review, sample (as necessary), and evaluate existing conditions of surface water bodies that border the Gude Landfill property boundary.
- D. Field review, sample (as necessary) and evaluate any known, visible or suspect areas on the landfill and along the perimeter property boundary for leachate seeps. Provide recommendations for immediate and long-term corrective measures.
- E. Perform a wetland delineation and forest stand delineation and survey wetland and forest boundaries that are contained within and border the Gude Landfill property for presentation on separate site maps. Obtain a jurisdictional determination for the wetland boundaries to support the Clean Water Act Section 404 permitting. Forest stand delineation must meet the requirements of the Maryland-National Capital Park and Planning Commission.
- F. Plan and field review of site stormwater management infrastructure including: stormwater drainage flow, swales, stormwater control structures, and associated design and available as-built drawings for previous site improvements.
- G. Review existing landfill gas monitoring data and boring construction logs in regards to regulatory compliance and future placement of new permanent perimeter landfill gas monitoring wells (by others) Provide surveyed property boundary documentation to the County Landfill Gas Management Contractor for installation of the new permanent perimeter landfill gas monitoring wells.
- H. Plan and field review of site topography and topographic maps.
- I. Determine additional data needs to evaluate existing conditions and prepare a comprehensive Nature and Extent Study Work Plan for submission to the County and the Maryland Department of the Environment (MDE) for review and concurrence.
- J. Prepare a site specific Health and Safety Plan for field work at the Gude Landfill.
- K. Perform additional field work with own staff or subcontractors as required to fill in data gaps for existing conditions including, but not limited to groundwater, surface water, landfill gas and stormwater management monitoring and infrastructure to prepare a comprehensive Nature and Extent Study.

**SCOPE OF WORK  
FOR THE  
NATURE AND EXTENT STUDY  
AT THE GUDE LANDFILL**

- L. Develop separate and independent contour maps presenting groundwater contours and surface water and stormwater flow directions on and around the perimeter of the landfill property. Develop an existing conditions drainage area map for the Gude Landfill.
- M. In conjunction with the independent groundwater contour maps and surface water and stormwater flow direction maps, provide a separate map depicting likely contaminant migration routes, identify human exposure pathways, and assess the potential for human exposure along the migration routes.
- N. Perform additional statistical analyses, limited computer-aided modeling or other measures to assess groundwater, surface water, and landfill gas contaminant concentration over time, mobility, impact to environment, etc.
- O. Contact and provide written documentation for correspondence with applicable federal, state, and local permitting agencies, other jurisdictional entities, and adjacent property owners to inquire about potential permitting requirements, public notification requirements, and property access for general remediation actions at the Gude Landfill. Agencies are to include, but are not limited to:
  - 1. MDE – nature and extent, etc.
  - 2. Army Corps of Engineers – wetlands, streams, etc.
  - 3. Maryland-National Capital Parks and Planning Commission (M-NCPPC) – land use, forest conservation (NRI/FSD), mandatory referral, etc.
  - 4. County Department of Permitting Services (DPS) – stormwater management, sediment control, etc.
  - 5. Columbia Gas/Trans Continental – gas line right-of-way, etc.
- P. Following the review of existing and new information, provide a breakdown of the Gude Landfill site into priority areas for remediation based on potential pathways for human exposure (perceived risk versus actual risk), environmental impacts, contaminant concentrations, etc. Also consider in the priority evaluation potential recommendations and timelines to implement any immediate corrective measures.
- Q. Attend weekly internal planning and progress meetings with County staff.
- R. Attend monthly public meeting and presentations, exclusive of internal progress meetings with County staff.
- S. Attend necessary meetings with federal, state and local permitting agencies and other jurisdictional entities to meet the objectives of Item O and to complete applicable permitting and public notification requirements.
- T. Provide content for a County managed website to keep the public, MDE, and other stakeholders informed of the progress of the project.
- U. Prepare a detailed project schedule outlining major work items in M.S. Project format for the Nature and Extent study to be updated on a monthly basis and periodically upon request by the County.

**SCOPE OF WORK  
FOR THE  
NATURE AND EXTENT STUDY  
AT THE GUDE LANDFILL**

- V. Prepare an Executive Summary of the Nature and Extent Study discussing major findings and recommendations, environmental impacts, health and safety concerns, etc.
- W. Based on the findings of the Nature and Extent Study, prepare a Remediation Feasibility Memorandum identifying critical items to be considered and incorporated in the next phase of work, Phase 2 – Remediation Alternatives Investigation. Such topics should include, but not be limited to potential remediation options, potential pros and cons to each remediation alternative, and approximate cost ranges. This document will supplement the Executive Summary.
- X. Prepare two (2) Nature and Extent Study reports; a status report at 50% completion describing work completed, preliminary results, planned work, and a draft 90% completion stage written report for County review. Ten (10) copies in 3-D-ring binders of the draft report are to be provided.
- Y. Prepare one (1) final Nature and Extent Study report for submission to MDE. Fifteen (15) copies in 3-D-ring binders of the final report are to be provided. The Consultant will be responsible for addressing all MDE and other agency comments and any required resubmissions of the Nature and Extent Study.
- Z. The duration of this Project Phase will be determined after review of the County's existing data during detailed scoping of the project, which is anticipated to be approximately six (6) months. The project phase duration may be modified based on the review of existing information or performance of site investigations. The Consultant shall provide a project schedule with the proposal to perform the work.

Note – the Consultant shall provide an initial cost estimate for performing the Nature and Extent Study. Costs for all other future phases of work shall be negotiated based on the prior phase's findings and recommendations.

**Scope of Work Items Removed for inclusion in Aerial Survey, Field Survey,  
and Limit of Waste Delineation.**

- Conduct new aerial flyover and field surveying to generate an accurate topographic map with 2-foot contours.
- Perform a property deed review for the Gude Landfill, survey property corners, and recover or place permanent surveyed benchmarks along all property corners and points required for line-of-sight between benchmarks.
- Perform test pitting (preferred), hand excavation, or a geophysical survey to delineate the limits of waste along the perimeter landfill property boundary.

X:\Steve Lezinski\4 - Gude Landfill\MDE\6 - Remediation Plan\Attachment 2 - Gude LF Remediation - Phase I - Nature and Extent Study - SOW FINAL (4-29-09).doc

**ATTACHMENT 3**



**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

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

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.

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

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.