

GUDE LANDFILL REMEDIATION

GLCC/DEP MEETING NO. 27

DATE: December 12, 2012
TIME: 7:30 PM to 9:00 PM
LOCATION: Montgomery County Transfer Station

ATTENDANCE:

<u>Name</u>	<u>Organization</u>	<u>Designation</u>
Dave Peterson	Gude Landfill Concerned Citizens (GLCC)	Member
Nick Radonic	Gude Landfill Concerned Citizens (GLCC)	Member
George Wolohojian	Gude Landfill Concerned Citizens (GLCC)	Member
Steve Lezinski	Montgomery County Dept. of Env. Protection (DEP)	Engineer III
Jamie Foster	Montgomery County Dept. of Env. Protection (DEP)	Engineer I
Mark Gutberlet	EA Engineering, Science, and Technology, Inc.	DEP Consultant

The Meeting Agenda is included as Attachment 1.
Contact information for attendees is included as Attachment 2.
Chronology of Closed Action and Follow-up Items is included as Attachment 3.
Other Attachments are referenced within the text.

MINUTES:

- 1) Steve Lezinski of DEP requested acceptance of the minutes from GLCC/DEP Meeting No. 26. GLCC accepted the minutes.
- 2) Steve Lezinski provided an update on remediation-related project activities:
 - EA and its surveyor have completed the final draft documents for the land exchange with M-NCPPC. DEP completed reviewing the documents and provided comments to EA. EA will finalize the documents. The Final deeds and the plat drawing will be provided to the County Office of Real Estate for review and presentation to the County Council through the land disposition process.
 - DEP continues to work with MDE to finalize the language of the Consent Order. The County and MDE are discussing the applicability of specific regulations to the Gude Landfill and the inclusion of other factual information.
 - EA continues to work on Chapter 4 of the Assessment of Corrective Measures (ACM). Mark Gutberlet of EA discussed the content of Table 4-2 (as a work-in-progress draft form). Nick Radonic of GLCC asked about DEP sharing the draft sections of the ACM. Steve stated ACM is due to MDE on June 1, 2013 and there will be opportunity for review of draft sections by GLCC. Steve reiterated discussions from previous GLCC/DEP meetings that other stakeholders such as County Office of Management

and Budget, the County Executive, etc. will also be involved in the review of the ACM Chapters.

- George Wolohojian of GLCC asked whether the time to achieve the Remedial Action Objectives (RAOs) is considered in the preliminary screening. Mark stated that this is included in more detail in the chapter text that is being prepared and will be considered in Chapter 5 in more detail as well. Time is also a factor that is considered within the “Effectiveness” category of the screening process as presented in Table 4-2. A second footnote will be added to Table 4-2 to incorporate time relative to the effectiveness of each remedial alternative.
 - DEP’s Gude Landfill Remediation Webpage continues to be updated.
- 3) Steve Lezinski stated that post-closure care activities continue at the landfill as needed. The Fall 2012 Semi-Annual Groundwater Monitoring Report was submitted to MDE on November 30, 2012. Sampling results are similar to prior monitoring results. Updated trend plots are included in the report. It will be posted to the Remediation Webpage. Dave Peterson of GLCC asked if the Overall MCL Compliance Extent Map could be updated after each new semi-annual sampling event. Steve stated that no significant MCL exceedances occurred in wells that have not had MCL exceedances previously. If changes occur in the future, Steve stated the map can be updated.

Steve Lezinski stated the Landfill Gas Management System is operating properly. There have been intermittent methane concentration exceedances at the property boundary and the County’s contractor (SCS Engineers) has made immediate field adjustments to correct the exceedances.

- 4) Jamie Foster of DEP discussed the County’s plan to install new multi-gas gas (carbon monoxide, methane, propane) detectors in Derwood Station South homes that are located along the natural gas pipeline Right-of-Way on the western boundary of Gude Landfill. The original methane gas detectors that were installed in 2005 by the County have likely reached the end of their useful life. The County will offer new detectors free of charge to all homes along the Right-of-Way. Jamie provided a draft letter that will be sent to homeowners to Nick Radonic so he is aware of the County’s plan. Nick Radonic provided feedback to Jamie. The distribution of the County letter to the homeowners is anticipated for January 2013.
- 5) DEP and the County agreed to hold the next GLCC/DEP meeting on February 21, 2013.

Recently Closed Action and Follow-up Items

- 26-1 DEP will provide a briefing on the draft of Section 4 of the ACM Report at the December 2012 GLCC/DEP Meeting. Status: Closed. A briefing was provided at the December 2012 meeting.
- 26-2 DEP will post the overall remediation schedule on the Gude Landfill Remediation Website. Status: Closed. The anticipated schedule is posted on the Remediation webpage.

- 26-3 DEP will post the M-NCPPC pamphlet of the Gude-Southlawn Recreational Area dated 1973 on the Gude Landfill Remediation Website.
Status: Closed. The pamphlet is posted on the Remediation webpage.

Open Action and Follow-up Items

These items will be addressed further during the ACM/Reuse evaluation process.

- 16-2 DEP and EA will further evaluate end use options and present these to GLCC in a future monthly meeting.
Status: Open.
- 17-1 DEP will contact senior County representatives and stakeholders regarding their attendance at a future GLCC/DEP monthly meeting to discuss the County's decision making process for Landfill site reuse, potential County site reuse options and the integration and consideration of the Community's reuse options.
Status: Open.
- 18-1 Once the Landfill land reuse discussion is documented and agreed upon in a decision memo with the County Executive and/or other stakeholders, DEP will share the final findings of the agreed upon process with GLCC.
Status: Open.

New Action and Follow-up Items

- 27-1 GLCC will review the draft Table 4-2 from the ACM and provide any comments or ask questions about the initial screening analysis summarized in the table.

The above summation is the writer's interpretation of the items discussed at the meeting. Comments involving differences in understanding of any of the meeting items will be received for a period of thirty (30) days from the date of these meeting minutes. Clarifications will be made, as deemed necessary. If no comments are received within the specified time period, the minutes will remain as written.

**Gude Landfill Remediation
Gude Landfill Concerned Citizens
Monthly Meeting No. 27**

Meeting Agenda

1. Meeting Sign-In Sheet

- a. Please sign-in.

2. GLCC/DEP Meeting Minutes (Meeting No. 26 on 10/18/12)

- a. DEP to request review and acceptance.

3. Remediation Project Activity Updates

- a. Land Exchange with M-NCPPC.
 - DEP has finalized its review of the survey documents and provided comments to EA. EA to review and incorporate County comments.
- b. Consent Order.
 - DEP continues to work with MDE regarding the precise language to be included in the Consent Order.
- c. Assessment of Corrective Measures.
 - EA continues to work on Chapter 4 regarding the screening of potential technologies for the corrective measure alternatives, which is still being developed. EA to review Table 4-2.
- d. Landfill Remediation Webpage – updates continue.

4. Current Gude Landfill Operations

- a. Standard post-closure care activities.
- b. Semi-Annual Groundwater Monitoring Report (Fall 2012) was submitted to MDE on November 30, 2012.
 - Sampling results are similar and comparable with prior monitoring results with respect to the types and concentrations of contaminants. The results represent typical fluctuations in water quality that have been observed over the past several years. Updated trend plots are included. Post to Remediation Webpage.
- c. Landfill Gas Management System is operating properly. Monitoring wells are primarily in compliance, with only intermittent exceedences for methane concentrations. The County's Contractor (SCS Engineers) performs well field adjustments to mitigate the intermittent exceedences.

5. Methane Gas Detectors in Derwood Station South Homes along the Right-of-Way

- a. The existing methane gas detectors were installed around 2005 in approximately 12 homes located along the high-pressure gas right-of-way adjacent to the Landfill. According to manufacturer documentation, the life span of the detectors is approximately 7-10 years.

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Meeting Agenda

- b. County to provide letter, detector replacement or installation request form, documentation for the new multi-gas meter (methane, propane and natural gas) and a site location map to each home located along the right-of-way. January 2013 timeframe.

6. Action/Follow-up Items and Next Meeting

- a. Open Action Items
 - 16-2, 17-1 and 18-1. For review during ACM and Land Reuse process.
- b. Action Items to Close
 - 26-1 – briefing on Section 4 of ACM.
 - 26-2 – post anticipated remediation schedule on the Remediation Webpage.
 - 26-3 – post 1973 M-NCPPC land reuse pamphlet on the Remediation Webpage.
- c. Summarize New Action Items from Meeting
- d. Next Meeting date.
 - January 10, 2013 (Meeting No. 28).
 - Recommend postponing until Wednesday, February 13, 2013 to allow additional time to perform the work of the ACM, which will enable the County to share more detailed information with the community.

Date	December 12, 2012	Meeting No. 27
Time	7:30 -9:00 PM	
Meeting	Gude Landfill Remediation: GLCC/DEP	

Name	Initial if Present	Affiliation	Phone	Email	Address
Stephen Lezinski	SLK	DEP	240-777-6590	Steve.Lezinski@montgomerycountymd.gov	16101 Frederick Road Derwood, MD 20855
Peter Karasik		DEP	240-777-6569	Peter.Karasik@montgomerycountymd.gov	16101 Frederick Road Derwood, MD 20855
Jamie Foster	JCF	DEP	240-777-6564	jamie.foster@montgomerycountymd.gov	16102 Frederick Road Derwood, MD 20855
Mark Gutberlet	MGK	EA Eng.	410-329-5135	mgutberlet@eaest.com	15 Loveton Circle Sparks, MD 21152
Dave Peterson	DPD	GLCC/DS1 HOA	301-921-6357	Kmpdhp@hotmail.com	7612 Ananosa Way Derwood, MD 20855
Keith Ligon		GLCC	301-340-3358	KLigonfamily@verizon.net	15501 Moravia Court Derwood, MD 20855
Julia Tillery		GLCC	202-329-8740	Julia@tilleryoffice.com	15461 Indianola Drive Derwood, MD 20855
Laszlo Harsanyi		GLCC/DS2 HOA	301-840-3822	LaszloH@comcast.net	7228 Tikonka Way Derwood, MD 20855
Nick Radonic	NR	GLCC/DSS HOA	301-294-9124	Blg.Rad@emall.com	15408 Indianola Drive Derwood, MD 20855
George Wolohojian	GW	GLCC/DSS HOA	301-738-7148	gwolohojian@aol.com	15448 Indianola Drive Derwood, MD 20855
Other Meeting Attendees					

Chronology of Closed Action and Follow-up Items
as of
GLCC/DEP Meeting No. 27

- 5-01 DEP and EA to research the existence of a comprehensive database for closed landfill reuse options.
Status: Closed. EA provided a list of landfill reuse resources, which was attached to the minutes for Meeting No. 7.
- 5-02 GLCC to schedule next Derwood Community Meeting; second quarter 2010.
Status: Closed. GLCC noted that the Community will continue to be welcome at the monthly meetings, and these will be included in the DEP letter to the HOAs and the residents. Therefore, GLCC does not plan to schedule another community meeting at this time.
- 5-03 DEP to contact MDE regarding the spring and northwest slope surface water sampling, and leachate seep repairs on northwest slope.
Status: Closed. DEP and MDE met on December 21, 2009 and discussed these issues. The outcome was summarized in Attachment No. 4 of the Meeting No. 7 minutes.
- 5-04 DEP to post the recent aerial survey of the Gude Landfill on the remediation project website.
Status: Closed. The image has been posted on the website.
- 5-05 DEP to evaluate if Biochemical and Chemical Oxygen Demand (BOD/COD) can be included for analysis purposes in surface water samples.
Status: Closed. After further discussion, GLCC agreed that BOD sampling would not be conducted, since it would be difficult to discern whether the results were affected by the landfill. DEP agreed to collect samples for COD analysis. The objectives and plan for COD sampling was and agreed to between DEP and GLCC.
- 5-06 DEP to reschedule the dioxin/furan testing of the Gude Landfill gas-to-energy engine.
Status: Closed. The testing was conducted in early March 2010 but the results have not yet been reported.
- 5-07 EA to provide a list of the chemical analytes that were detected in the Gude Landfill groundwater/surface water sampling that are carcinogens.
Status: Closed. EA provided a summary of risk and carcinogenic effects for chemical analytes, which is included as Attachment No. 6 to the Meeting No. 7 minutes.
- 6-01 DEP and EA to create a list of open agenda items (i.e., action and follow-up items).
Status: Closed. This list is included in the meeting minutes and will be carried into subsequent minutes.
- 6-02 DEP and EA to finalize more precise locations of the new monitoring wells. Follow-up work with permitting agencies, utility locators, and adjoining property owners will be conducted.
Status: Closed. Additional location information finalized.

Chronology of Closed Action and Follow-up Items
as of
GLCC/DEP Meeting No. 27

- 6-03 GLCC/DEP/EA to finalize an approach to communicate all aspects of the expanded monitoring well program to the Derwood Community.
Status: Closed. Initial letters to be sent to the HOAs, with follow-up letters to residents in the immediate area of proposed intrusive activities.
- 7-01 DEP to complete interim measures for leachate redirection at seep locations.
Status: Closed. Completed May/June 2010.
- 7-02 DEP to finalize and send letter to HOAs regarding the landfill remediation project and proposed groundwater monitoring well locations within the Community.
Status: Closed. DEP prepared the Community notification letter dated 2-26-10 for distribution to the residents via the HOA presidents.
- 7-03 DEP to obtain dioxin/furan test results for flare and engine.
Status: Closed. Results provided to GLCC June 2010.
- 8-01 EA will provide DEP with a full version of the Draft Study Plan as a PDF for posting on the website and an abbreviated PDF version for distribution to GLCC members.
Status: Closed. Received by County on August 6, 2010. County to post on remediation webpage.
- 8-02 GLCC will distribute the DEP Community Letter in a special edition of each of the three HOA newsletters, both by e-mail and standard mail, by the end of March.
Status: Closed.
- 9-01 DEP and EA will provide a list of milestones and dates to include as a schedule update with minutes from each meeting.
Status: Closed.
- 9-02 DEP and EA will identify special instructions for residents and the driller to be used during the actual well drilling for inclusion in the individual resident notification letters.
Status: Closed. Completed June 2010.
- 10-1 EA will prepare a Maryland Toxic Air Pollutant regulation compliance demonstration for dioxin/furan emissions from the flares and engines at Oaks and Gude.
Status: Closed. DEP will post on the Remediation webpage.
- 10-2 GLCC will meet independently on June 20, 2010 to discuss the process of early integration of end use objectives into the corrective action planning process and will propose a pathway and procedure to DEP at the July 8, 2010 DEP/GLCC meeting.
Status: Closed. During Meeting No. 11, GLCC provided the County guidance on preferred end uses from the Community for the Gude Landfill site.

Chronology of Closed Action and Follow-up Items
as of
GLCC/DEP Meeting No. 27

- 11-1 GLCC requested Bob Hoyt, Director of DEP to attend the next GLCC/DEP monthly meeting on September 15, 2010 to discuss the Request for Expression of Interest (REOI).
Status: Closed.
- 11-2 GLCC inquired if the County had investigated the potential for a Brownfields Grant for the Remediation/Land Reuse project.
Status: Closed. Grant funding options were presented to GLCC on 4/14/11.
- 12-1 Using the risk evaluation methodology, EA will back calculate contaminant concentrations that would represent a human risk concern for vapor intrusion from groundwater into indoor air.
Status: Closed. The calculation was made by EA and included in the analysis and provided to GLCC.
- 13-1 EA will revise the last two sentences in paragraph 5) of the minutes for Meeting No. 12 to clarify the concept.
Status: Closed. Changes are reflected in Meeting No. 12 Minutes.
- 13-2 EA will prepare and submit to DEP for review a summary of the project status including background, status, and the remaining activities to complete the project. The HOA Presidents will distribute this summary to Derwood Station residents.
Status: Closed. The Nature and Extent Study Fact Sheet was e-mailed to GLCC/HOA Presidents by Steve Lezinski on 12/23/10 for distribution to the Derwood Station Residential Community.
- 13-3 EA will research the applicability of 40 CFR Part 258 Subpart E and report back to DEP and GLCC.
Status: Closed. A response was provided via e-mail by Steve Lezinski to GLCC on 11/3/10 – the regulation is not applicable to Gude Landfill.
- 14-1 DEP will address conformance of the current monitoring program to the 2001 County Groundwater Protection Plan.
Status: Closed. It was determined that the Ground Water Protection Strategy is not an active program within DEP.
- 14-2 DEP will contact the County Attorney and the County Real Estate Office concerning potential property value impacts and seller's obligations.
Status: Closed. The Office of the County Attorney cannot provide legal advice to members of the Community. If members of the Community desire advice on property value impacts and seller's obligations, they would have to obtain this legal advice from their own legal counsel.
- 15-1 DEP and EA will establish a list of key project milestones for inclusion in the Project Communications Plan.
Status: Closed. As part of the Project Communications Plan, an updated project

Chronology of Closed Action and Follow-up Items
as of
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schedule and key project milestones were presented to GLCC on 4/14/11.

- 15-2 DEP and EA will determine the current regulation for setbacks at new landfills and report this information to GLCC.
Status: Closed. Applicable setback requirements were determined and presented to GLCC on 4/14/11.
- 15-3 DEP will submit the proposed action plan for further investigation and analysis to satisfy MDE's concerns about the Nature and Extent Study to MDE by March 18, 2011.
Status: Closed. The work plan of Amendment No. 1 to the Nature and Extent Study was submitted to and accepted by MDE in March 2011.
- 16-1 DEP and EA will evaluate the potential corrective measure of excavation and relocation of waste in greater detail, and present this to GLCC at a future monthly meeting.
Status: Closed. DEP and EA presented the potential corrective measure of waste excavation and reclamation during the GLCC/DEP Meeting No. 17.
- 17-2 DEP will add a timeline/milestone review section to future meeting agendas.
Status: Closed. DEP added this item as a standard topic for future agendas.
- 17-3 DEP will create a quarterly newsletter to orient the larger Community and other adjacent property stakeholders on the Landfill. The newsletter will contain an update on the Nature and Extent Study activities that have occurred in the past three months. The newsletter will be provided to GLCC to include in an upcoming HOA newsletter.
Status: Closed. DEP provided the Quarterly Newsletter to GLCC and the Derwood Station HOA's on June 30, 2011.
- 20-1 DEP and EA will provide a map that combines analytes with MCL exceedences and their individual inferred extent of contamination. DEP stated this could be accomplished after MDE approval of the NES Amendment No.1 Report.
Status: Closed. DEP and EA presented the information at GLCC/DEP Meeting No. 21.
- 20-2 DEP and EA will prepare a written explanation of the chemical degradation of TCE and PCE.
Status: Closed. DEP and EA presented the information at GLCC/DEP Meeting No. 21.
- 20-3 DEP will prepare a Fact Sheet for the NES Amendment No. 1 after MDE approval of the Report.
Status: Closed. DEP provided the draft fact sheet for review and will prepare the final version by the end of May. DEP provided the fact sheet to GLCC via email on May 31, 2012 for inclusion in the June 2012 Derwood Community Newsletter.
- 20-4 DEP will prepare a Fact Sheet to summarize the ACM process after MDE approval of the NES Amendment No.1 Report.
Status: Closed. DEP provided the draft fact sheet for review and will prepare the final

Chronology of Closed Action and Follow-up Items
as of
GLCC/DEP Meeting No. 27

version by the end of May. DEP provided the fact sheet to GLCC via email on May 31, 2012 for inclusion in the June 2012 Derwood Community Newsletter.

- 20-5 DEP to coordinate with GLCC to organize a larger community meeting to present the accepted findings of the NES and introduce the ACM process. This will be initiated after MDE approval of the NES Amendment No.1 Report. GLCC/DEP will review dates for the larger community meeting. DEP will confirm dates with appropriate staff and consultants. GLCC/DEP will develop the agenda for the larger community meeting. GLCC suggested the following major topics: 1) review of the overall purpose and process for the project, 2) a status update on recent activities, 3) explain the next steps, and 4) discuss landfill re-use options. GLCC will secure meeting space. Potential meeting date for September 11th, 12th, 13th, or 18th will be confirmed. Meeting on September 18 at Candlewood Elementary School has been tentatively decided. The date or location could be changed based on Montgomery County Public School calendar and Candlewood Elementary School availability.
Status: Closed. Community meeting has been scheduled and the draft presentation was reviewed with GLCC.
- 22-1 DEP to provide electronic copy of fact sheets via e-mail so GLCC can comment in those documents.
Status: Closed. DEP e-mailed Microsoft Word versions of the fact sheets to GLCC via email prior to finalization on May 31, 2012.
- 22-2 DEP to develop workshops starting with the next GLCC meeting (MNA and bioremediation topics suggested). Part 1 of the workshop was presented at GLCC/DEP Meeting No. 23. Part 2 of the workshop was presented at GLCC/DEP Meeting No. 24.
Status: Closed. Workshops were presented.
- 25-1 DEP will revise the community presentation based on the feedback and discussion at GLCC/DEP Meeting No. 25.
Status: Closed. Presentation was revised and presented at the Community Meeting on September 18, 2012.
- 25-2 DEP will prepare the public notice for the community meeting and send it to GLCC for distribution to the community.
Status: Closed. The public notice was provided before the Community Meeting.
- 25-3 GLCC will distribute the public notice provided by DEP via e-mail and door-to-door through existing HOA communication networks.
Status: Closed. The public notice was distributed before the Community Meeting.
- 25-4 DEP will prepare and provide two signs announcing the community meeting to be placed along the streets at the two entrances to Derwood Station.
Status: Closed. The signs were provided and posted before the Community Meeting.

Chronology of Closed Action and Follow-up Items
as of
GLCC/DEP Meeting No. 27

- 26-1 DEP will provide a briefing on the draft of Section 4 of the ACM Report at the December 2012 GLCC/DEP Meeting.
Status: Closed. A briefing was provided at the December 2012 meeting.
- 26-2 DEP will post the overall remediation schedule on the Gude Landfill Remediation Website.
Status: Closed. The anticipated schedule is posted on the Remediation webpage.
- 26-3 DEP will post the M-NCPPC pamphlet of the Gude-Southlawn Recreational Area dated 1973 on the Gude Landfill Remediation Website.
Status: Closed. The pamphlet is posted on the Remediation webpage.

WORK IN PROGRESS DRAFT

Table 4-2 Screening of Preliminary Corrective Measures Alternatives

Remedial Technology	Effectiveness	Implementability	Cost¹
Monitored Natural Attenuation	Moderate—natural attenuation is active at site, but COC concentrations in groundwater exceed MCLs at the point of compliance	High—relies upon sampling and analysis; detailed assessment required for regulatory approval	Low—mainly long-term monitoring and analysis
Enhanced Bioremediation	High—could decrease COC concentrations in shallow and deep groundwater to below MCLs	Moderate—relatively easy to install and implement; some logistical issues for well installation	Moderate—capital costs and long-term O&M
Permeable Reactive Barrier	Moderate—would not address COCs in groundwater within bedrock	Moderate—would require waste relocation, long-term maintenance	High—capital costs, especially for excavated walls, and O&M
Chemical Oxidation	Moderate—oxidant delivery to deep bedrock would likely be limited	Low—would require frequent reapplication of oxidizing agents; not typically used for sites with COC sources that cannot be treated	Moderate-High—mostly associated with multiple annual injections for many decades
Groundwater Pump and Treat	Moderate—would extract impacted groundwater and remove COCs, but may not completely control deep impacts	Moderate—would require careful design and significant long-term maintenance	Moderate-High—capital costs and long-term O&M
Phytoremediation	Low—small decrease in the flow of impacted groundwater across a portion of the property boundary	High—requires tree clearing prior to planting and maintenance of trees	Low—relatively low level of effort involved
Impermeable Barrier	Low—would only marginally reduce migration of landfill gas and shallow groundwater	Moderate—would require waste relocation, trench construction	Low—cost of constructing the barrier
Cover System Improvements	Moderate—would likely eliminate seeps	High—requires minimal site disturbance	Moderate—cost of additional topsoil

WORK IN PROGRESS DRAFT

Table 4-2 Screening of Preliminary Corrective Measures Alternatives

Remedial Technology	Effectiveness	Implementability	Cost¹
Full or Partial Capping	Moderate—could decrease leachate volume; would likely improve gas collection and eliminate seeps	Full Capping: Low – requires extensive site disturbance and rebuilding of landfill gas and stormwater collection systems Partial Capping: High —could be implemented on side slopes after waste excavation	Full Capping: High—costs of cap construction and rebuilding displaced systems Partial Capping: Low-Moderate—depending on extent of capping
Extensive or Selective Waste Excavation	Moderate—would create barrier between landfill and property boundary, allowing space for groundwater remediation and dissipation of any fugitive landfill gas. Regrading could address leachate seeps. Would not address contamination already present in groundwater.	Extensive Excavation: Low—requires extensive site and waste disturbance, and would likely take decades to excavate entire landfill Selective Excavation: Moderate—land and waste disturbance, disturbance to landfill gas recovery system	Extensive Excavation: High—may be offset to some degree by recycling of waste Selective Excavation: Moderate—includes cost of excavation and disposal
No Action	Low—would not provide monitoring and thus would not guarantee lack of unacceptable risk	Low—unlikely regulatory agency approval	Minimal—no capital or annual O&M costs

- (1) Low = <\$1 million
 Moderate = \$1-10 million
 High = >\$10 million
 (assuming 30 years of O&M, where applicable)