

**GUDE LANDFILL REMEDIATION**

**GLCC/DEP MEETING NO. 23**

DATE: June 21, 2012  
TIME: 7:30 PM to 9:00 PM  
LOCATION: Montgomery County Transfer Station

ATTENDANCE:

<u>Name</u>	<u>Organization</u>	<u>Designation</u>
Laszlo Harsanyi	Gude Landfill Concerned Citizens (GLCC)	Member
Dave Peterson	Gude Landfill Concerned Citizens (GLCC)	Member
Nick Radonic	Gude Landfill Concerned Citizens (GLCC)	Member
Julia Tillery	Gude Landfill Concerned Citizens (GLCC)	Member
Peter Karasik	Montgomery County Dept. of Env. Protection (DEP)	Section Chief
Steve Lezinski	Montgomery County Dept. of Env. Protection (DEP)	Engineer III
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 approval of the minutes from GLCC/DEP Meeting No. 22. GLCC approved the minutes.
- 2) Steve Lezinski stated that DEP provided the NES Amendment No. 1 Fact Sheet and the ACM Fact Sheet to GLCC via e-mail on May 31, 2012 for incorporation into the June 2012 Derwood Station Community Newsletters. Nick Radonic of GLCC stated the Derwood Station South Newsletter was distributed with the fact sheets. Dave Peterson and Laszlo Harsanyi stated that the Derwood Station 1 and 2 Newsletters would be distributed with the fact sheets in the near future. Steve L. asked GLCC to relay any community feedback on the fact sheets to DEP.
- 3) Steve Lezinski reviewed the logistics for the next community meeting. Steve L. agreed to check staff availability for the meeting to be held on September 11, 12, 13 or 18 and let GLCC know, which dates DEP and EA staff are available. The meeting will tentatively be held at the Candlewood Elementary School and GLCC will reserve the school when the meeting date is selected. Potential meeting content was discuss in summary form and will be discussed in more detail at future GLCC meetings.
- 4) Mark Gutberlet of EA presented the Remediation Workshop for Potential Corrective Measures Alternatives (Part 1), which is included as Attachment 4. The presentation was interactive and

GLCC, DEP and EA participated in open discussion that consisted primarily of a question and answer session. The Workshop included a discussion of the following remediation technologies/methodologies:

- Waste Relocation
  - Phytoremediation
  - Bioremediation
  - Monitored Natural Attenuation (MNA)
- 5) Steve Lezinski provided an update on other remediation related activities:
- a) EA's surveying subcontractor, CCJM, has placed property monuments in the field for the land exchange with Maryland-National Capitol Park and Planning Commission (M-NCPPC). The monuments will be verified on June 26, 2012.
  - b) DEP submitted red-line comments to MDE on the Draft-Final version of the Consent Order on May 10, 2012. DEP is awaiting comment from MDE.
  - c) EA is finalizing the proposal to perform the ACM based on DEP comments.
  - d) DEP continues to update the Landfill Remediation Webpage. A major update will occur by the end of July 2012 that will include addition of an introduction and status update section.
- 6) Steve Lezinski provided an update on Gude Landfill operations:
- a) DEP submitted the Spring 2012 semi-annual groundwater and surface water report to MDE on May 29, 2012. It will be posted on the Landfill Remediation Webpage.
  - b) The landfill gas wells were monitored on the June 8, 2012. There were no exceedances.

**Recently Closed Action and Follow-up Items**

- 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.

**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.
  
- 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 11<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, or 18<sup>th</sup> will be confirmed.  
Status: Open.
  
- 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: Open.

**New Action and Follow-up Items**

There were no items to report.

*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. 23**

**Meeting Agenda**

**1. Meeting Sign-In Sheet**

- a. Please sign-in.

**2. GLCC/DEP Meeting Minutes (Meeting No. 22)**

- a. DEP to request review and acceptance.

**3. Fact Sheets for Community Newsletter**

- a. DEP provided the NES Amendment No.1 and ACM Introduction Fact Sheets to GLCC via email on 5/31/12 for inclusion in the June 2012 Derwood Community Newsletter.
- b. GLCC to provide Community feedback (if any has been received).

**4. Community Meeting for NES Amendment No.1 and ACM Introduction**

- a. Review Logistics:
  - Meeting Date – Choose a date during September 10-21.
  - Meeting Location – Candlewood Elementary School. GLCC to reserve.
  - Meeting Content:
    - ❖ landfill overview.
    - ❖ purpose and process for remediation project.
    - ❖ status update on recent project activities.
      - i. Include general public health (risk) information for residents and for users of the M-NCPPC pathway on the right-of-way.
      - ii. Base on Fact Sheets and Workshop Presentations.
    - ❖ explain next steps in project.
    - ❖ discuss land reuse.

**5. Potential Corrective Measure Alternative Workshop – Part 1**

- a. Waste Relocation
- b. Phytoremediation
- c. Bioremediation
- d. Monitored Natural Attenuation (MNA)

**6. Other Remediation Activity Updates**

- a. Land Exchange with M-NCPPC – Field verification of survey markers to occur on 6/26/12.
- b. Consent Order – Draft-Final comments submitted to MDE on 5/10/12. DEP awaiting MDE comments.
- c. Consultant Proposal for ACM Report – EA is finalizing the Proposal based on County comments.

**Gude Landfill Remediation  
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**Meeting Agenda**

- d. Landfill Remediation Webpage – DEP continues to update with new information for public access. Major update to occur by the end of July 2012.

**7. Current Gude Landfill Operations**

- a. Groundwater & Surface Water Monitoring
  - DEP submitted the Spring 2012 Semi-Annual Report to MDE on 5/29/12.
  - DEP to post on Remediation Webpage.
- b. Landfill Gas Monitoring
  - Quarterly monitoring conducted on 6/8/12.
  - All monitoring wells are in compliance.

**8. 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.
  - 20-5. DEP and GLCC to confirm potential date and define content for larger Community meeting (September 2012).
- b. Action Items to Close
  - 20-3, 20-4 and 22-1. DEP to prepare and provide electronic copies of the NES Amendment No.1 and ACM fact sheets.
  - 22-2. DEP to develop workshops for potential corrective measure alternatives.
- c. Summarize New Action Items from Meeting
- d. Next Meeting date
  - Scheduled for July 12.
  - Remediation Workshop – Part 2: Landfill Capping, In-situ Permeable Barriers, Impermeable Barriers and Pump and Treat.

<b>Date</b>	June 21, 2012	Meeting No. 23
<b>Time</b>	7:30 -9:00 PM	
<b>Meeting</b>	Gude Landfill Remediation: GLCC/DEP	

Name	Initial if Present	Affiliation	Phone	Email	Address
Stephen Lezinski	SL	DEP	240-777-6590	Steve.Lezinski@montgomerycountymd.gov	16101 Frederick Road Derwood, MD 20855
Peter Karasik	PK	DEP	240-777-6569	Peter.Karasik@montgomerycountymd.gov	16101 Frederick Road Derwood, MD 20855
Mark Gutberlet	MG	EA Eng.	410-329-5135	mgutberlet@aest.com	15 Loveton Circle Sparks, MD 21152
Dave Peterson	DP	GLCC/DS1 HOA	301-921-6357	Kmadhp@hotmail.com	7612 Anamosa Way Derwood, MD 20855
Keith Ligon	KL	GLCC	301-340-3358	KLigonfamily@verizon.net	15501 Moravia Court Derwood, MD 20855
Julia Tillery	JT	GLCC	202-329-8740	Julia@tillervoffice.com	15461 Indianola Drive Derwood, MD 20855
Laszlo Harsanyi	LH	GLCC/DS2 HOA	301-840-3822	LaszloH@comcast.net	7228 Titonka Way Derwood, MD 20855
Nick Radonic	NR	GLCC/DSS HOA	301-294-9124	Big.Rad@gmail.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
<b>Other Meeting Attendees</b>					

Chronology of Closed Action and Follow-up Items  
as of  
GLCC/DEP Meeting No. 23

- 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. 23

- 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. 23

- 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 schedule and key project milestones were presented to GLCC on 4/14/11.

Chronology of Closed Action and Follow-up Items  
as of  
GLCC/DEP Meeting No. 23

- 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 version by the end of May. DEP provided the fact sheet to GLCC via email on May 31,

Chronology of Closed Action and Follow-up Items  
as of  
GLCC/DEP Meeting No. 23

2012 for inclusion in the June 2012 Derwood Community Newsletter.

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.

# Remediation Workshop for Potential Corrective Measures Alternatives

## (Part 1)

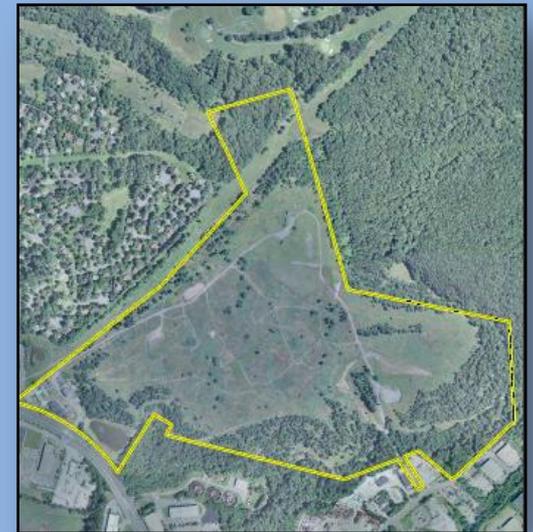
Presented at GLCC/DEP Meeting No. 23

Date: June 21, 2012



# Remedial Action Objectives:

- **Groundwater:** EPA's drinking water maximum contaminant levels (MCLs) will not be exceeded in the groundwater at the Gude Landfill property boundary
- **Landfill Gas (LFG):** Methane will not exceed lower explosive limit (LEL) at the Gude Landfill property boundary
- **Leachate:** No non-storm water discharges (leachate) will occur to waters of the State



# Potential Corrective Measure Alternatives

- Waste Relocation
  - Phytoremediation
  - Bioremediation
  - Monitored Natural Attenuation (MNA)
- 

## Future Workshops at GLCC/DEP Meetings:

- Landfill Capping
- In-situ Permeable Barriers
- Impermeable Barriers
- Pump and Treat



# What is Waste Relocation?

- **Excavating, removing and relocating solid waste to remove the source of contaminants**
- **Processing solid waste to screen cover soil and recyclable material**

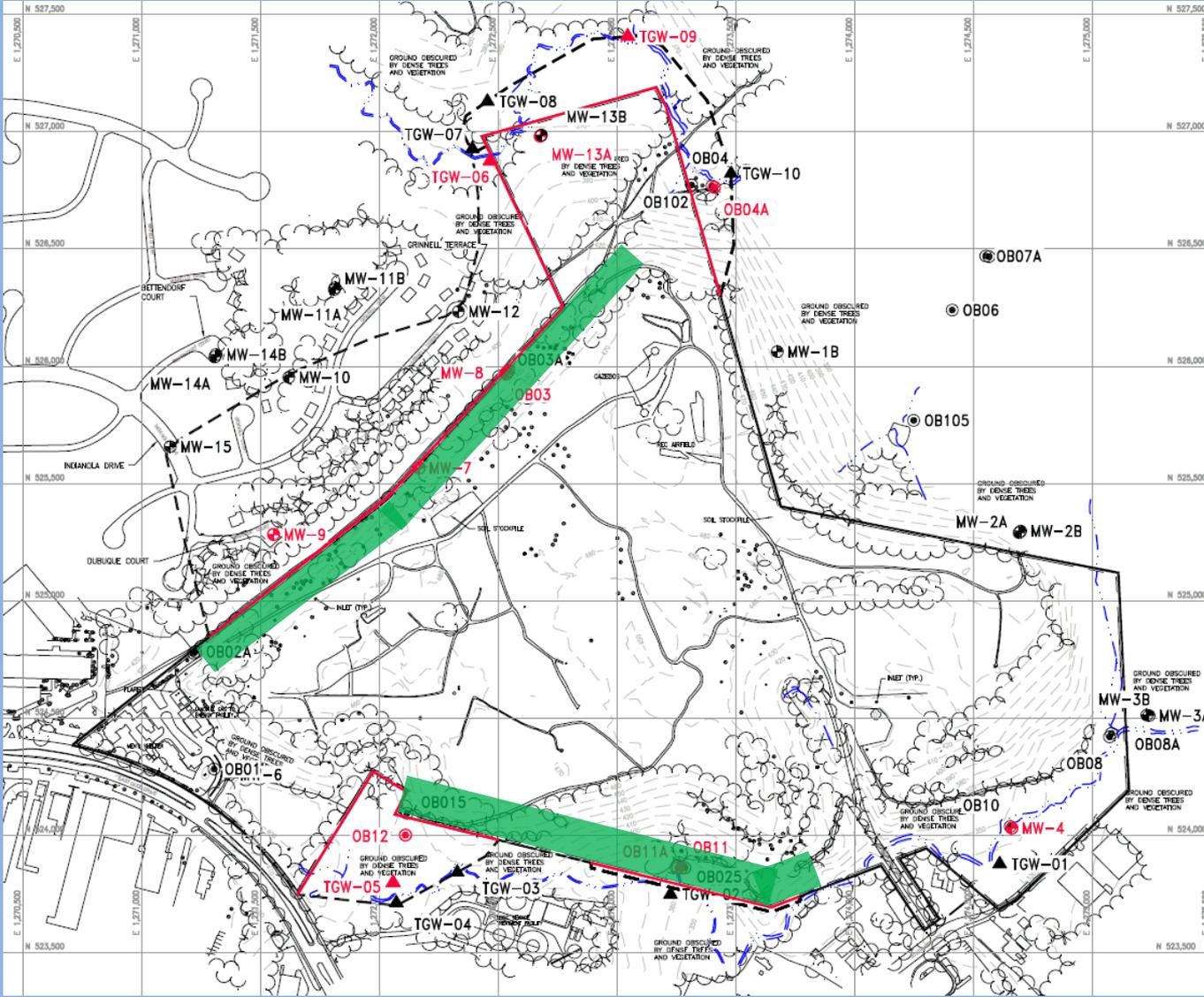


# What is Waste Relocation?

- **Selective relocation:** excavate waste from along the property boundary to increase the buffer between waste and the property boundary
- **Extensive relocation:** excavate large portions of the landfill or the entire landfill



# Selective Relocation



# Waste Handling

- **Option to process waste before disposal**
  - **Screen soil for re-use (physical and chemical)**
  - **Recover recyclable materials**
- **Waste likely to be trucked to the Shady Grove Transfer Station then rail-hauled to the Resource Recovery Facility**



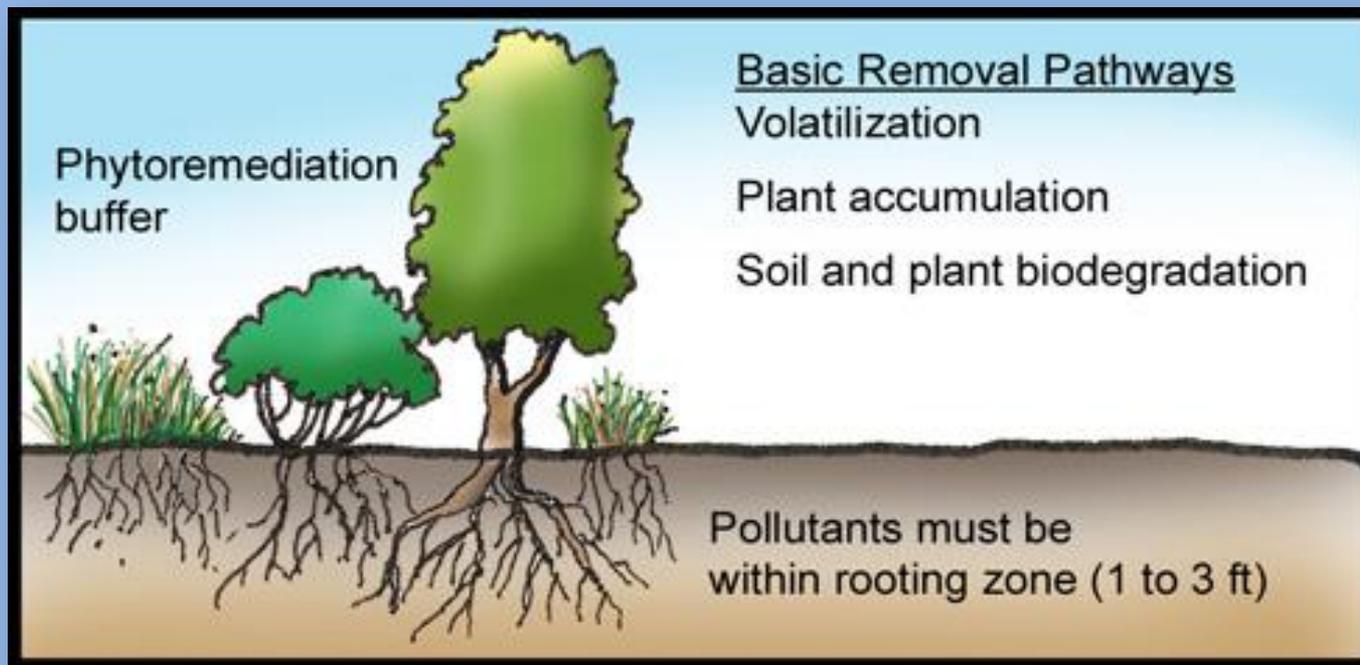
# **How does waste relocation apply to the Gude Landfill?**

- **Relocating waste to an off-site location will remove source material that is likely responsible for groundwater contamination**
- **Relocating waste from along the property boundary will provide an area without source material, which will create more opportunity for natural attenuation to be effective and physical space to implement bioremediation, phytoremediation, or other corrective measures**
- **Relocating waste may also create more opportunity for land re-use**



# What is Phytoremediation?

- **Definition 1:** The use of plant's natural uptake process to reduce the concentration of contaminants in soil and groundwater



# What is Phytoremediation?

- **Definition 2:** The use of plants and/or trees to uptake contaminated water as a mechanism to reduce the volume of contaminated groundwater migrating beyond a site's property boundary



# How does phytoremediation apply to the Gude Landfill?

- **Plants and/or trees planted along the property boundary or other areas of the site could reduce concentrations of contaminants and minimize off-site migration**

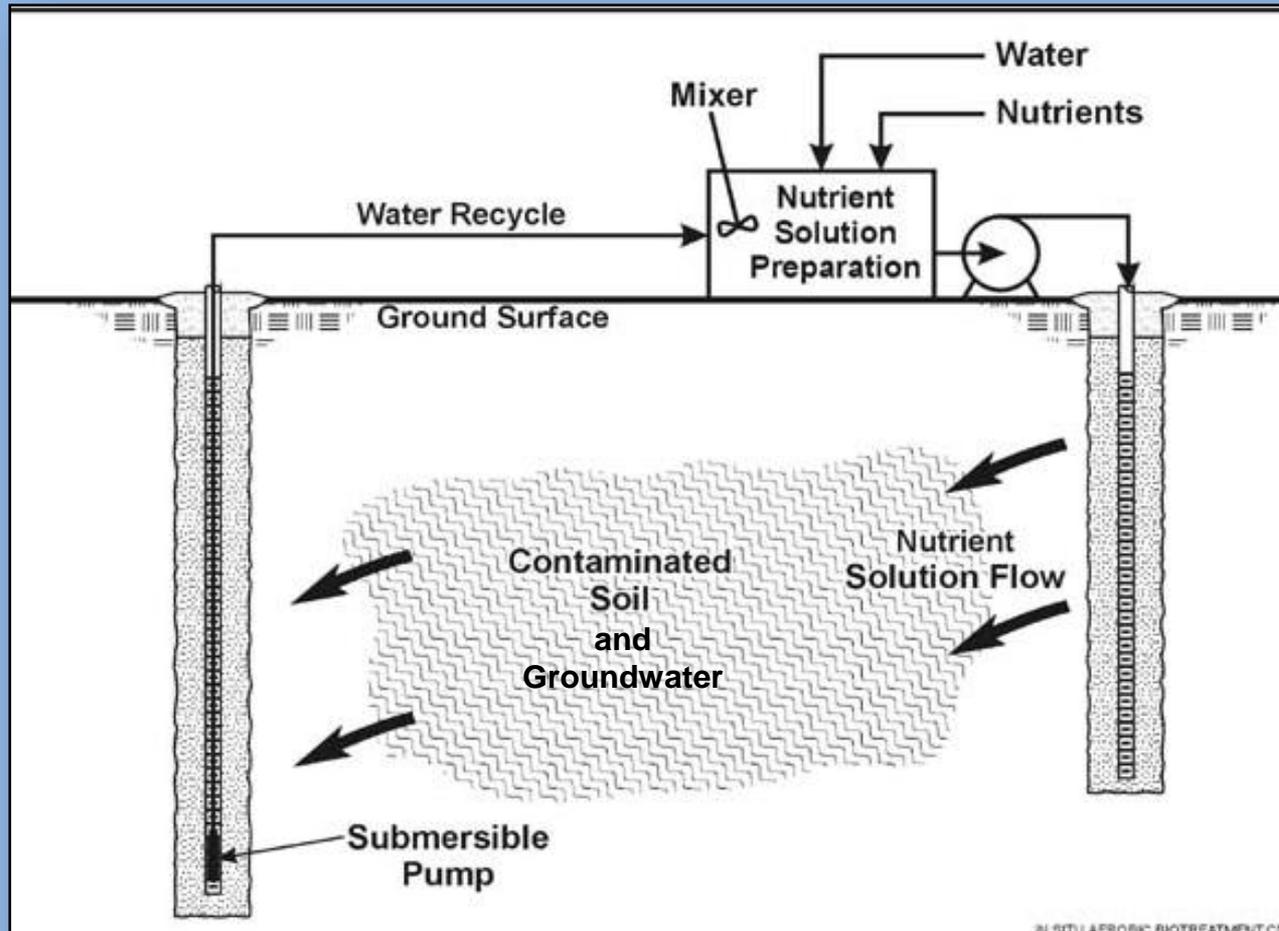


# What is Bioremediation?

- **Underground injection of nutrients and/or electron donors/acceptors to stimulate microorganism activity to degrade and reduce contaminants**
  - **Food-grade substrate: vegetable oil, sodium lactate or molasses**
- **Effective for chlorinated compounds such as PCE, TCE, DCE and VC found at Gude Landfill**



# What is Bioremediation?



# **How does bioremediation apply to the Gude Landfill?**

- **Injection of nutrients and/or electron donors/acceptors along the property boundary and other areas of the site could reduce concentrations of chlorinated compounds to less than the MCL**



# What is Monitored Natural Attenuation (MNA)?

- Natural biological processes within the subsurface that reduce contaminants in groundwater
  - Biodegradation, adsorption, dilution, dispersion and volatilization
- Processes transform organic contaminants to innocuous byproducts
  - Chlorinated organics are naturally dechlorinated
  - Conditions degrade PCE ultimately to non-harmful ethene, carbon dioxide, water, and chloride
  - $C_2Cl_4 \rightarrow C_2HCl_3 \rightarrow C_2H_2Cl_2 \rightarrow C_2H_3Cl \rightarrow C_2H_4 + CO_2 + \text{Water} + \text{Chloride}$
- Combined with a defined groundwater monitoring program to monitor the degradation progress



