

**GUDE LANDFILL REMEDIATION**

**GLCC/DEP MEETING NO. 24**

DATE: July 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> |
|-------------------|--|--------------------|
| Laszlo Harsanyi   | Gude Landfill Concerned Citizens (GLCC)          | Member             |
| Keith Ligon       | Gude Landfill Concerned Citizens (GLCC)          | Member             |
| Dave Peterson     | Gude Landfill Concerned Citizens (GLCC)          | Member             |
| Julia Tillery     | Gude Landfill Concerned Citizens (GLCC)          | Member             |
| George Wolohojian | 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. 23. GLCC approved the minutes with the following correction:  
  
Item #3 should be changed to indicate that Candlewood Elementary School is the “tentative” location for the community meeting because the school had not been reserved at the time of the meeting and may not be available.
- 2) Dave Peterson and Laszlo Harsanyi of GLCC also indicated that the Derwood Station 1 and 2 Newsletters would be distributed with the NES Amendment No. 1 Fact Sheet and the ACM Fact Sheet in the next week.
- 3) Steve Lezinski reviewed the logistics for the next community meeting.
  - a) Date: September 18 was tentatively identified as the meeting date based on DEP staff availability and GLCC concurrence. Keith Ligon of GLCC stated that the Montgomery County Public School calendar has not been finalized and the date should be confirmed when the calendar is finalized. It would be best if the community meeting did not occur on the same day as a “Back to School Night.”

- b) Location: Peter Karasik of DEP will investigate the use of the M-NCPPC Training Center on Crabbs Branch Way in case the Candlewood Elementary School is not available.
- c) Content: Steve Lezinski opened discussion for meeting content by seeking input for how to best incorporate the description of remedial technologies into the community presentation. GLCC, DEP and EA participated in an open discussion about the meeting content that resulted in the following major ideas:
  - The presentation should be approximately 30 minutes.
  - The following major topics should be discussed:
    - Introduction
    - Discuss risk to people and pets (no current risk)
    - Why is project being performed?
    - Overall project schedule
    - Discuss Nature and Extent Study (NES)
    - Describe next step (ACM)
    - Engage folks for discussion of landfill re-use

DEP will prepare a draft community presentation for discussion, review and comment. It will be presented to GLCC at GLCC/DEP Meeting No. 25 to solicit additional feedback from GLCC before presenting to the community.

- 4) Mark Gutberlet of EA presented the Remediation Workshop for Potential Corrective Measures Alternatives (Part 2), 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:
  - Landfill Capping
  - In-situ Permeable Barriers
  - Impermeable Barriers
  - Pump and Treat

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

- 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.

#### **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. 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: Open.

**New Action and Follow-up Items**

See additions to item 20-5. There were no other 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. 24**

**Meeting Agenda**

- 1. Meeting Sign-In Sheet**
  - a. Please sign-in.
  
- 2. GLCC/DEP Meeting Minutes (Meeting No. 23)**
  - a. DEP to request review and acceptance.
  
- 3. Community Meeting for NES Amendment No.1 and ACM Introduction**
  - a. Review Logistics:
    - Meeting Date – September 18 was confirmed by B. Hoyt.
    - Meeting Location – Candlewood Elementary School – review potential location change.
    - Meeting Content – same as previous meeting discussions.
  
- 4. Potential Corrective Measure Alternative Workshop – Part 2**
  - a. Landfill Capping
  - b. In-situ Permeable Barriers
  - c. Impermeable Barriers
  - d. Pump and Treat
  
- 5. Other Remediation Activity Updates**
  - a. Land Exchange with M-NCPPC – Field verification of survey markers completed. Final survey documents being prepared by EA for County review.
  - b. Consent Order – Draft-Final comments submitted to MDE on 5/10/12. DEP awaiting MDE comments.
  - c. Consultant Proposal for ACM Report – EA finalized the proposal and the NMWDA is processing the authorization.
  - d. Landfill Remediation Webpage – DEP continues to update with new information for public access. Major update to occur by the end of July 2012.
  
- 6. Current Gude Landfill Operations**
  - a. Storm Debris Management – on-going activity via the Southlawn Lane entrance for next 3-4 weeks.
  
- 7. 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).

**Gude Landfill Remediation  
Gude Landfill Concerned Citizens  
Monthly Meeting No. 24**

**Meeting Agenda**

- b. Action Items to Close
  - 22-2. DEP to develop workshops for potential corrective measure alternatives.
- c. Summarize New Action Items from Meeting
- d. Next Meeting date
  - Adjust schedule to August 23.
  - Present draft presentation for community meeting.

|         |                                     |                |
|---------|-------------------------------------|----------------|
| Date    | July 12, 2012                       | Meeting No. 24 |
| Time    | 7:30 - 9:00 PM                      |                |
| Meeting | Gude Landfill Remediation: GLCC/DEP |                |

| Name                           | Initial if Present | Affiliation  | Phone        | Email                                 | Address                                    |
|--------------------------------|--------------------|--------------|--------------|---------------------------------------|--|
| Stephen Lezinski               | SL2                | DEP          | 240-777-6590 | Steve.Lezinski@montgomerycountymd.gov | 16101 Frederick Road<br>Derwood, MD 20855  |
| Peter Karasik                  | PKK                | DEP          | 240-777-6569 | Peter.Karasik@montgomerycountymd.gov  | 16101 Frederick Road<br>Derwood, MD 20855  |
| Mark Gutberlet                 | MGR                | EA Eng.      | 410-329-5135 | mgutberlet@east.com                   | 15 Loveton Circle<br>Sparks, MD 21152      |
| Dave Peterson                  | DHP                | GLCC/DS1 HOA | 301-921-6357 | Kmpdhp@hotmail.com                    | 7612 Anamosa Way<br>Derwood, MD 20855      |
| Keith Ligon                    | KLR                | GLCC         | 301-340-3358 | KLigonfamily@verizon.net              | 15501 Moravia Court<br>Derwood, MD 20855   |
| Julia Tillery                  | JRT                | GLCC         | 202-329-8740 | Julia@tilleryoffice.com               | 15461 Indianola Drive<br>Derwood, MD 20855 |
| Laszlo Haranyi                 | LH                 | GLCC/DS2 HOA | 301-840-3822 | laszloh@comcast.net                   | 7228 Tritonka Way<br>Derwood, MD 20855     |
| Nick Radonic                   |                    | GLCC/DSS HOA | 301-294-9124 | Big.Radon@gmail.com                   | 15408 Indianola Drive<br>Derwood, MD 20855 |
| George Wolhojjan               |                    | GLCC/DSS HOA | 301-738-7148 | gwolhojjan@aol.com                    | 15448 Indianola Drive<br>Derwood, MD 20855 |
| <b>Other Meeting Attendees</b> |                    |              |              |                                       |  |
|                                |                    |              |              |                                       |  |
|                                |                    |              |              |                                       |  |
|                                |                    |              |              |                                       |  |
|                                |                    |              |              |                                       |  |

Chronology of Closed Action and Follow-up Items  
as of  
GLCC/DEP Meeting No. 24

- 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. 24

- 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. 24

- 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  
GLCC/DEP Meeting No. 24

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. 24

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.

- 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.

# Remediation Workshop for Potential Corrective Measures Alternatives

## (Part 2)

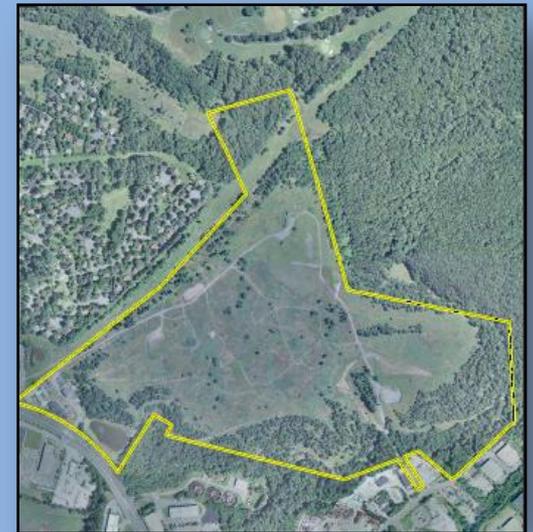
Presented at GLCC/DEP Meeting No. 24

Date: July 12, 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

## Part 1 Workshop at GLCC/DEP Meeting No. 23:

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

## Current Workshop:

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



# What is Landfill Capping?

- Installation of a properly sloped engineered geosynthetic membrane system or soil cover system to cover a landfill
- Provides a barrier between the landfill contents and humans, animals and the environment
- Reduces rainwater infiltration into the landfill and leachate generation
- Increases collection efficiency of landfill gas



# Landfill Cap Details

- State of Maryland regulations define capping requirements for RCRA landfills (COMAR 26.04.07.21) (Gude is a pre-RCRA era landfill)
- Capping System
  - 24” Final Earthen Cover
  - Drainage Layer
  - Low-Permeability Cap
- Landfill cap is graded to promote surface drainage to perimeter stormwater management facilities



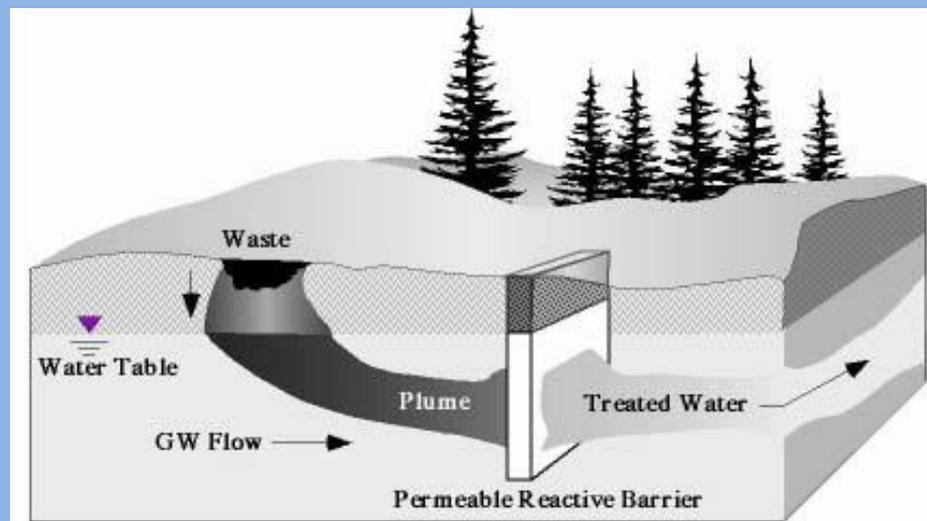
# How does landfill capping apply to the Gude Landfill?

- The Gude Landfill currently has a permeable soil cover system. The majority of stormwater is shed from the landfill surface; however, some stormwater infiltrates the landfill and creates leachate. The installation of a geosynthetic or soil cap would reduce the amount of water that infiltrates into the landfill. This would reduce leachate generation and could reduce groundwater contaminant levels.
- Capping is very effective at eliminating leachate seeps.
- Capping would likely require temporary removal and replacement of the existing landfill gas collection system.
- Capping could affect the feasibility and cost to develop some landfill re-use options.



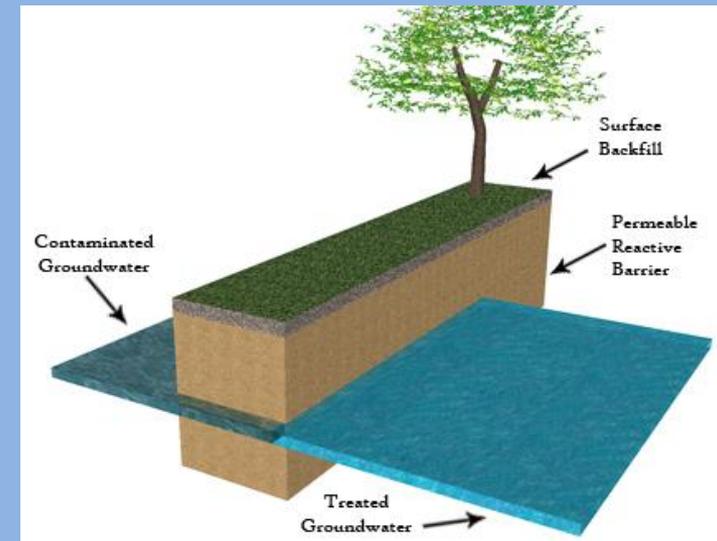
# What are In-Situ Permeable Barriers?

- **Constructed zones in the subsurface that allow groundwater to pass through them, while physically filtering or chemically reducing the contaminants; thus reducing contaminant concentrations**
- **Contaminants are treated *in situ* (in place)**



# What are In-Situ Permeable Barriers?

- Typically constructed by excavating soil and backfilling with specialized media selected for site-specific contaminants
- Media may be selected to adsorb contaminants, promote precipitation of contaminants or chemically reduce contaminants to environmentally acceptable forms
- Examples of media:
  - Zero valent iron (ZVI)
  - Peat moss
  - Zeolites (molecular sieves)



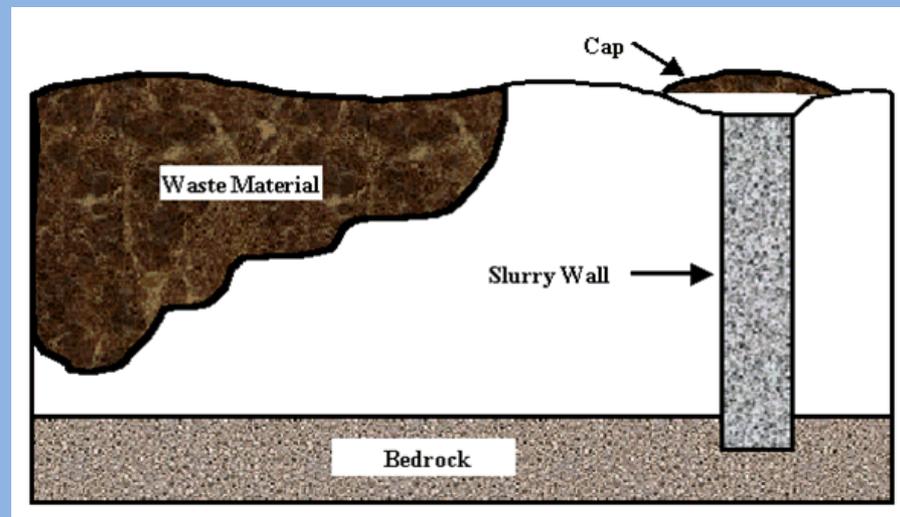
# How do in-situ permeable barriers apply to the Gude Landfill?

- Permeable barriers along the property boundary or other areas of the site could reduce concentrations of contaminants in the groundwater migrating off-site.



# What are Impermeable Barriers?

- **Constructed zones in the subsurface that restrict the flow of groundwater and subsurface gases**
- **Used to contain contamination as well as to divert water and gases from specific areas**
- **Examples:**
  - Slurry walls
  - Grout curtains
  - Sheet pile walls



# Slurry Walls

- Trench excavated and pumped full of bentonite slurry to keep trench open
- Trench backfilled with low-permeability soil-bentonite or cement-bentonite mixture that displaces the slurry
- Groundwater and gas flow is significantly reduced through the completed wall



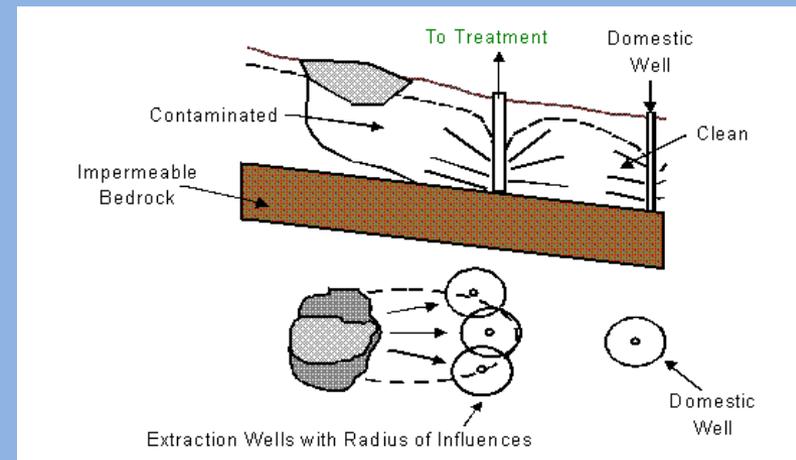
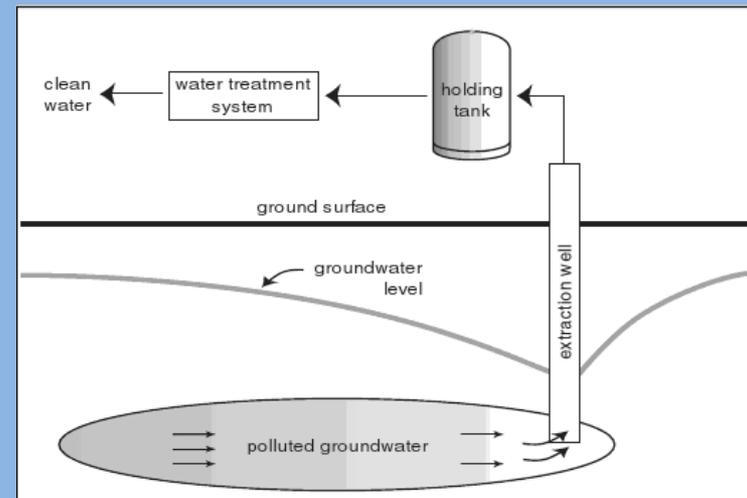
# How do impermeable barriers apply to the Gude Landfill?

- Impermeable barriers could be installed along portions of the perimeter of the landfill to reduce the migration of landfill gas and impacted groundwater toward sensitive areas. This would likely be coupled with other technologies to collect or treat groundwater and gas that builds up behind the barrier.
- Impermeable barriers can also be used like a funnel to direct groundwater or landfill gas to a specific treatment zone, like a permeable reactive barrier.



# What is Pump and Treat?

- Extraction of groundwater from the subsurface by pumping (typically from groundwater extraction wells)
- Extraction well spacing is based on site-specific subsurface conditions
- Objective is to fully capture the groundwater plume
- Groundwater is treated in an above-ground system and then discharged



# What is Pump and Treat?

- Components of the aboveground treatment system are designed to reduce the contaminant concentrations to meet the treatment objectives and discharge requirements
- Aboveground treatment systems are very flexible for targeting site-specific contaminants (many proven treatment technologies exist)



# How does pump and treat apply to the Gude Landfill?

- A line of extraction wells along the property boundary or other areas of the site could capture contaminated groundwater and minimize off-site migration.
- Captured groundwater can then be treated to reduce contaminant concentrations below acceptable regulatory levels before discharge.

