

Maryland Department of the Environment
Land Management Administration
Notice of Tentative Determination and Public Hearing

In accordance with Sections 1-601, 1-602, 1-604, and 9-209 of the Environment Article, Annotated Code of Maryland, the Maryland Department of the Environment (the "Department") has made a Tentative Determination to approve a Refuse Disposal Permit Application submitted by Millennium Inorganic Chemical Inc. to accept coal combustion byproducts at the Hawkins Point Plant (HPP) Industrial Landfill. The landfill is a permitted nonhazardous solid waste acceptance facility located at 3901 Fort Armistead Road, Baltimore, Maryland 21226.

To provide opportunity for interested citizens to obtain information about the proposed application to accept coal combustion byproducts and the Department's Tentative Determination, a Public Hearing is scheduled for Wednesday, March 17, 2010, at 6:30 p.m. in the Curtis Bay Recreation Center, Curtis Avenue and Filbert Street, Baltimore, MD 21226. In case of inclement weather, the public hearing will be held on March 24, 2010 at 6:30 p.m. in the same location. A Public Informational Meeting concerning this application was previously held on August 17, 2009 at 6:00 p.m. at the Curtis Bay Recreation Center. The Public Hearing will be held to provide the citizens an opportunity to formally comment on the Department's Tentative Determination concerning the proposed application.

Upon request, the Department will provide an interpreter for the deaf or hearing-impaired persons. The permit application, supporting documents, and draft permit will be available for review at the Enoch Free Library (Brooklyn Branch) located at 300 E. Patapsco Avenue, Baltimore MD 21225, Riviera Beach Public Library located at 1130 Duvall Highway, Pasadena, MD 21122 and at the Department by appointment after March 2, 2010.

Written comments regarding the application may be addressed to Mr. Horacio Tablada, Director, Land Management Administration, 1800 Washington Boulevard, Baltimore, MD 21230-1719 by the close of business on **April 9, 2010**.

For further information regarding this notice, to schedule an appointment to review the application, or to request an interpreter, please contact Ms. Gail Castleman, Hearings Administrator at (410) 537-3310.



Facts About...

Millennium Hawkins Point Plant Industrial Waste Landfill *Proposed Coal Combustion Byproducts (CCB) Disposal - Questions & Answers*

What are Coal Combustion Byproducts?

Coal combustion byproducts (CCBs) are generated from burning coal. Currently about 60 percent of Maryland's electricity comes from burning coal, and Maryland power plants generate approximately 2 million tons of coal ash (fly ash and bottom ash) annually. CCBs include fly ash, bottom ash, boiler slag, fluidized bed combustion, and flue gas desulphurization sludge, also known as "scrubber sludge". CCBs are either disposed or beneficially used. Disposal of fly ash and bottom ash occurs in surface impoundments or landfills. Beneficial uses of coal ash include mine reclamation, structural fill applications, or as a substitute for cement in the production of concrete.

Is this a new landfill permit?

This is not a new landfill permit. This site has been permitted as an industrial waste landfill since June 22, 1992. The landfill is divided into two parcels separated by railroad tracks: a 30-acre parcel, where the active landfill cell is currently located, and a 65-acre parcel that is permitted to receive industrial waste but is not yet constructed. The active fill area that currently receives industrial waste from the Millennium plant as well as third party sources that generate waste compatible to the waste stream generated by the Millennium plant consists of a 28.3-acre landfill cell on the 30-acre parcel. What is at issue is a request to use the 28.7-acre landfill cell on the 65-acre parcel, that is already permitted for the disposal of these same types of industrial waste, for the disposal of CCBs only. The proposal includes design upgrades that would make the liner and leachate collection system meet or exceed the design requirements for CCB landfills and reclamation sites.

What waste will the two landfill parcels be allowed to accept?

The 28.3-acre landfill cell on the 30-acre parcel currently receives industrial waste from the Millennium plant as well as third party sources. The Millennium plant makes titanium dioxide for use in paints and similar materials. This includes waste such as primary and secondary gypsum-sulfate, dredge material from settling basins, dewatered solids from chloride operations, brick and excavated soils from construction, and other industrial waste approved by MDE.

The 28.7-acre landfill cell on the 65-acre parcel will only receive CCBs from the Brandon Shores, H.A. Wagner, and C.P. Crane coal power plants.

Where can I read the proposed permit and plans?

The application documents and draft permit have been placed in the Enoch Free Library (Brooklyn Branch) located at 300 E. Patapsco Avenue, Baltimore MD 21225, and the Riviera Beach Public Library located at 1130 Duvall Highway, Pasadena, MD 21122.

The application, supporting plans and draft permit are also available for review at the MDE office in Baltimore, and the draft permit has also been posted on the MDE website under the *In Focus* section (www.mde.state.md.us). To review the application documents at MDE, please contact Ms. Maria Stephens at 410-537-3422.

What are the days and hours of operation of the Millennium Landfill?

The active landfill operates during daylight hours only. The proposed hours of operation for the CCB landfill cell will be 6:00 am to 4:00 pm, Monday through Friday. The CCB landfill will be closed on the noted holidays – New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.

What will be the lifespan of the landfill cell located on the 65-acre parcel?

This will depend on how fast Millennium chooses to fill the site. If a lot of the CCBs from the coal power plants are recycled, the landfill will likely be filled slowly and last for many years. If the coal power plants choose to dispose of a large percentage of the CCBs, the lifetime will be shorter. In general, the lifespan is calculated using the available volume, density of CCBs, and acceptance rate. The total volume of the landfill is 4 million cubic-yards. The acceptance rate is estimated to be 400,000 tons/year which is equivalent to 370,000 cubic-yards/year (based on a CCB unit weight of 1.08 tons per cubic yard). Hence, the estimated life for the facility is approximately 11 years.

How high will the landfill cell located on the 65-acre parcel be?

The landfill cell located on the 65-acre parcel is currently permitted to have a final elevation of 219 feet above mean sea level. The existing ground varies between approximately 40 to 110 feet above mean sea level. The height of the landfill at its highest point will be 103 feet above existing grade.

How big is the proposed CCB fill area? I've heard it's 65 acres.

The actual fill area proposed for CCB disposal is 28.7 acres, that is located on a parcel of land that is 65 acres. There is also an active industrial waste landfill cell on the site, east of the proposed CCB fill area, that comprises 28.3 acres and has been permitted and used for the disposal of the Millennium plant's waste since 1992. The rest of the 65-acre parcel that is not used for CCB disposal will be used for monitoring, sediment erosion control, and leachate management systems, and as a wooded buffer to the residential communities to the south.

Will the landfill be constructed in wetlands?

The footprint of the cells used for CCB disposal will not disturb or be constructed in any wetland areas. There is an existing wetlands mitigation area located along the northeast section of the CCB landfill cell which was permitted by Millennium in 1992 as part of the original application for the landfill. A small portion of storm water discharge from Cell 1 of the landfill will discharge into the wetlands area. This discharge is necessary to maintain a supply of water to the wetlands. Storm water discharge from Cell 1 will not come into contact with contaminants contained in the CCBs because the side slopes of the landfill will be covered with at least two feet of soil and seeded and vegetated. Any water that would come in contact with the waste would be directed to the leachate storage pond.

What is leachate? And How will it be managed?

Leachate is rainwater which percolates through the waste in the landfill and is collected at the bottom of the landfill and removed by gravity and pipes. Landfill leachate often contains pollutants that have been dissolved out of the waste as it percolated through the landfill.

The leachate will be collected at the bottom of the landfill and pumped to a lined leachate storage pond. From there, the leachate will be transported by truck to the Clean Harbors Treatment Facility on Russell Street, Baltimore City for further treatment and removal of metals. The treated liquid will then be discharged into the Baltimore City sanitary sewer system.

What monitoring will be done at the landfill to make sure groundwater is not contaminated?

There are 11 existing groundwater monitoring wells at the Millennium Landfill. Five wells cover the existing 30-acre landfill and 6 wells cover the 65-acre landfill. These monitoring wells are required to be sampled semiannually for heavy metals, volatile organic compounds and indicator parameters. A report detailing the sampling results is submitted to MDE semiannually for review. This frequency is the standard monitoring frequency established by MDE for all municipal, rubble, and industrial landfills in the State.

The groundwater flow is to the east towards the Baltimore Harbor. There are two monitoring wells located upgradient of the proposed CCB fill area on the 65-acre parcel which monitor the quality of groundwater entering the site. Four additional monitoring wells are located downgradient or crossgradient of the CCB fill area and will monitor any change in the water quality compared to the upgradient well. The 30-acre parcel is located downgradient of the 65-acre parcel and has two upgradient and three downgradient wells which monitor the quality of groundwater before it leaves the

perimeter of the Millennium Landfill site. Statistical analyses are run on the semiannual water quality data to determine if there are any significant changes in water quality.

What will prevent pollutants from the landfill from contaminating Swan Creek and the Baltimore Harbor?

The application complies with the December 2008 CCB regulations that require a liner, leachate collection, and monitoring system for industrial landfills receiving CCBs. The liner system will be comprised of 2 feet of soil having 1×10^{-7} centimeter/second permeability, a 60 mil textured geomembrane liner, 1 foot of drainage material having 4×10^{-3} centimeter/second permeability and geotextile. This design exceeds the minimum standard required by State regulations for industrial waste landfills, and the new minimum standard established in 2008 for non-coal mine reclamations. The 60 mil liner has been widely used in hazardous waste, municipal and industrial landfills and is an industry standard. The leachate, which is rainwater that percolates through the waste, will be collected from the bottom of the landfill and pumped to a lined leachate storage pond. From there, the leachate will be transported by truck to the Clean Harbors Treatment Facility for further treatment.

CCBs have contaminated wells in Gambrills, Anne Arundel County. What's to prevent heavy metals from contaminating the groundwater at the Millennium site?

The BBSS site in Gambrills was an unlined fly ash disposal site. The 65-acre landfill is designed to have a liner and leachate collection system similar to requirements for hazardous and municipal landfills, from which leachate will be collected and treated instead of discharging to the environment. These measures will be protective of human health and the environment.

What will prevent CCBs from blowing off trucks passing through neighborhoods on the way to the landfill and spreading pollutants in the air?

Under the proposed modifications to the 2008 CCB regulations regarding transportation of CCBs, vehicles transporting CCBs in the State must be in compliance per COMAR 26.04.10.04. Trucks coming to the Millennium Landfill will be covered with a cable type tarp system, and the CCBs will be pre-conditioned at the coal power plants to have a target moisture content of 20% to avoid the spread of particulate matter in the air.

How many trucks will come to the landfill each day?

The number of trucks is highly dependent on the production rate at the coal power plants and the percentage of beneficial re-use of CCBs. Based on the proposed 400,000 tons/ year, there could be up to 80 trucks per day. Recent re-use and production data from the plants indicates that there may be less CCBs coming to the landfill on a yearly basis. Note that the use of a local disposal site will eliminate the need for long-haul trucking of the material.

How will dust be managed at the landfill?

Fugitive dust at the Millennium site will be managed by a rigorous dust management program and ensured through effective enforcement policies. Dust will be controlled by watering the access road, and other landfill areas as needed via a water truck. Water will also be applied to the CCBs to maintain optimum moisture content for compaction and dust control. After the end of each working day, the active working area will be hydro-mulched. Hydro-mulch is a moist-applied mulch that contains tacking agents, which enable it to adhere to the surface on which it is applied. Soil may also be used at the working face, if needed. A self-contained truck and wheel wash system will be installed on the site to wash waste material and mud from vehicles before leaving the site. Visual inspections by MDE personnel will be made to ensure that reasonable precautions are used to control the dust.

How will storm water be managed?

Soil cover will be placed over the waste on the side slopes of the landfill, and the majority of clean storm water runoff from the landfill will be directed to stormwater basins and then discharged to Swan Creek under State Discharge Permit No. 07-DP-2954/NPDES Permit No. MD0066206. The 65-acre landfill has an individual permit for stormwater discharge associated with construction activity for Cell 1: State Discharge Permit No. 09IP0155/NPDES Permit No. MD09I0155. Storm water from a small section of the north slope of Cell 1 will discharge into the wetlands area adjacent to the landfill. This wetland mitigation area was permitted by the Maryland Department of Natural Resources

in 1992 under Nontidal Wetland Permit No. 91-NT-I128/199260103 and constructed by Millennium as part of the application for the original landfill permit.

Why is MDE processing this application if EPA is looking at classifying fly ash as a hazardous material?

The U.S. Environmental Protection Agency is currently evaluating a range of options to, for the first time, impose federal requirements for regulation of CCBs. These include regulating CCBs as non-hazardous industrial waste, regulating CCBs as a hazardous waste or a hybrid of the two. The EPA has not yet proposed a rule, and the promulgation process is likely to take some time. Maryland recently updated its regulatory requirements and instituted a comprehensive system for regulating CCBs and other industrial waste landfills that is protective of human health and the environment. If federal rules that are more stringent should be enacted, they will apply to all CCB generators, and any changes needed to address federal requirements will be addressed.

What other MDE permits are issued for this landfill?

The Millennium Landfill has a permit for stormwater discharge which covers both parcels (NPDES Permit No, MD0066206/ State Discharge Permit No. 07-DP-2954). The 65-acre parcel also has an individual permit for stormwater associated with construction activity for Cell 1: State Discharge Permit No. 09IP0155/NPDES Permit No. MD09I0155.

Why does MDE not take Environmental Justice issues into consideration?

Environmental justice is an issue to which MDE is very committed to giving attention. The Department is a member of the Commission on Environmental Justice and Sustainable Communities established by the State on January 1, 2001. This Commission is currently evaluating the issue of cumulative impact, which takes into account other environmental permits/impacts in an area, but current laws do not allow MDE to take cumulative impact into account. For further information regarding MDE's participation in environmental justice matters or to voice specific concerns, one can contact Ms. Lisa Nissley at 1-800-633-6101.



Facts About...

Refuse Disposal Permit

AUTHORITY TO ACCEPT COAL COMBUSTION BY-PRODUCTS AT THE EXISTING MILLENNIUM HAWKINS POINT PLANT (HPP) INDUSTRIAL WASTE LANDFILL

SUBJECT: REQUEST TO ACCEPT COAL COMBUSTION BY-PRODUCTS AT THE MILLENNIUM HPP INDUSTRIAL WASTE LANDFILL. THIS LANDFILL IS A NON-HAZARDOUS SOLID WASTE ACCEPTANCE FACILITY LOCATED AT 3901 FORT ARMISTEAD ROAD, BALTIMORE, MARYLAND.

Project Manager: Kassa Kebede, Maryland Department of the Environment (MDE), Solid Waste Program, 410-537-3318 or toll free within Maryland 1-800-633-6101 x3318

Applicant: Millennium Inorganic Chemical, Inc.

Owner: Millennium Inorganic Chemical, Inc. (MIC): 30-acre parcel
Lot 15 – Fort Armistead Rd., Inc. (owned by Cristal US, Inc., an MIC affiliate): 65-acre parcel

Operator: Millennium Inorganic Chemical, Inc.: 30-acre parcel
Charah Inc.: 65-acre parcel

SITE INFORMATION

The Millennium HPP Industrial Waste Landfill consists of 57 acres of fill area on a 95-acre site. The landfill is currently permitted under Refuse Disposal Permit No. 2005-WIF-0527. The landfill is divided into two parcels separated by railroad tracks: a 30-acre active fill area which currently receives industrial waste from the Millennium plant as well as third party sources that generate waste compatible to the waste stream generated by the Millennium HPP Plant, and a 65-acre parcel that is permitted to receive industrial waste but is not yet constructed.

The applicant proposes to dedicate the 65-acre parcel solely for the disposal of coal combustion by-products from fossil fuel energy power plant operations at Brandon Shores, H.A. Wagner, and C.P. Crane. In addition to the acceptance of coal combustion by-products, the applicant also proposes to revise the cell layout within the permitted footprint of the 65-acre parcel, upgrade the bottom liner system, and redesign the leachate collection/storage system.

Site Stratigraphy: The site lies within the western shore upland region of the Coastal Plain Province. The site is primarily composed of artificial fill materials consisting of sand and clay facies of the Patapsco Formation.

Groundwater Monitoring: The landfill is surrounded by 11 groundwater-monitoring wells which are used to monitor the groundwater beneath the site. The groundwater monitoring network at the landfill is divided into Area A and Area B. Area A consists of monitoring wells M-1 through M-5 which monitor the 30-acre parcel, and Area B consists of monitoring wells M-6 through M-11 which monitor the 65-acre parcel. The wells are sampled on a semi-annual basis. A qualified laboratory analyzes the samples for metals and other water quality parameters. Groundwater levels and elevation readings are measured monthly. In accordance with the groundwater monitoring plan for the site, several metals and general chemistry parameters are sampled for possible Maximum Contaminant Level (MCL) exceedances. The latest monitoring report showed no MCLs were exceeded in any of the monitoring wells.

APPLICATION PROCESS

February 24, 2009, MDE received 12 copies of a Refuse Disposal Permit Application submitted by Millennium Inorganic Chemical Inc. to accept coal combustion by-products at the 65-acre parcel of the existing Millennium HPP Industrial Waste Landfill.

March 16, 2009, MDE sent a letter to the applicant acknowledging receipt of the application.

March 16, 2009, MDE sent a status letter to Baltimore City requesting a written statement that the proposed coal combustion by-products waste stream meets all applicable Baltimore City zoning and land use requirements, and that it is in conformity with the Baltimore City solid waste management plan.

June 9, 2009, MDE received a letter from Baltimore City Department of Public Works stating that the proposal will keep the facility in accord with the City's Ten Year Solid Waste Management Plan, the landfill was granted the right to accept coal combustion by-products, and satisfies all applicable zoning and land use requirements.

June 15, 2009, MDE distributed copies of the permit application document to all interested agencies for their review and comment.

June 17, 2009, MDE received a letter from the Baltimore City Board of Municipal and Zoning Appeals stating that placement of coal combustion by-products was approved at the facility.

July 6, 2009, MDE conducted a joint plan review meeting and a site inspection.

August 17, 2009, a Public Informational Meeting was held on the proposed application.

December 16, 2009, MDE received two copies of the revised Design Report, Volumes I and II.

PUBLIC INFORMATIONAL MEETING/PUBLIC HEARING

MDE's permitting process includes review of the permit application and comments on the proposed project solicited from several Maryland State, federal and local agencies. Provided all minimum requirements of the permit application are satisfied, MDE will schedule, advertise and hold the required public informational meeting and hearing.

MDE published a Notice of Informational Meeting in the August 3rd and 10th, 2009 editions of the Sun newspaper and the August 5th and 12th, 2009 editions of the Maryland Gazette.

On August 17, 2009, MDE held the Informational Meeting at the Curtis Bay Recreation Center.

MDE published tonight's Notice of Tentative Determination and a Public Hearing in the March 3rd and 10th, 2010 editions of the Maryland Gazette and the Sun newspaper.



MARYLAND DEPARTMENT OF THE ENVIRONMENT



Martin O'Malley
Governor

Land Management Administration
Solid Waste Program

1800 Washington Boulevard, Suite 605, Baltimore, Maryland 212301719



Refuse Disposal Permit

No. 2005-WIF-0527A

ISSUE DATE: 5-years

EXPIRATION DATE: 5-years

Issued to: Millennium Inorganic Chemicals, Inc.

Authorizing: Continued construction and operation of the Hawkins Point Plant (HPP) Industrial Waste Landfill

Located at: 3901 Fort Armistead Road, Baltimore, Maryland 21226

This permit is issued pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and regulations promulgated thereunder, and is subject to the attached terms and conditions, and compliance with all applicable laws and regulations.

Edward M. Dexter, Administrator
Solid Waste Program

Horacio Tablada, Director
Land Management Administration

REFUSE DISPOSAL PERMIT

Permit No. 2005-WIF-0527A

Issuance Date:

Expiration Date: 5-years

**STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard
Baltimore, Maryland 21230-1719**

This Refuse Disposal Permit is issued pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, by the Maryland Department of the Environment, Land Management Administration (the "Department") to:

**Millennium Inorganic Chemicals, Inc. (the "permittee")
3901 Fort Armistead Road
Baltimore MD 21226**

for the construction and operation of the

Hawkins Point Plant (HPP) Industrial Waste Landfill

encompassing a

57-acre fill area on a 95-acre site

located at

**3901 Fort Armistead Road
Baltimore, Maryland 21226**

This permit is granted in accordance with the referenced documents in Part I, and subject to the terms and conditions specified in Parts II, III, and IV of this Permit as follows:

- Part I:** Referenced Materials - permit application, plans and specifications and other pertinent documents submitted to the Department.
- Part II:** Facility Specific Conditions - conditions which amend all other permit conditions applicable to this facility should any discrepancies or conflicts exist.
- Part III:** General Conditions - conditions which are generally applicable to solid waste acceptance facilities similar to this facility.
- Part IV:** Standard Conditions - conditions which are generally applicable to all solid waste acceptance facilities.

Part I: Referenced Materials:

1. Document entitled "Phase III Minor Permit Modification, Application, Hawkins Point Plant Landfill, Baltimore City, Maryland", consisting of Volume 1 Design Report and Volume 2 Drawings, prepared by Geosyntec Consultants, dated March 2009, revised December 2009 and received on December 16, 2009.
2. Report entitled "Response to Comments, Hawkins Point Industrial Waste Landfill, Baltimore, Maryland", dated and received November 10, 2009.
3. A Refuse Disposal Permit Application for the Hawkins Point Plant (HPP) Industrial Waste Landfill to accept coal combustion by products, prepared and submitted by Geosyntec Consultants, dated January 23, 2009 and received on February 24, 2009.
4. As built plans consisting of drawing Nos. 170-SP-016 through 170-SP-019, 170-E-012, 170-E-013, 170-E-020, and 170-PD-010 for the new leachate sump and leachate pipe connection at the Hawkins Point Plant (HPP) Industrial Landfill, prepared by TM Engineering, Inc., dated September 20, 2006 and received on September 29, 2006.
5. A document entitled "Operation and Maintenance Manual for the Millennium Chemicals, Inc., HPP Landfill, Baltimore, Maryland", dated September 12, 2005 and received on September 22, 2005.
6. Engineering Plan and Specifications entitled "Improvements to Leachate Collection System, HPP Landfill, Millennium Chemicals, Inc., Baltimore, Maryland", consisting of drawing Nos. 1 through 3, prepared by TM Engineering, Inc., dated July 28, 2005 and received on August 4, 2005.
7. A Refuse Disposal Permit Application for the Hawkins Point Plant (HPP) Industrial Waste Landfill to accept third party waste from outside the permitted Millennium Inorganic Chemicals, Inc. waste stream, dated June 9, 2004 and received on June 15, 2004.
8. A Refuse Disposal Permit Application for the Hawkins Point Plant (HPP) Industrial Waste Landfill, dated February 20, 2004, along with copies of the notices of the renewal application by certified mail to each member of the General Assembly in whose district the landfill system is located, received on March 10, 2004.
9. A Refuse Disposal Permit Renewal Application for the Hawkins Point Plant (HPP) Industrial Waste Landfill Millennium Inorganic Chemicals, Inc. dated June 6, 1997 and received on June 11, 1997.
10. A letter requesting to change the name of the permittee from SCM Chemicals, Inc to Millennium Inorganic Chemicals, Inc., dated March 13, 1997.

11. Supplemental document to the Phase III Report entitled "Industrial Solid Waste Disposal Facility, HPP landfill, SCM Chemicals, Inc.", received on April 28, 1992.
12. Document entitled "Groundwater and Surface Water Impact Analysis for SCM Chemicals, Inc., HPP Landfill", prepared by Haley & Aldrich, Inc., received on March 6, 1992.
13. Supplemental document to the Phase III Report consisting of a drawing, prepared by Haley & Aldrich, Inc. for SCM Chemicals, Inc., received on March 6, 1992.
14. A document entitled "Phase III Report for Industrial Solid Waste Disposal Facility", including 36 sheets of drawings, prepared by Oosterban Associates, P.C. for SCM Chemicals, Inc., received on February 27, 1992.
15. Second supplement to the Phase II submission entitled "Geology, Hydro-Geology, and Landfill Concept Plan for Industrial Solid Waste Disposal Facility-HPP Landfill", prepared by Oosterban Associates, P.C., received on February 7, 1992.
16. Supplement to the Phase II submission entitled "Geology, Hydro-Geology, and Landfill Concept Plan for Industrial Solid Waste Disposal Facility HPP Landfill", with drawings, prepared by Oosterban Associates, P.C., received on December 12, 1991.
17. Document entitled "Phase II Report, Geology, Hydro-Geology, and Landfill Concept Plan for Industrial Solid Waste Disposal Facility-HPP Landfill", with 24 sheets of drawings, prepared by Oosterban Associates, P.C., received on July 31, 1991.
18. Permit Application for Industrial Solid Waste Disposal Facility, including a set of drawings, prepared by Oosterban Associates, P.C, received February 1991.

Part II: Facility Specific Conditions:

A. Hours of Construction and Operation:

1. The permittee for the 30-acre parcel may construct and operate this part of the facility during daylight hours only. Operations of this facility may be performed after sunset or before sunrise if artificial light adequate to perform the activity in a safe and acceptable manner is provided to the satisfaction of the Department.
2. The permittee for the 65-acre parcel may construct and operate this part of the facility during daylight only between the hours of 6 a.m. to 4:30 p.m., Monday through Friday. Operations may be performed during these hours after sunset or before sunrise if artificial light adequate to perform the activity in a safe and acceptable manner is provided to the satisfaction of the Department.
3. These specified hours may be changed upon written approval by the Department. For approval, a letter requesting the change of hours and a letter from the appropriate local government office stating that the change is consistent with local zoning and land use requirements must be submitted with such a request.
4. A statement of the days and hours of operation shall be posted at the entrance to the facility.
5. Emergency conditions or unusual circumstances which require the performance of the activities which are authorized under A.1 after hours, shall be reported to the Department at (410) 537-3318 during normal business hours, or via the Department's Emergency line at (866) 633-4686 at other times.

B. Plans and Specifications:

Approved plans and specifications under Part I and Part II will satisfy the requirements under Part III General Conditions and Part IV Standard Conditions of the permit. The approved plans and specifications override the requirements under these conditions to the extent that they do not conflict with applicable laws or regulations unless a variance has been granted under the Code of Maryland Regulations (COMAR) 26.04.07.26. However, these conditions do remain valid and enforceable.

C. Authorized Wastes for the 65-acre parcel:

The 65-acre parcel of the landfill may only accept coal combustion by product wastes generated from Brandon Shores, H.A. Wagner, and Crane energy production plants.

D. Authorized Wastes for the 30-acre parcel:

1. The 30-acre parcel of the landfill may accept the following wastes generated at the Hawkins Point Plant located at 3901 Fort Armistead Road, Baltimore, Maryland:
 - i. Primary gypsum-sulfate process;
 - ii. Secondary gypsum-sulfate process;
 - iii. Lagoon dredging/chloride process solids-chloride process;
 - iv. Neutralized batch mud-sulfate process;
 - v. Miscellaneous-calciner brick, excavated soil from plant construction and maintenance, etc.,
 - vi. Dewatered dredged solids from the chloride process settling basins;
 - vii. Refractory brick and brick solids from the calciner kilns, batch attack vessels, and chlorinators;
 - viii. Settled solids from the settling basins on the landfill;
 - ix. Batch attack mud;
 - x. Batch attack vessel refractory brick and brick solids;
 - xi. Chlorinator refractory brick and brick solids;
 - xii. Excavated soil, clay and rubble;
 - xiii. Residual magnesium hydroxide, sodium hydroxide;
 - xiv. Unreacted ore residues from the batch attack process;
 - xv. Chlorinator bed material;

- xvi. Lime grit; Process refractory;
- xvii. Titanium oxide/sand mill wastes;
- xviii. Sandblast material
- xix. Silica wastes; and
- xx. Road asphalt.

- 2. Third party waste that is compatible to the waste stream generated by the Hawkins Point Plant may be accepted at the 30-acre parcel. This waste stream shall be non-hazardous industrial waste or waste excluded from RCRA Subtitle C regulation under 40 CFR§261.4(b)(7).
- 3. If the permittee desires to dispose of any waste other than the authorized wastes, the permittee shall submit a written request to the Department for authorization to dispose of the waste, including a complete waste characterization. The Department shall respond to the permittee's request in a timely manner. The permittee shall not accept any waste material for which such a request is made until it receives written authorization from the Department.

E. Waste Characterization for the 30-acre parcel:

- 1. Third party waste described in Part II D.2 shall be sampled and analyzed in accordance with EPA approved Toxicity Characteristic Leaching Procedure (TCLP) and the EPA Publication SW-846 prior to disposal.
- 2. The permittee shall give notice to the Department of changes to the operation at the plant, which may affect the chemical characteristic of the authorized wastes. In the event of such changes, the permittee shall re-characterize the waste as specified in D.3, and submit the characterization data to the Department for a written authorization prior to the disposal at the landfill.
- 3. All data on waste characterization including routine daily waste analyses shall be kept in a logbook on-site. The logbook shall be available for inspection by the Department representative at all times during the operating hours of the landfill.

F. Monitoring Parameters for the 65-acre parcel:

The permittee shall submit to the Department a semiannual water quality report containing summary and interpretative discussion of all analyses of the chemical quality of groundwater from all of the monitoring wells for the following parameters:

**TABLE II
MONITORING PARAMETERS**

<i>ELEMENTS AND INDICATOR PARAMETERS</i>	PQL (ppm)
Total Antimony	0.0020
Total Arsenic	0.0040
Total Barium	0.0100
Total Beryllium	0.0020
Total Boron	0.013
Total Cadmium	0.0040
Total Chromium	0.0100
Total Calcium	0.08
Total Cobalt	0.0100
Total Copper	0.0100
Total Iron	0.0050
Total Lead	0.0020
Total Lithium	0.016
Total Magnesium	0.004
Total Manganese	0.0100
Total Mercury	0.002
Total Molybdenum	0.016
Total Nickel	0.0110
Total Potassium	0.39
Total Selenium	0.0120
Total Silver	0.0100
Total Sodium	0.20
Total Sulfate	0.38
Total Thallium	0.0020
Total Vanadium	0.0100
Total Zinc	0.0100
PH	0.1 (SU)
Alkalinity	1
Hardness	0.5
Chloride	0.39
Specific conductance	1
Nitrate	0.06
Chemical oxygen demand	1
Turbidity	0.11 (NTU)
Ammonia	1
Total dissolved solids	10

Part III: General Conditions (Applicable to Industrial Waste Landfills):

A. Waste Restrictions:

1. The permittee may only accept industrial waste as specified in this facility's Refuse Disposal Permit Application and its supporting documents identified in Part I of this permit, except as restricted or prohibited in this condition.
2. The following waste materials are specifically prohibited from being accepted at this site, regardless of their origin or type:
 - a. Controlled hazardous substances, defined as hazardous waste in Code of Maryland Regulations (COMAR) 26.13.02, unless specifically authorized by a valid permit issued under COMAR 26.13.07;
 - b. Liquid waste or any waste containing free liquids, as determined by the EPA method 9095 Paint Filter Liquids test, as outlined in the EPA Publication SW-846 "Test Methods for Evaluating Solid Waste, Volume One, Section C, Laboratory Manual Physical/Chemical Methods", Third Edition, dated November 1986;
 - c. Special medical waste as defined in COMAR 26.13.11.02.B(10);
 - d. Radioactive hazardous substances as defined in COMAR 26.15.02;
 - e. Automobiles;
 - f. Drums or tanks, unless empty and flattened or crushed with the ends removed; drums or tanks that have held hazardous waste shall be emptied properly in accordance with COMAR 26.13.02.07;
 - g. Animal carcasses resulting from medical research activities or destruction of diseased animals harboring diseases transmittable to humans, unless acceptance of the carcass(es) is ordered by the local County Health Officer, and the carcasses are covered with soil immediately upon deposition at the working face of the landfill;
 - h. Untreated septage or sewage scavenger waste;
 - i. Chemical or petroleum cleanup material, unless:
 - i. the nature of the spilled substance is known;

- ii. the spilled material is not a controlled hazardous substance as defined in COMAR 26.13.02;
 - iii. the spilled material is not likely to adversely affect the landfill liner; and
 - iv. the spilled substance is contained in an absorbent material of sufficient excess volume that the material deposited at the landfill does not exhibit free liquids as defined in Part III.A.2(b) of this permit.
- j. Truckloads of separately collected yard waste for final disposal, unless the permittee provides for composting or mulching of the yard waste; and
 - k. Scrap tires, unless the Department authorizes the acceptance and processing of scrap tires as required COMAR 26.04.08.
3. If sewage sludge, processed sewage sludge, septage, or any other product containing these materials are proposed for storage, handling, or utilization at the facility, a separate application shall be submitted to the Department for a Sewage Sludge Utilization Permit. That permit must be issued prior to the acceptance on site of any sewage sludge or septage.
 4. The Department, upon written request of the permittee, may amend the list in Part III.A. If the Department denies the permittee's request or unilaterally determines to limit or exclude a waste stream from being disposed of at the landfill, the permittee will be notified of the Department's decision in writing and will be provided an opportunity for a hearing in accordance with the Administrative Procedure Act.

B. Cell Floor Construction:

1. The permittee shall notify the Department in writing five working days prior to the anticipated start of each phase of floor construction including floor grading and compaction, liner installation, and leachate collection system installation.
2. No waste emplacement may commence in any area of the landfill, unless said area of the cell floor has been constructed and graded in accordance with the approved plans and specifications.

3. During construction of each area of the landfill, the edges of each landfill cell or subcell shall be marked to indicate where the edge of the permitted disposal area is located:
 - a. For the exterior edges of cells, which delineate the boundary of the area permitted for solid waste acceptance and disposal, a permanent means of marking such as durable posts set in concrete shall be placed around the boundary every 250 feet. The posts shall be placed as close to the solid waste boundary as is possible without causing damage to the liner or other pollution control systems, and if more than 1 foot away shall have a durable marking indicating the amount of offset from the permitted disposal area. In no case shall the post be more than 5 feet away from the solid waste boundary unless otherwise approved by the Department.
 - b. For the interior edges of subcells, where a new waste disposal area will eventually be constructed contiguous to an existing solid waste disposal area, a semipermanent method of demarking the prepared disposal area such as wooden or fiberglass stakes shall be installed no more than 100 feet apart, and at every corner or significant change in direction. These stakes shall be placed within 1 foot of the edge of the prepared area, and shall be checked and repaired as necessary. The marking may only be removed in accordance with an approved schedule for construction of the adjacent subcell. Care must be taken to insure that the liner, leachate collection system, and other pollution control systems are not damaged by the installation of the markers.
 - c. Posts, stakes or other approved methods must be maintained in a serviceable condition at all times, and repaired as necessary.
 - d. Alternative means may be substituted if approved by the Department.
4. No liner and leachate collection system installation may commence in any cell unless the following requirements are fulfilled:
 - a. The design of the liner and leachate collection system shall comply with the minimum requirements specified under COMAR 26.04.07.07C(12), unless otherwise approved by the Department. The design of the liner and leachate collection system must be approved by the Department before installation begins.

- b. If applicable, a plan for the installation of synthetic membrane sections, illustrating overlap and seams, and sequence of installation shall be prepared and submitted to the Department at least ten days prior to the start of liner installation.
 - c. If applicable, the sub-base for the synthetic membrane must be cleared of tree stumps, roots, vegetation, rubble, debris, angular rocks or stones, sharp-edged objects, and any material that may puncture or damage the overlying synthetic membrane to a maximum particle size established in accordance with the manufacturer's recommendations.
 - d. Sub-base construction must be conducted in lifts not to exceed six inches in thickness and compacted to the required density prior to addition of another lift.
 - e. To ensure that the highest quality sub-base layer and synthetic membrane field seams are produced, continuous monitoring of all sub-base construction and synthetic membrane seaming operations shall be conducted by trained, experienced construction quality assurance monitors. In addition, undisturbed samples of the sub-base shall be tested for as-constructed permeability and 100 percent of all field seams shall be field tested (using an approved test method) as part of the liner installer's construction quality control activities. A quality assurance/quality control plan shall be submitted to the Department for review and approval. Quality assurance/quality control shall be performed by an independent contractor not associated with the construction contractor.
5. Synthetic membrane other than that specified in the approved plans and specifications may be used upon prior written approval from the Department.
 6. The synthetic membrane sheets shall be properly seamed in accordance with the manufacturer's recommendations. All field seams shall be visually inspected and tested using the vacuum chamber method, air lance method or other nondestructive testing methods as recommended by the manufacturer. Construction verification tests including seam integrity verification, liner thickness, liner and seam strength, and other parameters shall be included in the quality assurance/quality control plan approved by the Department. Any imperfect seams, holes, punctures, and damaged areas shall be completely repaired or replaced as necessary to ensure the liner integrity. All factory seams shall be checked visually.

7. Any method of liner and leachate collection system construction which departs or varies in any way from those methods described in the approved plans and specifications or the procedures specified herein shall be approved in writing by the Department before construction.
8. An independent engineer or the manufacturer of the perforated and un-perforated pipes and fittings used in construction of the leachate collection system shall certify that:
 - a. The material meets the required standards and specifications as addressed in the approved plans and specifications;
 - b. The pipes have a maximum 7.5% allowable ring deflection, unless otherwise specified in the approved plans;
 - c. The pipes have factors of safety against crushing and buckling of two or greater under dynamic (short duration) loading and 24 hours stationary (long duration) loading from landfill equipment and vehicles; and
 - d. The pipes are new and not defective.
9. All piping projections through the synthetic membrane liner shall be properly installed in accordance with the plans and specifications.
10. Each leachate collection pipe shall be inspected prior to installation, and tested to ensure that no clogging exists, that it is a properly manufactured pipe, and that it was not changed in transit.
11. The leachate collection pipes, storage unit(s), and sumps shall be tested for leaks after installation.
12. The permittee must obtain certification from the manufacturer(s) that the synthetic membrane to be used as liner has thickness as specified in the approved plans and specifications with a permeability less than or equal to 1×10^{-10} cm/sec, and meets all of the applicable ASTM standards. A copy of the certification must be appended to the approved plan for the facility and provided to the Department within sixty (60) days of receipt of the certification.
13. Following the satisfactory installation of the cell floor liners, the overlying layer shall be placed as soon as is practical for the protection of the liner.
14. No waste placement may commence in any cell unless and until the following requirements are fulfilled:

- a. All monitoring wells have been installed, sampled and analyzed by the permittee in accordance with the approved monitoring program for the establishment of background water quality;
- b. The cell floor liner and leachate collection system have been installed in accordance with the approved plans and specifications, and the requirements of this permit;
- c. A minimum of one foot of pea gravel or other approved drainage material shall be placed to provide for the free passage of leachate to the liner and to serve as a protective layer for the liner and leachate collection system; and
- d. Representatives of the Department have inspected and approved the construction of the cell floor.

C. Protection of Liner and Leachate Collection System:

A minimum of four feet of select industrial waste containing no long pipes, boards, or other materials that could damage the liner and leachate collection system must be placed over the protective layer before compaction, to minimize the risk of damage to the liner and leachate collection system. No refuse hauling vehicles, equipment used for landfill operations, or any heavy equipment shall operate over the leachate collection pipes and liner on the floor and side of the cell slopes until there is at least four feet of select industrial waste placed upon the protective drainage layer. The permittee must notify the Department prior to the placement of the select waste.

D. Leachate:

1. All ponded leachate occurring in areas that are not part of an approved leachate collection or treatment system shall be collected and treated in accordance with this permit.
2. Untreated leachate or contaminated liquid may not be discharged to the waters of the State. The permittee must notify the Department with one (1) hour of becoming aware of any waste or discharge leaving the site or having the potential of being released off-site.

3. If applicable, all leachate collected in the leachate collection system shall be stored in the leachate storage unit(s) as specified in the approved engineering plans and reports referenced in Part I of this permit. Leachate shall be discharged to the sanitary sewer system or an approved wastewater treatment plant in compliance with the provisions of COMAR 26.08.08 unless other methods of disposal are permitted by the Department.
4. Leachate or other contaminated liquids shall not be discharged, recirculated, or treated on site without prior approval of the Department. Any approved modifications to plans and specifications will be incorporated by reference as part of this landfill's permit.
5. The permittee shall monitor the leak detection unit, if any, at least twice each month and include the results in the semiannual report on water quality referenced in this permit.
6. Except for a leachate collection system relying solely on free gravity drainage to prevent leachate from ponding on the cell floor, the level of leachate in the leachate collection system shall be monitored a minimum of twice each operating day except Sundays and holidays. The data shall be recorded and initialed by the person performing the monitoring. Results are to be included in each semiannual report on water quality referenced in this permit.
7. To ensure the integrity and proper operation of the landfill's leachate storage unit(s), all leachate storage unit(s):
 - a. Shall be either tested annually, be equipped with a release detection system, or have some other method of determining leakage that is approved by the Department; and
 - b. Shall be equipped with a level sensor that will, if the storage unit is nearly full, activate an audible alarm in the landfill office and a red light that is visible from the public road at all times of the year. The alarm and light shall be tested weekly and the results of these tests included in the semiannual report on water quality referenced in this permit. A sign shall be posted at the gate with instructions to notify the appropriate local and State emergency numbers, including the Department's phone number, if the light is on when the site is closed. The Department may approve alternative alarm notification systems.

8. Commencing on the day that solid waste is received at the landfill, the permittee shall monitor the quantity of leachate and other contaminated liquids collected each and every calendar month. The results of this monitoring shall be included in the semiannual report on water quality as required by the landfill's permit. The report shall include:
 - a. The volume of leachate or other contaminated liquid collected monthly. Quantities shall be reported in gallons or cubic feet;
 - b. The method used to measure the quantities of leachate coming from the leachate collection systems;
 - c. The volume of liquid discharged to a sanitary sewer. Quantities shall be reported in gallons or cubic feet;
 - d. The volume of liquid disposed of by any means other than that specified in (c). Quantities shall be reported in gallons or cubic feet;
 - e. The results of any chemical analyses performed on the collected liquid; and
 - f. The estimated total amount of precipitation received at the landfill based on local climatological data. Quantities shall be reported in inches and the source of the data shall be stated in the report.
9. If applicable, means for separating and diverting uncontaminated stormwater from the leachate collection system within lined landfill cells may be proposed by the permittee. If approved by the Department, the plans and specifications for the separation and diversion of uncontaminated stormwater shall be incorporated into and become as part of this permit. Until such plans are approved, all water collected from cells containing refuse shall be treated as leachate.
10. Should a force main be constructed to convey leachate to a sewer system, the following conditions shall be met:
 - a. All pretreatment requirements established in COMAR 26.08.08 shall be met;
 - b. A flow meter shall be installed, with results to be recorded daily and included in the semiannual report on water quality referenced in this permit. Upon request, the Department may approve an alternative accurate flow measurement method; and

- c. The force main shall be pressure tested prior to use, by a method to be proposed to and approved by the Department.

E. Water Level Measurement:

1. The water elevations in all existing monitoring wells and piezometers shall be measured monthly and the readings shall be included in the semiannual water quality report referenced in this permit.
2. If examination of this information by either the permittee or the Department indicates that groundwater elevations have risen to encroach upon any existing or proposed cell floors, the bottom elevations of all subsequently constructed cells shall be raised. Except as permitted by the regulations, the increase in elevation shall be sufficient to insure a minimum buffer of three vertical feet between the base of any unconstructed fill areas, as well as the base of any unfilled areas of the waste cell currently being filled, and the highest observed or expected water level. A revised plan and specifications of all cell floors to be constructed, depicting these changes, shall be submitted to the Department for review and approval prior to commencement of construction of any cell area.

F. Written Reports on Water Quality Analysis:

1. Within 90 days of the effective date of this permit, the permittee shall submit to the Department for review and approval a Groundwater and Surface Water Monitoring (G&SWM) Plan. The Plan shall be prepared in accordance with COMAR 26.04.07.20D(2) and guidelines established by the Department.

2.
 - a. The permittee shall submit to the Department a semiannual water quality report containing summary and interpretative discussion of all analyses of the chemical quality of groundwater from all of the monitoring wells and all of the surface water monitoring points specified in the approved G&SWM Plan;
 - b. The semiannual water quality report shall be submitted to the Department within ninety days of the close of every first and third calendar quarters unless an alternative schedule is specified in the approved G&SWM Plan;
 - c. Sampling shall occur during the period between January through March and July through September of each year unless an alternative schedule is included in the G&SWM Plan and approved by the Department;
 - d. The permittee shall arrange for a qualified groundwater scientist to sample, or to oversee qualified environmental technicians who sample the wells twice annually at the intervals specified in the approved G&SWM Plan;
 - e. The parameters must be measured in their Practical Quantitation Limits (PQL). The Department may approve an alternative list of parameters or an alternative PQL for any parameter;
 - f. The sampling, sample handling, analyses and reporting of analytical parameters shall be performed in accordance with the approved G&SWM Plan;
 - g. A qualified independent laboratory certified for water quality analysis by the Department or which is otherwise acceptable to the Department shall perform the analyses;
 - h. A qualified groundwater scientist or professional shall evaluate the results and advise the permittee of any changes in water quality or any exceedance of the State and federal Maximum Contaminant Level (MCL), Action Level or other health standard;
 - i. A complete copy of the laboratory data, and the qualified groundwater scientist or professional's interpretive findings shall be included in each semiannual water quality report referenced in this permit;

- j. If analytical results from samples collected from any sources associated with the landfill or surrounding properties exceed MCL, Action Level, or other health standard for the first time, the permittee must notify the Department within 24 hours of receipt of the analytical data detecting this occurrence. Thereafter, if there is any significant increases above the MCL, Action Level, or other health standard, the permittee must notify the Department within 24 hours of receipt of the analytical data verifying this occurrence;
- k. Upon detection of the exceedance of an MCL, Action Level or other health standard for the first time, the monitoring point(s) in which the standard was exceeded must be immediately resampled to verify the initial detection. This resampling must occur as soon as possible, and no later than 30 days following notification of the permittee of the exceedance of the standard by the analytical laboratory performing the analysis of the sample which indicated the exceedance;
- l. All data for each well must be summarized and presented in time series format. The data for each well must be presented in a spreadsheet so that the water quality data for each parameter for each well can be observed simultaneously; and
- m. All "J" values must be reported. "J" values are analytical results that are below the PQL but can be estimated.

**TABLE I
MONITORING PARAMETERS**

<i>VOLATILE ORGANIC COMPOUNDS</i>	PQL (ppb)
Acetone	5.0
Acrylonitrile	5.0
Benzene	1.0
Bromochloromethane	1.0
Bromodichloromethane	1.0
Bromoform	1.0
Bromomethane	1.0
2-Butanone	5.0
Carbon disulfide	1.0
Carbon tetrachloride	1.0
Chlorobenzene	1.0
Chloroethane	1.0
Chloroform	1.0
Chloromethane	1.0
Dibromochloromethane	1.0

**TABLE I (Cont'd)
MONITORING PARAMETERS**

<i>VOLATILE ORGANIC COMPOUNDS</i>	PQL (ppb)
1,2-Dibromo-3-chloropropane	1.0
1,2 - Dibromoethane (EDB)	1.0
Dibromomethane	1.0
1,2 - Dichlorobenzene	1.0
1,4 - Dichlorobenzene	1.0
Trans-1,4-dichloro-2-butene	5.0
1,1-Dichloroethane	1.0
1,2-Dichloroethane	1.0
1,1-Dichloroethene	1.0
Cis-1,2-Dichloroethene	1.0
Trans-1,2-Dichloroethene	1.0
Methylene chloride	1.0
1,2-Dichloropropane	1.0
Trans-1,3-Dichloropropene	1.0
Cis-1,3-Dichloropropene	1.0
Ethylbenzene	1.0
2-Hexanone	5.0
Iodomethane	1.0
4-Methyl-2-pentanone	5.0
Methyl Tertiary Butyl Ether	2.0
Styrene	1.0
1,1,1,2-Tetrachloroethane	1.0
1,1,2,2-Tetrachloroethane	1.0
Tetrachloroethene	1.0
Toluene	1.0
1,1,1-Trichloroethane	1.0
1,1,2-Trichloroethane	1.0
Trichloroethene	1.0
Trichlorofluoromethane	1.0
1,2,3-Trichloropropane	1.0
Vinyl acetate	1.0
Vinyl chloride	1.0
Xylene	1.0

**TABLE II
MONITORING PARAMETERS**

<i>ELEMENTS AND INDICATOR PARAMETERS</i>	PQL (ppm)
Total Antimony	0.0020
Total Arsenic	0.0020
Total Barium	0.0100
Total Beryllium	0.0020
Total Cadmium	0.0040
Total Chromium	0.0100
Total Calcium	0.08
Total Cobalt	0.0100
Total Copper	0.0100
Total Iron	0.005
Total Lead	0.0020
Total Nickel	0.0110
Total Magnesium	0.004
Total Manganese	0.0100
Total Mercury	0.0002
Total Potassium	0.39
Total Selenium	0.035
Total Silver	0.0100
Total Sodium	0.2
Total Thallium	0.0020
Total Vanadium	0.0100
Total Zinc	0.0100
PH	0.1 (SU)
Alkalinity	1
Hardness	0.5
Chloride	0.39
Specific conductance	1
Nitrate	0.06
Chemical oxygen demand	10
Turbidity	0.11 (NTU)
Ammonia	1
Sulfate	0.38
Total dissolved solids	10

3. The semiannual report on water quality must include a time series analysis of the data. The historical data from each well should be presented in a tabular form in each semiannual report. The discussion should emphasize historical trends in the data.

4. A copy of the most current topographic map generated by a survey performed as required in this permit shall be included in each semiannual report and shall depict the location of all monitoring wells and piezometers in existence at the time of the survey; and
5. A copy of a current groundwater contour map depicting the location of all monitoring wells from which groundwater data is collected shall be included in each semiannual report on water quality. Multiple aquifers shall be depicted on separate groundwater contour maps

G. Spreading and Compaction:

Industrial waste shall be spread in uniform layers and compacted to its smallest practicable volume before application of cover material.

H. Industrial Waste Lifts:

A lift of industrial waste may not exceed 8 feet in height, except as specifically authorized in writing by the Department.

I. Daily Cover:

If applicable, a uniform compacted layer of clean earth at least 6 inches in depth, or an approved cover material of a thickness specified by the Department, shall be placed over exposed solid waste by the end of each day's operation, or more frequently as may be determined by the Department. To meet approval, the cover material may not:

1. Contain free liquids, putrescible, or toxic materials. Moisture that is present in the cover material solely as a result of precipitation is not free liquid.
2. Create a dust or odor problem.
3. Attract or harbor vectors.
4. Impede compaction of wastes by standard landfill equipment.

J. Final Cover:

A uniform compacted layer of earthen material not less than two feet in depth shall be placed over any part of the final lift of refuse not later than 90 days following completion of that final area.

K. Grading and Drainage:

The disposal site shall be graded and drained to:

1. Minimize runoff onto the fill area of the industrial landfill;
2. Prevent erosion and ponding within the fill areas; and
3. Drain water from the surface of the industrial landfill.

L. Erosion and Sediment Control Plan:

The permittee shall have a signed copy of a valid Erosion and Sediment Control Plan prepared in accordance with the requirements of COMAR 26.17.01 and approved by the appropriate approving authority prior to the construction of the landfill as authorized by this permit. An approved plan as required under COMAR 26.17.01 that covers all areas of the permitted facility must be maintained at all times during the life of this permit.

M. Stormwater Management Plan:

1. The permittee shall have a signed copy of a valid Stormwater Management Plan prepared in accordance with the requirement of COMAR 26.17.02 and approved by the appropriate approving authority prior to the construction of the landfill as authorized by this permit.
2. Means for separating and diverting uncontaminated stormwater from the landfill cells may be proposed by the permittee. If approved by the Department, the plans and specifications for the separation and diversion of uncontaminated stormwater shall be incorporated into and become as part of this permit.

N. Water Supply Contingency Plan:

1. If a risk to public health due to contamination of the groundwater by the landfill has developed to the extent that provision for an alternative water supply for offsite water users may become necessary, the Department will require the permittee to draft a detailed engineering design plan describing the manner in which alternative water supplies will be provided to potentially affected areas around the landfill. This plan must be developed and submitted to the Department for review and approval. The draft plan shall be submitted to the Department for review within one (1) year of notification by the Department. The plan shall be revised in accordance with any reasonable requirement of the Department. The level of detail of the plan shall be sufficient to serve as construction and implementation documents for the proposed water supply. The plan shall also include a schedule of all activities necessary to implement the plan, including activities to be performed by the permittee to bid, oversee, and implement the plan, and all activities by contractors.
2. The area which the plan must contemplate for water supplies must, at a minimum, include all areas within 1/2 mile of the property boundary of the landfill as depicted in the reports referenced in Part I of this permit, and any other groundwater use located downgradient of the landfill. The plan must also contain provisions for expansion of the area of impact should it become necessary to protect the public health. The plan may also contain provisions for partial or staggered implementation, based on specific information about the cause and extent of the triggering event, which is available at the time of implementation.
3. Upon approval by the Department, the water supply contingency plan shall become attached as a part of this permit, by reference.
4. Should the Department determine that migration of contaminants from the property on which the landfill is located has occurred or is likely to occur, the permittee shall immediately implement the water supply contingency plan in accordance with the approved schedule.

O. Closure and Post-Closure:

When the design capacity has been exhausted, the permittee shall cap the landfill in accordance with the requirements of COMAR 26.04.07.21. Furthermore, at least six months prior to cessation of landfilling operations, a closure plan shall be submitted to the Department for review and approval. The plan shall contain the following elements:

1. A description of the methods to be used in closing out and capping the facility in an environmentally sound manner;
2. A description of the facility's post-closure activities including groundwater monitoring and maintenance of the closed facility as specified in COMAR 26.04.07.22;
3. A description of the future use of the facility upon closure; and
4. A deadline for the submission of a map based on an actual field survey, which depicts the final topography of the site upon closure.

P. Wetlands and Wildlife Protection:

1. Landfill construction and operation may not impact any regulated wetlands area until necessary authorization is received from the applicable State and federal wetland authorities. This includes construction of access roads, landfill cells, or other land disturbance, and pertains to wetlands regulated by the State of Maryland and the U.S. Army Corps of Engineers.
2. Landfill construction or facility operations, which may impact upon State or federally regulated endangered species, may not begin unless all necessary permits or authorizations are obtained from the applicable State or federal wildlife regulatory agencies.

Part IV: Standard Conditions (Applicable to All Solid Waste Acceptance Facilities):

A. Supervision:

This facility shall be under the supervision of a responsible individual present at the disposal site at all times during the operation.

B. Right of Entry:

The permittee shall allow the Department's authorized representatives, at reasonable times and upon presentation of credentials:

1. To enter this facility covered under this permit or where any records are required to be kept under the terms and conditions of this permit.
2. To have access to and copy any records required to be kept under the terms and conditions of this permit.
3. To inspect any equipment or process required in this permit.
4. To inspect any collection, treatment, pollution management or control facilities, or transport vehicles, required by this permit.
5. To sample any waste, groundwater, surface water, soil or vegetation on the site.
6. To obtain photographic documentation or evidence.

C. Controlled Access:

Access to this facility shall be controlled at all times. Gates, fencing, and other ingress/egress controls around the perimeter of this facility shall be adequate to control access when this facility is not in operation. All gates shall be locked when this facility is unattended. Access shall be limited to those times when authorized personnel are on duty at this facility.

D. Overall Operation:

The permittee shall take all measures necessary to control pollution, health hazards or nuisances. This facility shall be operated and maintained in such a manner as to prevent air, land, or water pollution, public health hazards or nuisances.

E. As-Built Plans:

The permittee shall submit to the Department two copies of certified as-built plans no later than ninety (90) days after completion of the work under this permit.

F. Inspection of Incoming Waste:

1. The permittee shall inspect all incoming loads of solid waste material to insure that no unacceptable waste types, as herein defined in Part III of this permit, are included in the load. The permittee may conduct this inspection by observing wastes as they are deposited, transferred or processed.
2. If an unacceptable solid waste is identified during the tipping and/or inspection process, the permittee shall reject the unacceptable solid waste and advise the generator or hauler of the reason for rejection.
3. If the source of an unacceptable solid waste is unknown, the permittee shall dispose off-site all discovered unacceptable solid waste in a manner consistent with all applicable laws and/or regulations.
4. The permittee shall immediately (within two hours) report to the Department at (410) 537-3315 or (866) 633-4686 after working hours all incidents of discovery of any unacceptable hazardous waste materials in a load of waste. The permittee shall then submit to the Department a written report within five working days following the discovery. When the source of waste is known, the written report shall include the source of the waste, the transporter of the waste, the circumstances of discovery, a description of efforts to secure and control the waste and any release of pollutants from the waste, the current location and if known, the final disposition of the waste. If the source of waste is unknown, the written report shall include the circumstances of discovery, a description of efforts to secure and control the waste and any release of pollutants from the waste, and the current location and final disposition of the waste. If the source of unacceptable hazardous waste is known, the permittee shall reject the waste material and advise the generator or hauler of the reason of rejection. If the source of unacceptable hazardous waste is unknown, the permittee shall separate and handle the waste material in accordance with the applicable requirements of COMAR 26.13.02 "Disposal of Controlled Hazardous Substances".

G. Personnel, Equipment and Maintenance:

The permittee shall provide adequate personnel and equipment to insure proper construction and operation of this facility. Provisions shall be made for equipment repair or replacement as required. Substitute equipment shall be obtained when breakdown or maintenance renders essential operating equipment inoperative for a period in excess of 24 hours during days of operation.

H. Roads:

The permittee shall provide all-weather access roads to the disposal site or receiving area, and to all required pollution control and monitoring systems and devices. Roads shall be maintained in such a manner so as to prevent the tracking of soil, ash, or waste onto any public road and/or to cause a public nuisance. If necessary, vehicles shall be cleaned prior to leaving this facility. Additional actions or facilities may be required at the discretion of the Department in order to control sediment tracking.

I. Dust and Noise Control:

1. Dust shall be controlled through the application of water to roads, operational procedures designed to limit disturbance of bare soils, and other practices approved by the Department. No chemical, oil or petroleum product shall be used for the control of dust without prior written approval from the Department.
2. Operations of the facility shall be conducted in a manner that conforms to the applicable noise provisions of COMAR 26.02.03.

J. Litter Control:

Scattering of wastes by wind shall be controlled and the entire site shall be policed daily or more often, as needed, to control litter.

K. Liquids Management:

1. Under no circumstances may any collected contaminated liquids be discharged by any means, except to the sanitary sewerage system or any permitted treatment facility, without written authorization from the Department. Any discharge to a sanitary sewerage system shall comply with the applicable provisions of the State's pre-treatment program, as described in COMAR 26.08.08.
2. Stormwater management at this facility shall be in accordance with the requirements of COMAR 26.17.02. Any point source discharge of pollutants to waters of the State is prohibited unless permitted by the Department. Any pollutants from the handling, transfer, or storage of wastes, including accidental spills and rainfall events, shall be collected or disposed of in a manner approved by the Department.

L. Fuel Storage:

Fueling of equipment and vehicles shall be conducted with care to avoid spilling or overfilling. The storage tanks and fuel distribution facilities shall be installed and maintained in accordance with the applicable requirements of COMAR 26.10.01 through COMAR 26.10.11 inclusive, and with the requirements of local fire prevention agencies. Any spilled fuel shall be cleaned up immediately. Disposal of spilled fuel may only take place at an incinerator, municipal landfill or oil handling facility permitted to accept this material.

M. Fire Control:

1. Solid waste may not be burned at this facility except as permitted by the Department.
2. The permittee shall take suitable measures to control and prevent fires that may occur during the operation of this facility.

N. Removed Pollutant Substances:

Unless previous written approval for disposal has been given by the Department, wastes such as solids, sludge, or other materials removed from or resulting from the treatment or control of waste waters or facility operations, shall be disposed of at a facility approved to accept such materials, and in a manner to prevent any removed substances or runoff from such substances from entering or from being placed in a location where they may enter the waters of the State.

O. Pollution Monitoring and Control Device Requirements:

1. All pollution control and ground and surface water monitoring systems (including stormwater management and sediment control systems) shall be installed in accordance with the manufacturer's recommendations and plans and specifications approved by the Department. All pollution control and ground and surface water monitoring systems shall remain operational and shall be maintained in accordance with the provisions of the approved plans and specifications.
2. Any incidence of damage to this facility's monitoring or pollution control systems shall be reported to the Department at (410) 537-3315 within two hours of the incident, or within two hours of the discovery of the damage if the damage occurred outside of working hours. All repairs needed to correct the damage shall be completed as soon as practical or as specified by the Department.
3. During construction and operation of this facility, the sediment and stormwater basins shall be cleaned out whenever (a) a clean-out elevation is reached; (b) construction is completed; (c) the amount of sediment reaches 50% capacity, and/or (d) as specified by the approved Sediment and Erosion Control Plan.

P. Penalties for Tampering:

Section 9-343 of the Environment Article, Annotated Code of Maryland, provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

Q. Records Retention:

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, calibration and maintenance of instrumentation, original recordings from continuous monitoring instrumentation, and inspection results shall be retained by the permittee on-site or at another location upon written approval of the Department, for a minimum period of five years.

R. Annual Report:

An annual report shall be submitted to the Department concerning the operation and status of this facility for each calendar year that this facility is in operation. The annual report shall be for the calendar year ending December 31 and shall be submitted by March 1 of the following year on the form provided by the Department.

S. Duty to Provide Information:

The permittee shall furnish to the Department within a reasonable time, any information that the Department may request, to determine whether cause exists for modifying, revoking, reissuing, or terminating this permit; or to determine compliance with this permit.

T. Alterations:

Any modification to this facility or its operating plans must be approved in writing by the Department prior to implementation. Modifications include, but are not limited to, any changes that alter a significant structural feature, operational procedure, element of design, type of equipment or method of construction described in the approved plans and specifications for this facility and defined herein.

U. Application for Renewal:

1. At least two weeks before the expiration date of this permit, unless permission for a later date has been granted by the Department, the permittee shall submit a new application for renewal of the authorization to continue to operate under the provision of this permit or notify the Department of the intent to cease operating by the expiration date. In the case of landfill systems, the application shall be submitted in accordance with Section 9-213 of the Environment Article, Annotated Code of Maryland. In the event that a timely and sufficient reapplication has been submitted and the Department is unable, through no fault of the permittee, to renew this permit before its expiration date, the terms and conditions of this permit are automatically continued and remain fully effective and enforceable.
2. The Department may refuse to renew this permit if the permittee violates the terms or conditions of this permit or State law and regulations, in accordance with Section 9-214 of the Environment Article, Annotated Code of Maryland.

V. Closure:

1. When operations end, the permittee shall close this facility in a manner that prevents erosion, health and safety hazards, nuisances, and pollution.
2. All remaining solid wastes, not properly disposed of, shall be transferred to a permitted facility for proper disposal.

3. If applicable, the surety bond for this facility as specified in Sections 9-211 or 9-211.1 of the Environment Article, Annotated Code of Maryland or other financial assurance required by State, federal, or local regulations, shall be utilized to the extent necessary to remediate the facility if the permittee does not close this facility in a proper manner, and the Department:
 - a. Notifies the permittee and corporate surety on the bond that the facility is not properly closed;
 - b. Specifies in the notice, the deficiencies that must be addressed;
 - c. Gives the permittee and the corporate surety a reasonable opportunity to correct the deficiencies and close the facility in accordance with the regulations of the Department; and
 - d. Authorizes the local governing body or other agency to use the surety bond to close the facility in accordance with the regulations of the Department.

W. Transfer of Permit or Ownership:

1. This permit is valid only for the permittee named and may not be transferred to another entity without first obtaining a new Refuse Disposal Permit from the Department for the new entity.
2. In the event of any change in control or ownership of the property, the permittee shall notify the succeeding owner by certified mail, of the existence of this permit and of any outstanding permit noncompliance, a minimum of 30 days prior to transfer. A copy of this notification shall also be forwarded to the Department at the same time.

X. Compliance:

1. The permittee shall comply with the terms and conditions of this permit, and with all applicable federal, local and State laws and regulations.
2. If for any reason the permittee does not comply or is unable to comply with any of the terms and conditions of this permit, the permittee shall notify the Department at (410) 537-3315 on the same day or on the next working day, following any noncompliance. Within five (5) working days after this notification, the permittee shall provide the Department with the following information in writing:
 - a. Descriptions of the noncompliance, including dates, time, and type of noncompliance;
 - b. Cause of noncompliance;
 - c. Anticipated time the noncompliance is expected to continue or if such condition has been corrected;

- d. Steps taken by the permittee to correct the noncompliance; and
- e. Steps to be taken by the permittee to prevent recurrence of the noncompliance.

Y. Local Solid Waste Management Plan/Zoning and Land Use Requirements:

1. Nothing in this permit authorizes the construction or the operation of this facility when it is not in conformance with the local solid waste management plan, or zoning or land use requirements. The issuance of this permit does not prevent any duly authorized local authority from taking action to enforce applicable zoning, planning and land use requirements, or provisions of the local solid waste management plan.
2. This permit may be suspended or revoked upon a final, unreviewable determination that the permittee lacks, or is in violation of, any federal, State or local approval necessary to conduct the activity authorized by this permit.

Z. Civil and Criminal Liability:

Nothing in this permit shall be construed to neither preclude the institution of any legal action nor relieve the permittee from civil or criminal responsibilities and/or penalties for non-compliance with Title 9 of the Environment Article, Annotated Code of Maryland, or any federal, local or other State laws or regulations.

AA. Penalties for Violations of Permit Conditions:

Section 9-268 of the Environment Article, Annotated Code of Maryland, provides that, except for violations of Part III of that subtitle and violations enforced under Section 9-267 of that subtitle, the provisions of Sections 9-334 through 9-342 of Subtitle 3 of that title shall be used and shall apply to enforce violations of:

1. That subtitle;
2. Any regulation adopted under that subtitle; or
3. Any permit issued under that subtitle.

BB. Property Rights:

The issuance of this permit does not intend to convey any property rights in either real or personal property, or any exclusive privilege or franchise, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State or local laws or regulations.

CC. Severability:

If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provision shall be considered severed and deleted from this permit.

DD. Signatory Requirements:

All applications, request for alterations, renewal requests, or monitoring reports submitted to the Department shall be signed and verified in accordance with Section 1-201 of the Environment Article, Annotated Code of Maryland, by the permittee or authorized representative of this facility as being true.