

MARYLAND DEPARTMENT OF THE ENVIRONMENT



Larry Hogan
Governor

Land and Materials Administration
Solid Waste Program

1800 Washington Boulevard, Suite 605, Baltimore, Maryland 21230-1719



Ben Grumbles
Secretary

Refuse Disposal Permit
No. 2017-WMF-0680

ISSUE DATE:

EXPIRATION DATE:

Issued to: *County Council of Dorchester County*

Authorizing: the construction and operation of the Dorchester County Municipal Landfill

Located at: 6812 East New Market – Elwood Road, Hurlock, Maryland

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

Kaley Laleker, Director
Land and Materials Administration

REFUSE DISPOSAL PERMIT

Permit No. 2017-WMF-0680

Issuance Date:

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**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 and Materials Administration (the "Department") to:

**County Council of Dorchester County (the "permittee")
5435 Handley Road, Cambridge, Maryland**

for the construction and operation of the

Dorchester County Municipal Landfill

encompassing a

50-acre fill area on a 246-acre site

located at

**6812 East New Market – Elwood Road
Dorchester County, Maryland**

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:

A. Operating Documents:

1. Document entitled “Phase I Report Dorchester County Municipal Landfill” prepared by Geosyntec Consultants, dated November 2017 and received on November 27, 2017
2. Document entitled “Phase II Report: Site Geologic Study” prepared by Geosyntec Consultants, dated April 2019 and received on April 23, 2019.
3. Document entitled “Cell 1 Sediment and Erosion Control Plan: Dorchester County Municipal Landfill” prepared by Geosyntec Consultants, dated July 2020 and received on September 3, 2020.
4. Document entitled “Application for a Municipal Landfill Permit: Phase III Report” dated October 2018, revised August 2020, and received on October 21, 2020.
5. Document entitled “Declaration of Covenant on Dorchester County Municipal Landfill Property” dated March 3, 2021 and received on March 8, 2021.

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Part II: Facility Specific Conditions:

A. Hours of Construction and Operation:

1. The permittee may construct and operate this facility during daylight only between the hours of 7:00 a.m. and 4:30 p.m., Monday through Saturday. 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.
2. 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.
3. A statement of the days and hours of operation shall be posted at the entrance to the facility.
4. Emergency conditions or unusual circumstances that require the performance of the activities authorized under A.1 after hours, shall be reported to the Department at (410) 537-3315 during normal business hours, or via the Department's Emergency line at (866) 633-4686 at other times.
5. The Department may authorize an extension of the facility's hours of operation in emergency conditions. This approval does not authorize any infringement of federal, State or local laws or regulations, such as local zoning and land use requirements.

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.

Part III: General Conditions (Applicable to Municipal Solid Waste Landfills):

A. Waste Restrictions:

1. The permittee may accept solid 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. If the permittee accepts the following classes of waste as defined below, the acceptance of these materials is subject to the exceptions noted:
 - a. Household appliances and white goods may be accepted at the facility, provided that any refrigerant is removed from the appliances before burial and handled in accordance with Section 608 of the federal Clean Air Act; and
 - b. Friable asbestos waste, provided that the material that is received is packaged and labeled as specified in Code of Maryland Regulations (COMAR) 26.11.21.08A and is managed in the following manner:
 - i. Prior notification to the landfill supervisor is required;
 - ii. The waste asbestos is unloaded carefully to prevent emission of fibers into the air as required in the NESHAPS 40 CFR Part 61, and specified in COMAR 26.11.21.06;
 - iii. The area used for burial of asbestos shall be restricted to the working face of the landfill, or a separate cell dedicated solely to asbestos disposal;
 - iv. The waste shall be completely covered with earth or other refuse and may not be compacted or driven over until sufficient cover has been applied to prevent the release of asbestos fibers to the atmosphere during compaction or application of other cover material; and
 - v. When managing friable asbestos waste, operators at the landfill shall wear respiratory protection as specified in COMAR 26.11.21.05A, and wear protective clothing and use the equipment specified in COMAR 26.11.21.05D.

3. 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 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, except for small containers contained in household waste only;
 - c. Special medical waste as defined in COMAR 26.13.11.02B(11);
 - d. Radioactive hazardous substances as defined in COMAR 26.15.02;
 - e. Automobiles, unless accepted under a plan approved by the Department;
 - 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 liquid 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 so that the material deposited at the landfill does not exhibit free liquids as defined in Part III.A.3(b) of this permit.
 - j. Truckloads of separately collected yard waste for final disposal, unless the permittee provides for the composting or mulching of the yard waste;
 - k. Loads of separately collected food waste for final disposal unless the owner or operator provides for the organics recycling of the food waste; and
 - l. Scrap tires, unless the Department authorizes the acceptance and processing of scrap tires as required in COMAR 26.04.08
 4. If sewage sludge, processed sewage sludge, or any other product containing these materials is proposed for storage, handling, or utilization at the landfill site, a separate application shall be submitted to the Biosolids Division for a sewage sludge utilization permit. That permit must be issued prior to the acceptance on site of any sewage sludge.
 5. 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 5 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 replaced 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; and
 - 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) and the federal regulations specified in 40 CFR §258.40. The design of the liner and leachate collection system must be approved by the Department before installation begins;
 - b. 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. 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 6 inches in thickness and compacted to the required density prior to addition of another lift; and
 - 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 must 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 2 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 damaged 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 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 2 feet 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 4 feet of select 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 landfilling 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 4 feet of select 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, without prior approval of the Department. The permittee must notify the Department within 1 hour of becoming aware of any leachate or contaminated liquid discharge leaving the site or having the potential of being released off-site.
3. 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 specifications (also known as the Phase III Report) referenced in Part I

of this permit. Leachate shall be discharged to the sanitary sewer system or an approved waste water 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. Leachate recirculation, treatment and/or discharge shall also comply with the federal regulation specified in 40 CFR §258.28(a)(2). 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. Upon request, 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 cumulative 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 storm water 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 storm water 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 3 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, must 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 a hard copy and a searchable electronic/digital copy 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 26.04.07.08B(17), 26.04.07.09F, 40 CFR §258, and guidelines established by the Department.
2.
 - a. The permittee shall submit to the Department a semiannual report on water quality 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 report on water quality shall be submitted to the Department within 90 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 to be measured and their Practical Quantitation Limits (PQL) are listed in Tables I and II of this permit. 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 report on water quality 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 in writing within 24 hours of receipt of the analytical data detecting this occurrence. Thereafter, if there are any significant increases above the MCL, Action Level, or other health standard, the permittee must notify the Department in writing within 24 hours of receipt of the analytical data detecting 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 receipt of the analytical data by the permittee or the qualified groundwater scientist or professional who is reviewing the analytical data which indicated the exceedance. If the permittee accepts the initial sampling result as a valid result, then the permittee can elect to not resample the monitoring point(s);
- 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**

VOLATILE ORGANIC COMPOUNDS	PQL (ppb)	VOLATILE ORGANIC COMPOUNDS	PQL (ppb)
Acetone	5.0	Cis-1,2-Dichloroethene	1.0
Acrylonitrile	5.0	Trans-1,2-Dichloroethene	1.0
Benzene	1.0	Methylene Chloride	1.0
Bromochloromethane	1.0	1,2-Dichloropropane	1.0
Bromodichloromethane	1.0	Trans-1,3-Dichloropropene	1.0
Bromoform	1.0	Cis-1,3-Dichloropropene	1.0
Bromomethane	1.0	Ethylbenzene	1.0
2-Butanone	5.0	2-Hexanone	5.0
Carbon disulfide	1.0	Iodomethane	1.0
Carbon Tetrachloride	1.0	4-Methyl-2-pentanone	5.0
Chlorobenzene	1.0	Methyl Tertiary Butyl Ether	2.0
Chloroethane	1.0	Styrene	1.0
Chloroform	1.0	1,1,1,2-Tetrachloroethane	1.0
Chloromethane	1.0	1,1,2,2-Tetrachloroethane	1.0
Dibromochloromethane	1.0	Tetrachloroethene	1.0
1,2-Dibromo-3-chloropropane	0.04	Toluene	1.0
1,2 – Dibromoethane (EDB)	0.04	1,1,1-Trichloroethane	1.0
Dibromomethane	1.0	1,1,2-Trichloroethane	1.0
1,2 – Dichlorobenzene	1.0	Trichloroethene	1.0
1,4 – Dichlorobenzene	1.0	Trichlorofluoromethane	1.0
Trans-1,4-dichloro-2-butene	5.0	1,2,3-Trichloropropane	1.0
1,1-Dichloroethane	1.0	Vinyl Acetate	1.0
1,2-Dichloroethane	1.0	Vinyl Chloride	1.0
1,1-Dichloroethene	1.0	Xylene	1.0

**TABLE II
MONITORING PARAMETERS**

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

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. Also, the report must include statistical analysis methods in evaluating groundwater monitoring data as required under the federal regulation 40 CFR §258.53(g)-(i).
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 on water quality and shall depict the location of all monitoring wells and piezometers in existence at the time of the survey.
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.
6. The requirements of 40 CFR §258 subpart E concerning groundwater monitoring and remediation must be followed to the satisfaction of the Department.

G. Spreading and Compaction:

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

H. Solid Waste Lifts:

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

I. Daily Cover:

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, putrescibles, 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; and
4. Impede compaction of wastes by standard landfill equipment.

J. Intermediate Cover:

A uniform, compacted layer of clean earth not less than 1 foot in depth shall be placed over each portion of a lift not later than 1 month following completion of that lift. The intermediate cover layer may not be removed without written authorization from the Department.

K. Final Cover:

1. A uniform compacted layer of earthen material not less than 2 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 lift.
2. Areas which have received final cover shall be mowed at least once a year, or more often if necessary, to control growth of woody vegetation and to allow facility personnel to inspect for signs of erosion, settlement, ponding of water, and leachate seeps.

L. Grading and Drainage:

The disposal site shall be graded and drained to:

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

M. 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.

N. Storm Water Management Plan:

1. The permittee shall have a signed copy of a valid Storm Water 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 storm water 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 storm water shall be incorporated into and become as part of this permit.

O. 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 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.

P. 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 and the federal regulation under 40 CFR §258. Furthermore, at least 6 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 and gas monitoring and maintenance of the closed facility as specified in COMAR 26.04.07.22 and the federal regulation under 40 CFR §258;
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.

Q. Gas Monitoring:

1. The permittee shall implement a gas monitoring program approved by the Department to comply with the lower explosive limit (LEL, 5 percent by volume in air) requirements for methane. To demonstrate compliance, the permittee shall sample air within facility structures where gas may accumulate, and in soil at the property boundary. Monitoring methods may include sampling gases from probes within the landfill units or leachate collection system and by sampling gases from monitoring probes or from gas monitoring wells installed in soil between the landfill unit and either the property boundary or structures where gas migration may pose a danger. Monitoring for gas migration shall occur within the most permeable (unsaturated) strata.
2. The type and frequency of monitoring shall be determined based on the soil conditions, the hydrogeologic and hydraulic conditions surrounding the facility, and the location of facility structures and property boundaries. The quantity and location of gas probes, gas monitoring wells, sampling equipment, and the monitoring frequencies shall be approved by the Department. The minimum frequency of monitoring shall be quarterly. The reports of gas monitoring shall be submitted to the Department on a semiannual basis along with the other environmental monitoring reports specified in the facility's permit. A copy of the most current topographic map generated by a survey performed as required in this permit and depicting the location of all gas monitoring probes and wells shall be included in each semiannual report.
3. If methane concentrations exceed 25 percent of the LEL in facility structures, excluding gas control or recovery system components, or exceed the LEL at the property boundary, immediate action shall be taken by the permittee to protect human health from potentially explosive conditions (e.g. personnel evacuation and venting the building). The permittee shall notify the Department as soon as a methane concentration in excess of 25 percent of the LEL is detected in the facility structures, excluding gas control or recovery system components, or when it exceeds the LEL at the property boundary.
4. Within 60 days after detection of the exceedance, the permittee shall prepare and submit a remediation plan for the Department's approval.

5. The remediation plan must describe the frequency and lateral and vertical extent of methane migration. The plan must describe possible causes of the increase in gas concentrations such as landfill operational conditions, gas control system failure or upset, climatic conditions, or closure activity. The plan must describe remedial action to be taken based on the cause, extent, and nature of the methane migration. The remediation plan must also include a schedule for implementation of the remediation.
6. If approved by the Department, the remediation plan must be implemented immediately with any changes to the plan or schedule reasonably required by the Department.

R. Location Restrictions and Design Demonstrations:

If not previously submitted, the permittee shall demonstrate to the Department compliance with the Location Restrictions specified under federal regulation 40 CFR 258.10 through 258.16 regarding airport safety, floodplains, wetlands, fault areas, seismic impact zones, and unstable areas. If not previously submitted, the permittee shall also demonstrate to the Department compliance with the Design Criteria specified under federal regulation 40 CFR §258.40. A copy of the required demonstrations shall be placed in a public repository, at or near the landfill site, where interested parties have access to them for review.

S. 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/or the U.S. Army Corps of Engineers.
2. Landfill construction and 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.