

CLOSURE PLAN REVIEW FORM

LANDFILL CLOSURE

Last Updated: July 2005

Facility Name		Reviewer / District Office	
Facility ID Number		Date Review of Plan Completed	
Date of Plan		Date Reviewed by Closure Coordinator	
Plan is: New, Amended, Revised		Date Reviewed by DDAGW (if applicable)	

This Closure Plan Review Form is #		of		forms completed in the review of this closure plan.
------------------------------------	--	----	--	---

Relevant Guidance Document Closure Plan Review Guidance for RCRA Facilities - OEPA/DHWM <http://epa.ohio.gov/portals/32/pdf/2008CPRG.pdf>

	YES	NO	N/A	Page #	Notes - NOD Comment #
I. General					
A) Facility Permit Status:					
Part A?					
Part B?					
Unpermitted Treatment, Storage, and Disposal Facility?					
B) Type of Closure:					
Full?					
Partial? If yes, list the other regulated units remaining (unclosed) at the facility in the Notes.					
C) Does the submitted plan describe closure for more than one unit? If yes, a separate closure plan review form shall be completed for each individual unit.					

	YES	NO	N/A	Page #	Notes - NOD Comment #
D) Is a summary and a description of unique features regarding the container storage area(s) provided? If yes, please include in the Notes.					
II. Description of Facility					
A) Is a description of the type of industry, size, and products included? If yes, please include in the Notes.					
B) Is a description of the process(es) that generate(s) the hazardous waste included? If yes, please include in the Notes.					
C) Is a description of the facility's hazardous waste management methods included? If yes, please include in the Notes.					
III. Map of Facility					
A) Does the plan include a topographic and/or county map including a north arrow?					
B) Does the plan include a detailed facility map showing the location of each of the hazardous waste management units, including a north arrow, scale, and legend?					
IV. Description of Unit to be Closed					
A) Is the following information regarding the landfill included? If yes, please include in the Notes.					
1) The estimated surface area of the landfill prior to initiation of closure activities (in acres, square yards, etc...).					
2) Types of operating permits for this landfill (e.g. NPDES, wastewater discharge permit for leachate, zoning permit, air, etc...).					
3) The maximum amount of waste managed at the landfill (in cubic yards or tons).					

	YES	NO	N/A	Page #	Notes - NOD Comment #
4) If a run-on or run-off control system been constructed to manage storm water at a volume equivalent to a 24-hour, 25-year storm.					
5) The approximate volume and/or dimensions of the waste to be capped.					
6) The period of use for hazardous waste management.					
7) Description, in detail, of any artificial or permanent structures associated with this landfill unit.					
8) A summary of geologic and hydrogeologic information.					
9) The depth to ground-water.					
10) The ground-water plan review form must be completed. If it's not completed, provide the reason.					
V. Composition of the Bottom Liner System (If no bottom liner exists, proceed to Section VI)					
A) Does the landfill contains a double-liner system beneath the waste, describe the liner components (e.g., primary and secondary clay liners, geomembranes, and leachate collection systems)					
B) Does the landfill contains a single-liner system beneath the waste, describe the liner components (e.g. clay liner, geomembrane, and leachate collection system)					
VI. List of Hazardous Waste					
A) Are the types of hazardous waste(s) currently managed in the container storage area included? List below with appropriate U.S. EPA Codes; include potential degradation products; App. VIII constituent(s).					

Waste Description	U.S. EPA waste code(s)	Constituents and Degradation Products	CAS Number

	YES	NO	N/A	Page #	Notes - NOD Comment #
B) Were the method(s) used to characterize the waste(s) listed? If yes, please include in the Notes.					
C) Is the characterization adequate? If no, please include in the Notes.					

VII. Landfill Design Components					
A) Is the following information regarding the landfill design included? If yes, please include in the notes, if no, please state reason why it's unnecessary.					
1) Test pad construction					
2) Final cover construction					
3) Sedimentation basin					
4) Slope stability and liquefaction					
5) Leachate collection pipes and holding tank					
6) Periodic surveying requirements					
7) Final cover settlement					

	YES	NO	N/A	Page #	Notes - NOD Comment #
8) Surface water collection/drainage pipes					
9) French or trench drains for surface water run-off or contaminated ground-water removal					
10) Contaminated ground-water pump and treat					
11) Anchor trench design					
12) Ground-water cut-off walls					
13) Gas collection & control					
14) Dike preparation for final cover					
VIII. Construction Quality Assurance					
A) Is the following information regarding the construction quality assurance included? If yes, please include in the notes, if no, please state reason why it's unnecessary					
1) Contingency plan for preventing or correcting damage to the landfill cover components during construction (e.g., inclement weather, burrowing animals)					
2) Site preparation (e.g., level slopes, prepare dikes)					
3) Sequence of construction activities					
4) Installation of the components (e.g., bottom liner, leachate collection, final cover, ground-water monitoring wells, sedimentation basin, gas control)					
5) Protection against the elements (e.g., freeze thaw cycle)					
6) Seismic stability analysis					
7) Unstable area design aspects (e.g., weak soils, underground mines, saturated wastes, water bodies, etc...)					

Closure Plan Review Form - Landfill

Facility - _____

	YES	NO	N/A	Page #	Notes - NOD Comment #
8) Chemical compatibility of waste material with other waste or landfill components					
9) Soil material sources for the bottom liner and final cover systems (quality and quantity)					
10) Procedures for handling of waste materials					
11) Equipment for construction, operation, and maintenance (each equipment specification depends upon its function)					
12) Equipment placement and traffic patterns					
13) Schedule for leachate management system inspections and maintenance					
14) Test pad construction and testing					
15) Construction and testing of recompacted clay liner for bottom and final cover systems					
16) Installation of geomembrane and geosynthetic clay liners for bottom and final cover systems (including the seaming and jointing of geosynthetic materials and anchor trench construction)					
17) Installation of a natural (12-inch sand/gravel layer) or geosynthetic (geonet and fabric filter) drainage systems for bottom and final cover systems					
18) Waste stabilization/solidification activities					
19) Surface water removal structures (e.g., drainage ditches and sedimentation basin)					
IX. Post-Closure Plan					
A) Is the following information regarding the post-closure plan included? If yes, please include in the notes, if no, please state reason why it's unnecessary					
1) Ground-water monitoring plan					

	YES	NO	N/A	Page #	Notes - NOD Comment #
2) Liner leak detection					
3) Leachate monitoring and removal					
4) Ground-water pump and treat					
5) Periodic inspections and settlement surveying					
6) Maintenance activities					
7) Continuation of land treatment processes including procedures for further degradation of hazardous constituents (i.e., fertilizing, disking, liming, etc.), run-on/run-off control, erosion control					
8) Post-closure notices					
9) Post-closure certification					
X. Plan Cover Sheet					
A) Is the following information regarding the plan cover sheet included? If yes, please include in the notes, if no, please state reason why it's unnecessary					
1) Name of the facility					
2) Type of unit					
3) U.S. EPA Identification Number					
4) Geographical location					
5) Date of the submittal					
6) Index of drawings					
XI. Drawing Requirements					
A) Indicate whether the closure plan provides the following landfill closure plan drawing requirements or state the reason why it's unnecessary.					

	YES	NO	N/A	Page #	Notes - NOD Comment #
1) General drawing standards (e.g., 24" x 36" sheet size, legend, title block, scale $\leq 1" = 200'$, north arrow, contour lines $< 5'$, etc...)					
2) Engineering plan drawings					
3) Cross-sectional drawings					
4) Detailed drawings					
XII. <u>Additional Requirements</u>					
A) Indicate whether the closure plan contains the following additional requirements or state the reason why it's unnecessary.					
1) Ground-water monitoring plan (OAC Rules 3745-65-90 to 65-94, or 54-90 to 54-99, and 55-01 to 55-02 as applicable). The groundwater plan review form should be completed.					
2) Is the DDAGW doing a review of the plan?					
3) Operation and maintenance plan during closure (construction) activities (OAC Rules 3745-65-15 & 18 or 54-15, 33, 73 to 75, and 55-02 as applicable)					
4) Survey plat (OAC Rule 3745-66-16)					
5) Contingency plans for flooding, erosion, leachate outbreaks, slope failures, and differential settlement during closure (construction) activities					
XIII. <u>Schedule for Closure</u>					
A) Does the plan detail all critical milestones for closure and state when a Professional Engineer (licensed and registered in the state of Ohio) will be present?					

	YES	NO	N/A	Page #	Notes - NOD Comment #
B) Does the plan list which activities the inspector will be notified of?					
C) Does the plan state that Ohio EPA will be given five working days notice before activities occur as listed in the above question?					
D) Does the closure plan indicate how long closure activities will take and is this time frame realistic?					
XIV. Other Permits					
A) Will other permits be required for successful implementation of this plan? If yes, please include in the Notes.					
B) Does the plan address NPDES, air emission, or other permit requirements?					
XV. Health and Safety Plan					
A) Does the closure plan indicate that the facility will comply with applicable OSHA requirements, including a Health and Safety Plan?					
XVI. Decontamination					
A) Unit and/or Secondary Containment Fate/Destiny:					
1) Does the plan state what will happen with the unit upon completion of closure? If yes, please include in the Notes.					
2) Does the plan state what will happen with the secondary containment upon completion of closure (i.e., Will the pad be used as a < 90-day storage area? Will it be scrapped?)? If yes, please include in the Notes.					
B) Based on the fate of the unit as described above, is the unit required to be decontaminated?					

	YES	NO	N/A	Page #	Notes - NOD Comment #
C) Is the structure or equipment subject to a triple wash? Does the plan state which solvent will be used? If yes, please include in the Notes.					
D) Does the plan state the volume of rinsate and debris expected to be generated? If yes, please include in the Notes.					
E) Does the plan state that the rinsate and debris will be managed as hazardous waste?					
1) If yes, please include a description of how the rinsate and debris will be managed and disposed in the Notes.					
2) If no, please include how that determination was made in the Notes.					
F) Is a description of the release control (decontamination pad) included in the plan? If yes, please include in the Notes.					
XVII. Sampling Plan and Analytical Procedures					
A) Does the plan include a soil Sampling and Analysis Plan as detailed in Section 3.11 of the 2005 CPRG - including sampling of cracks/holes, sump areas and areas of runoff/visible staining? If yes, the Data Collection and Analysis (http://epa.ohio.gov/portals/32/pdf/dca-prf.PDF) and Data Validation PRFs (http://epa.ohio.gov/portals/32/pdf/TierIDVManual.pdf) should be completed along with this form.					
B) Does the plan state that the full nature and extent of contamination will be determined and addressed?					

	YES	NO	N/A	Page #	Notes - NOD Comment #
XVIII. Certification					
A) Does the closure plan indicate that the certification will include the wording found in OAC rule 3745-50-42(D)?					
B) Does the closure plan state the status (e.g., post-closure) of the unit and the facility upon completion of closure? If yes, please include in the Notes.					
C) Does the plan state what documentation will be submitted with the closure certification? If yes, please include in the Notes.					
XIV. Financial Assurance Documentation					
A) Was a closure cost estimate submitted to Central Office or included with this closure plan submittal?					