

# **VIRGINIA SOLID WASTE MANAGEMENT REGULATIONS**

## **AMENDMENT 7 PERMITTING**

Deb Miller  
DEQ

Fouad Arbid  
SWS

# Purpose

- ▣ Landfill Siting Changes
  
- ▣ Design and Permit Application Changes
  - Overview of New Part B Form
  
- ▣ Overview of Permit Modification Changes
  
- ▣ Permit By Rule Changes

# Siting Changes

## ▣ Sanitary Landfills

- Statutory Revisions

- ▣ Public Water Supply (1 mile/3 mile)
- ▣ Wetlands (2.0 acres)

## ▣ CDD Landfills

- No 100 yr floodplains (no longer demonstration option)
- 500' from well, spring, gw drinking water source (200')
- No park/rec area, wildlife management area, or area critical habitat for any endangered species (new)

## ▣ Industrial Landfills

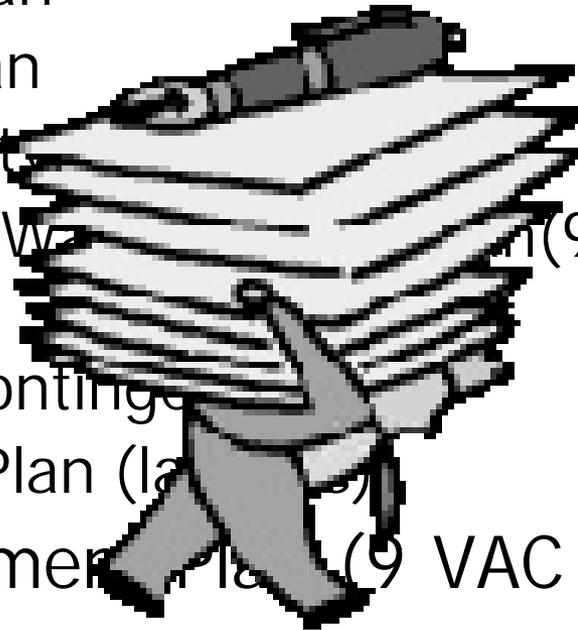
- No 100 yr floodplains (no longer demonstration option)
- No park/rec area, wildlife management area, or area critical habitat for any endangered species (new)

# Amend 7 Permit Format

- ▣ Part A 
  - DEQ Form SW 7-3 → Form SW PTA
  
- ▣ Part B 
  - DEQ Form SW PTB
    - ▣ One for Landfills (Sanitary, CDD, & Industrial)
    - ▣ One for Other SWMF
    - ▣ Attachments specified for permit documents

# What previous SWP documents are now only part of the operating record?

- ▣ Operations Manual (9 VAC 20-81-140)
  - Operations Plan
  - Inspection Plan
  - Health & Safety Plan
  - Unauthorized Work Plan (9 VAC 20-81-100.E.1)
  - Emergency Contingency Plan
  - Landscaping Plan (landscaping)
- ▣ Odor Management Plan (9 VAC 20-81-200.D.1.)



# Removal of Operations Manual

## (Guidance Memo 01-2010)

- ▣ Items Specified on DEQ Form SW PTB
  - Hours of operation
  - Daily disposal limit
    - ▣ Guidance Document 02-2008
  - Wastes to be accepted
- ▣ Items to be included in Design Report
  - Traffic routing
  - Refuse-cover balance computations
  - Stockpile sizing estimates

# Submission Requirements

- ▣ Notice of Intent (9 VAC 20-81-450.B.)
- ▣ Part A Application (9 VAC 20-81-460)
- ▣ Part B Application (9 VAC 20-81-470)

# **Notice of Intent Changes**

**(9 VAC 20-81-450.B, Submission Instruction No. 1)**

- ▣ Host Agreement
  - References § 10.1-1408.1 B 7 of the Code of Virginia
- ▣ SCC Certification
- ▣ DEQ Form SW PTA
  - Pieces of NOI to be included as Attachments I through VIII

# Part A Changes

## (9 VAC 20-81-460, Submission Instructions No. 1)

- ▣ Revised DEQ Form SW PTA
- ▣ Regulatory Modification
  - VDOT Adequacy – clarified for new SLF or increase in daily disposal limit
  - Adjacent Property Notification – specified only for new, expansion, or increase in capacity
  - Removal of SWMP Consistency Demonstration – covered in NOI

# Part B Changes

**(9 VAC 20-81-470, Submission Instruction No. 1)**

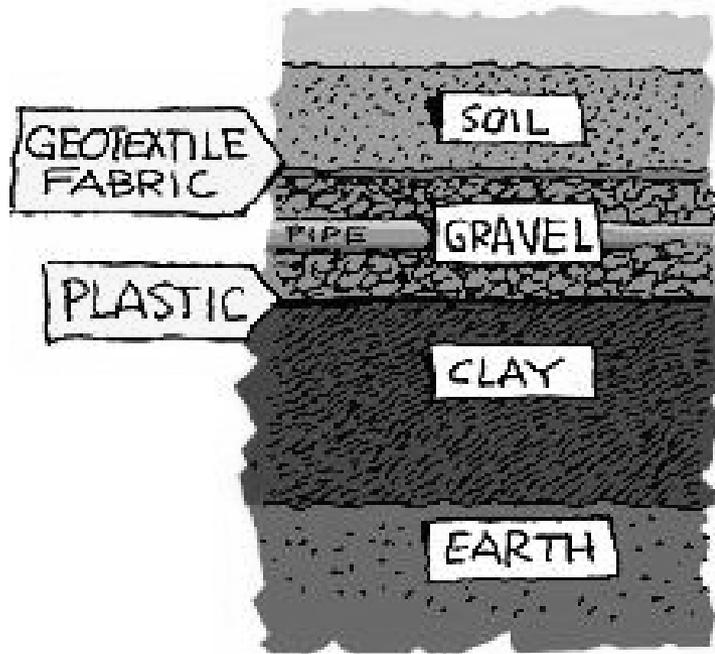
New DEQ Form SW PTB

				Solid Waste Landfill Part B Application, Form SW PTB			
		Solid Waste Permit No.		SWP			
		New Landfill		<input type="checkbox"/>		Modification of existing permit	
Facility Name:				Type of Landfill:			
Facility Location:							
Contact Person:				Contact Number:			
Owner Name, Address, and Phone:				Operator Name, Address, and Phone:			

# DEQ Form SW PTB - Operations

	Total Property Acreage:		Facility Boundary Acreage:			
	Disposal Unit Boundary Acreage:		Total Capacity (cubic yards):			
→	Daily Disposal Limit:		Site Life (years):			
→	Hours of Operation:					
→	<b>Types of Wastes to be Accepted (check all that apply)</b>					
	Municipal Solid Waste	<input type="checkbox"/>	Ash	<input type="checkbox"/>	Contaminated Soil <sub>1</sub>	<input type="checkbox"/>
	Construction Waste	<input type="checkbox"/>	Institutional Waste	<input type="checkbox"/>	Vegetative Waste	<input type="checkbox"/>
	Demolition Waste	<input type="checkbox"/>	Inert Waste	<input type="checkbox"/>	Sludge	<input type="checkbox"/>
	Debris Waste	<input type="checkbox"/>	Industrial Waste	<input type="checkbox"/>	Household Waste	<input type="checkbox"/>
	Animal Carcasses	<input type="checkbox"/>	Non-friable Asbestos	<input type="checkbox"/>	Other Special Wastes <sub>1</sub>	<input type="checkbox"/>
	Commercial Waste	<input type="checkbox"/>	Friable Asbestos	<input type="checkbox"/>		

# DEQ Form SW PTB – Landfill Liner (9 VAC 20-81-130)



## Sanitary Landfills

- Subtitle D Liner
- Pre-Approved Alternate
- *Additional Alternate*

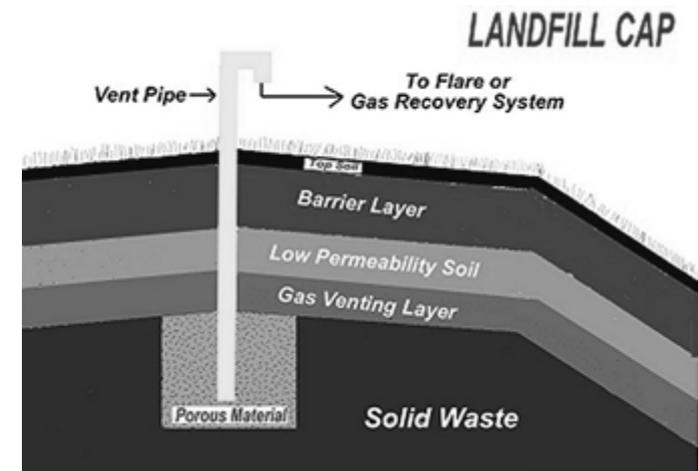
## CDD & Industrial Landfills

- Compacted Clay
- Synthetic Liner
- *Other Liner*
- In-place Soil
- Double Liner

- Facilities opting for an Alternate/Other Liner design must provide a demonstration proving the liner's suitability – *no longer a variance*

# DEQ Form SW PTB – Landfill Cap (9 VAC 20-81-160)

- ▣ Standard Final Cover
- ▣ Pre-approved Alternate
  - Separate Sanitary and CDD/Industrial LF liners
- ▣ Additional Alternate
  - Facilities opting for an Additional Alternate Cap design must provide a demonstration proving the cap's suitability



# DEQ Form SW PTB – Leachate

- ▣ Leachate Recirculation (RDD)
- ▣ Discharged directly to WWTP
- ▣ Treated onsite and Discharged
  - Need VPDES approval
- ▣ Transported by a vehicle to an offsite WWTP
- ▣ Other method

<b>Leachate Management (check all that apply)</b>	
Leachate Recirculation <sub>6</sub>	<input type="checkbox"/>
Discharged directly to WWTP	<input type="checkbox"/>
Treated onsite and discharged <sub>7</sub>	<input type="checkbox"/>
Transported by a vehicle to an offsite WWTP	<input type="checkbox"/>
Other method <sub>8</sub>	<input type="checkbox"/>

# DEQ Form SW PTB – RDD Plans and Variances

<b>Does this application include a Research Development and Demonstration Plan?</b> (Yes or No),		
If yes:	The addition of liquids to leachate and gas condensate from the same landfill for accelerated decomposition of the waste mass.	<input type="checkbox"/>
	Allowing run-on water to flow into the landfill waste mass.	<input type="checkbox"/>
	Allowing testing of the construction and infiltration performance or alternative final cover systems.	<input type="checkbox"/>
	Other measures to be taken to enhance stabilization of the waste mass.	<input type="checkbox"/>
<b>Does this application include a variance(s) request to regulatory requirements?</b> (Yes or No)		
If yes list regulatory citation(s):		

# DEQ Form SW PTB Attachments

**Attachments. The following attachments must be submitted in the order prescribed**

Attachment I: Notice of Intent

Attachment II: VDOT Adequacy Report and Approval Letter (If increasing Daily Disposal Limit)

Attachment III: Design Plans

Attachment IV: Closure Plan

Attachment V: Post Closure Plan

Attachment VI: Design Report

Attachment VII: Construction Quality Assurance (CQA) Program and Technical Specifications

Attachment VIII: Leachate Management Plan

Attachment IX: Landfill Gas Plans

Attachment X: Groundwater Monitoring Plan

Attachment XI: Groundwater Corrective Action Plan

Attachment XII: Financial Assurance Documentation

Attachment XIII: Special Waste Documentation

Attachment XIV: Alternate Liner Demonstration

Attachment XV: Laboratory Test Results Documenting Permeability of In-place Soils

Attachment XVI: Alternate Final Cover Demonstration

Attachment XVII: Research, Development, and Demonstration Plan

# **I. Notice of Intent**

## **(9 VAC 20-81-450.B.)**

- ▣ Submission Instruction No. 1
  - For new Part B Applications, this is a copy of the initial NOI
  - For Part B Modifications, this is the NOI requesting the modification

# II. VDOT Adequacy

- ▣ Submission Instruction No. 1
  - Required for facilities requesting an increase in their daily disposal limit
  - References Part A documentation



# III. Design Plans

## (9 VAC 20-81-470.A.1.)



- ▣ Submission Instruction No. 2
  - Specifies list and order of design plans to be submitted with application
  - Request for full size and 11x17 versions
- ▣ Regulatory Modification
  - Plan sheets not required to include “the direction and sequence of filling within each phase” (old 9 VAC 20-80-520.A.1.j.(4))

# IV. Closure Plan

(9 VAC 20-81-160.B. and 9 VAC 20-81-470.A.2.)



- ▣ Submission Instruction No. 6
  - Added new section for closure of SWMF located at a SWDF (for those that don't have a separate permit)
  - Specified calculations to be included
  - Cost estimates according to Worksheet 1 + reference calcs related to waste storage
  - Demonstrations for alternate caps to be included in Attachment XVI
- ▣ Consolidation of LF closure requirements
  - Re-order requirements to flow with time

# V. Post-Closure Plan

**(9 VAC 20-81-170.A.2. and 9 VAC 20-81-470.A.3.)**

- ▣ Submission Instruction No. 6
  - Consolidation of Inspection, Monitoring, and Maintenance Plans
  - Reference other Part B attachments, in lieu of repeating information (gas, groundwater, leachate)
  - Cost estimate calculation according to existing Worksheet 2
- ▣ Consolidation of LF post-closure requirements
  - Re-order requirements to flow with time
  - Addition of PCC Termination language consistent with GM 01-2007

# **VI. Design Report**

## **(9 VAC 20-81-130 and 9 VAC 20-81-470.B.)**

- ▣ Submission Instruction No. 2
  - Still working on Design Report text
  - Section provided to address alternate liner demonstration to be included in Attachment XIV
- ▣ Consolidation of LF design requirements
  - Captive industrial LF exempt from shelter requirement (9VAC20-81-130.D.)
  - Run-on control system to prevent flow from 24-hour, 25-year storm (9VAC20-81-130.H.1.)
  - 50-ft fire break now applies to all landfills (9VAC20-81-130.I.)

# **VII. CQA and Technical Specs**

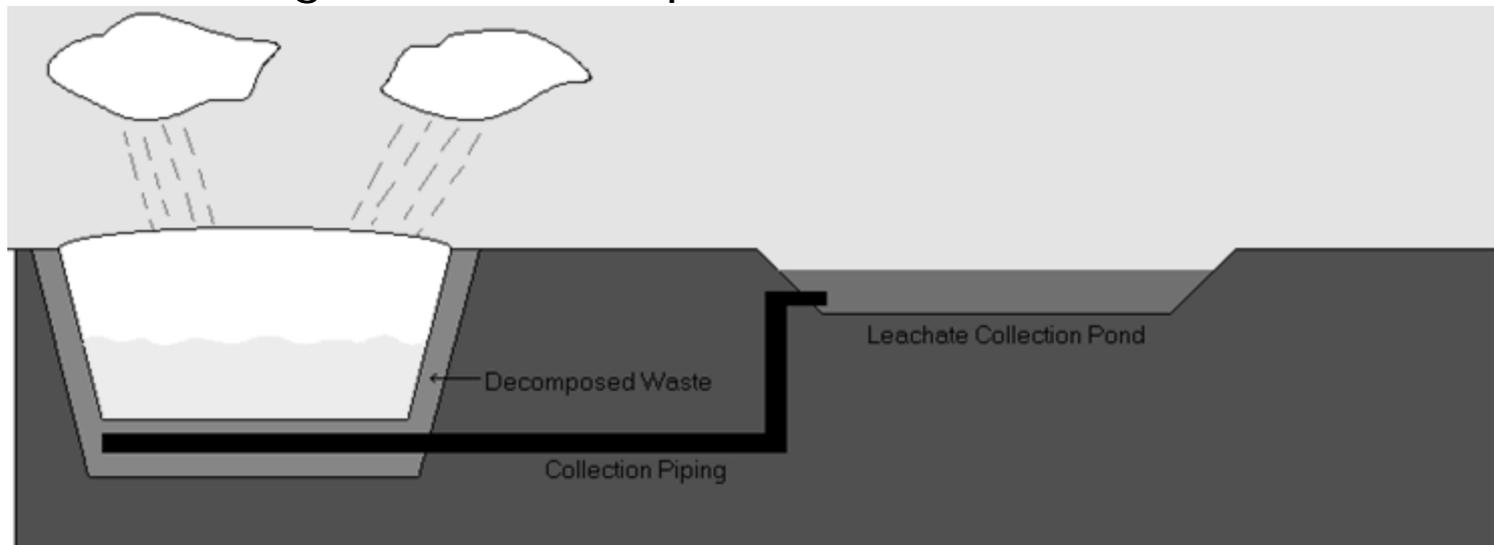
## **(9 VAC 20-81-130.Q. and 9 VAC 20-81-470.B.3.)**

- ▣ Submission Instruction No. 2
  - Text still under revision
- ▣ Consolidation of LF requirements
  - Test pad requirements added (9VAC20-81-130.Q.2.g.)
    - ▣ One test pad per low permeability liner soil source
    - ▣ Test pad to establish range of criteria for liner (compaction, moisture, USCS classification, and grain size)
    - ▣ Liner to be tested and certified according to test pad results
- ▣ Clarified requirement that waste cannot be accepted until DEQ issues CTO (9VAC20-81-130.Q.3.)

# VIII. Leachate Management Plan

## (9 VAC 20-81-210)

- ▣ New Submission Instruction No. 10
  - Design of leachate collection, removal and leakage monitoring systems
  - Design and capacity of Collection & Storage Units
  - Treatment & Discharge Methods
  - Handling leachate seeps



# **IX. LFG Plans**

## **(9 VAC 20-81-200)**

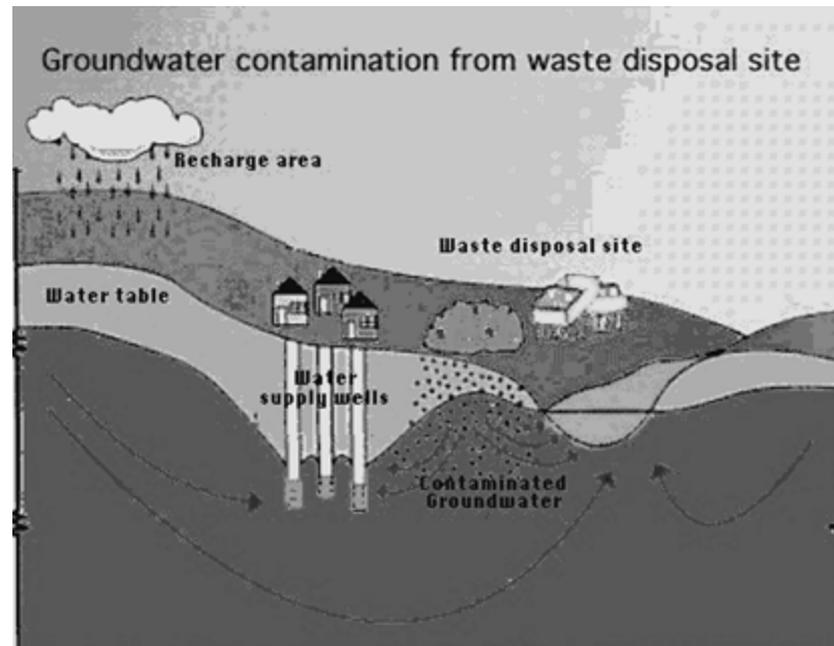
- ▣ Revised Submission Instruction No. 13
  - Added SWANA language in regards to gas probe purging procedures
  - Added return to compliance monitoring procedures
  - Placeholder for LFG Demonstrations at CDD/Industrial Landfills
  - Separate sections to address LFG Remediation and Odor Management Plan content



# X. Groundwater Monitoring

# XI. Corrective Action

- ▣ Revising Submission Instructions for GWMPs



# **XII. Financial Assurance Documentation**

- ▣ Submission Instruction No. 1
  - Modification to text for clarification
    - ▣ Specifies that FA is required for closure, post-closure, and corrective action
    - ▣ Clarifies that FA Mechanism to be submitted prior to facility obtaining CTO
- ▣ Submission Instruction No. 9



# **XIII. Special Waste Documentation**

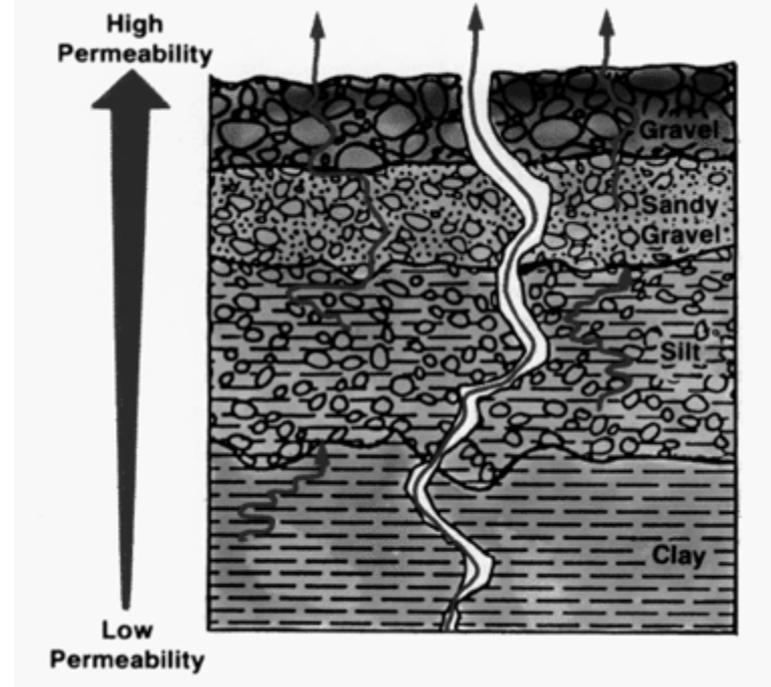
- ▣ Required for facilities that marked 'Contaminated Soil' or 'Other Waste' on DEQ Form SW PTB
- ▣ Modification of SPSW Forms
- ▣ Revising guidance 04-1994/09-2003: Guidelines for Special Waste Disposal

# **XIV. Alternate Liner Demonstration**

- ▣ NOT for pre-approved alternate
  
- ▣ See Submission Instruction No. 2
- ▣ Same documentation to be submitted as before, just now it's not processed as a variance
- ▣ Processing:
  - DEQ Regional Office to review HELP Model
  - DEQ Central Office to review MULTIMED Model

# XV. Laboratory Test Results...

- ▣ Same as before
  - Required for CDD/Industrial LFs using 'In-place Soil' liner
    - ▣ Min. 1-ft of in-place soil present
    - ▣ Hydraulic conductivity =  $1.0 \times 10^{-7}$  cm/sec

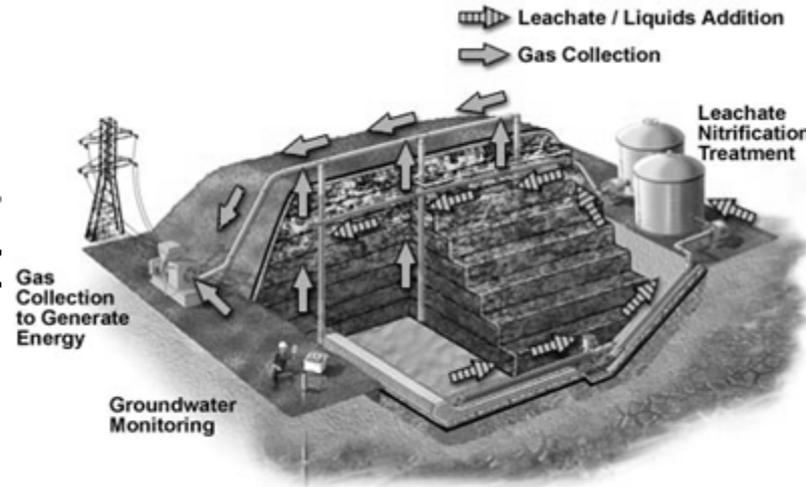


# **XVI. Alternate Final Cover Demonstration**

- ▣ Not for pre-approved alternate
  
- ▣ Same as before
  - See Submission Instruction No. 6
  - Documentation must show infiltration and erosion layers meet regulatory requirements
  - Reference to GM 2009-04: Final Cap System Hydraulic Conductivity Testing-Infiltration Layer

# XVII. RDD Plans

- ▣ Addition of liquids in addition to leachate and gas condensate from the same landfill for accelerated decomposition of the waste mass
- ▣ Allowing run-on water to flow into the landfill waste mass
- ▣ Allowing testing of the construction and infiltration performance of alternate final cover systems
- ▣ Other methods for waste stabilization



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# New SWP Application Review

- ▣ NOI Review
  - Completeness Review only
- ▣ Part A Review
  - Completeness Review w/in 30 days
  - Technical Review following “administratively complete” status
- ▣ Part B Review
  - Completeness Review w/in 30 days
  - Technical Review
    - ▣ Following “administratively complete”
    - ▣ DEQ implementing “one bite at the apple” approach
- ▣ Draft Permit
  - Public Participation



# Permit Modifications

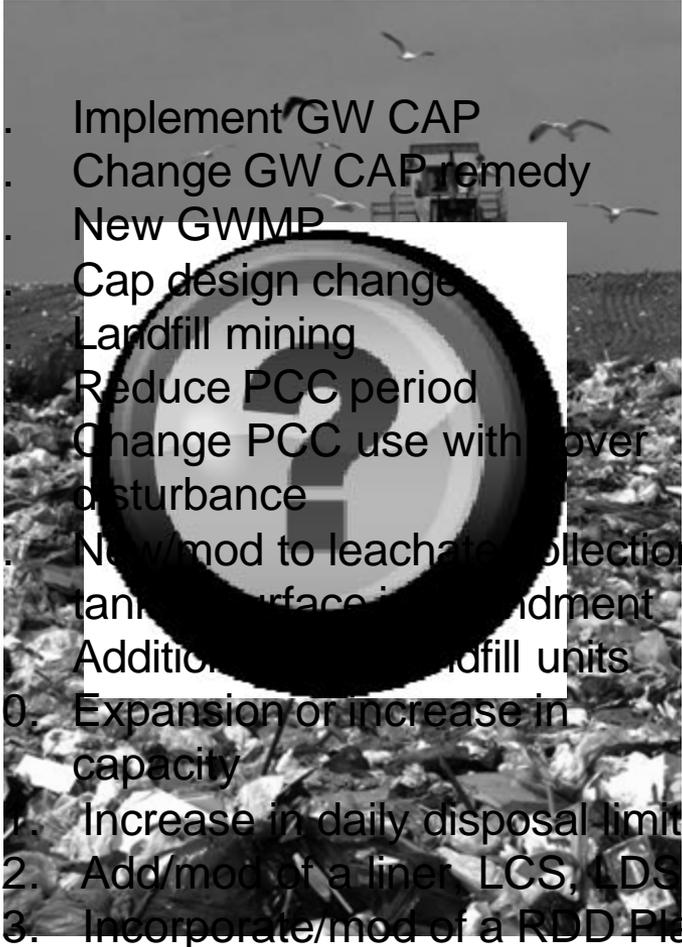
## PERMIT AMENDMENTS



# Major Permit Modifications

(9 VAC 20-81-600, Table 5.2)

- ▣ Major Modifications substantially alter the facility or its operation
- ▣ 13 Modifications specified in Table 5.2
- ▣ Submission requirements provided in Submission Instruction No. 1

- 
1. Implement GW CAP
  2. Change GW CAP remedy
  3. New GWMP
  4. Cap design change
  5. Landfill mining
  6. Reduce PCC period
  7. Change PCC use with cover disturbance
  8. New/mod to leachate collection tank surface in ground
  9. Additional landfill units
  10. Expansion or increase in capacity
  11. Increase in daily disposal limit
  12. Add/mod of a liner, LCS, LDS
  13. Incorporate/mod of a RDD Plan

# Permittee Changes

## (9 VAC 20-81-600, Table 5.2)

- ▣ Replaces minor amendment not requiring director approval
- 1. Correction of typographical errors
- 2. ▣ Equipment replacement or upgrade with functionally equivalent components
- 3. ▣ Replacement of an existing leachate tank with a tank that meets the same design standards and has a capacity within +/-10% of the replaced tank
- 4. Replacement with functionally equivalent, upgrade, or relocation of emergency equipment
- 5. Changes in name, address, or phone number of contact personnel
- 6. Replacement of an existing well that has been damaged or rendered nonoperable, without change to location, design, or depth of the well
- 7. Changes to the expected year of final closure, where other permit conditions are not changed
- 8. Changes in postclosure use of the property, without disturbance of the
- 9. Mcoverdification of a leachate tank management practice

# Minor Permit Modifications

## (9 VAC 20-81-600.F.2.)

- ▣ Encompasses everything else
- ▣ Requires prior written approval by DEQ
- ▣ RDD Minor Modification (9 VAC 20-81-600.F.7.d.)
  - If the RDD Final Report indicates that the goals of the project have been met, are reliable and predictable, the department will provide a minor permit modification to incorporate the continued operation of the project with the appropriate monitoring.

# Processing Permit Modifications

- ▣ Major Modifications
  - DEQ to respond w/in 90 days
  - Public Hearings - only required for an expansion or increase in capacity of an existing LF
- ▣ Minor Modifications
  - DEQ to respond w/in xx days- NOT SPECIFIED IN REG!
  - Facilities to provide notification to local gov't w/in 90 days of permit modification
- ▣ Permittee Changes
  - No DEQ response specified
  - Permittee to provide DEQ and local gov't notification

# Guidance Memos

## ▣ New

- GM 01-2010: New Operations Manual Requirements
- GM 05-2010: Beneficial Use

## ■ Revised

- GM 02-2008: LF Waste Disposal Limits
- GM 01-2007: PCC Termination
- GM 01-2009: Is a Part A Mod Required
- GM 05-2009: RDD Plans

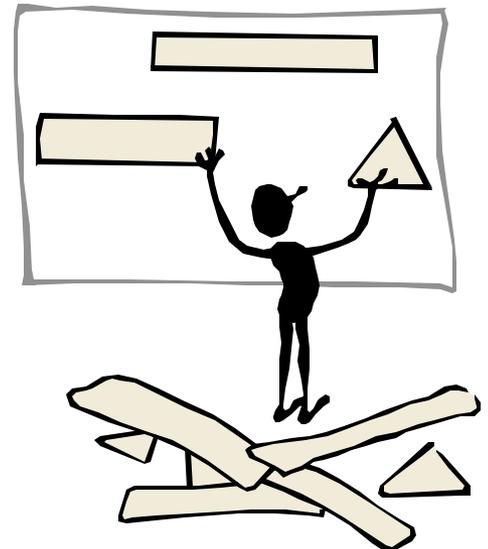


# Submission Instructions

- ▣ SI\_01: Procedural Requirements
- ▣ SI\_02: LF Design
- ▣ SI\_03: Waste-to-Energy/Thermal Treatment/Incinerator Design
- ▣ SI\_04: Other SWMF Design
- ▣ SI\_06: Closure & Post-Closure Plans
- ▣ SI\_10: Leachate Management Plan 
- ▣ SI\_13: LFGMP, LFGRP, and Odor Plans
- ▣ SI\_20: PCC Termination Evaluation

# Next Steps

- ▣ Update Checklists
- ▣ Update Solid Waste Permit Manual & Template Letters
- ▣ Assess needs for additional Guidance and Submission Instructions



***PERMITTING OTHER  
SWMFS***

# PBR Submission Requirements

(9 VAC 20-81-410.A., Submission Instruction No. 01A)

- ▣ NOI
  - Area/Site Maps
  - Disclosure Statement
  - Local Gov't Cert
  - Demonstration of Need
- ▣ Siting Certification
- ▣ SWMP Certification
- ▣ P.E. Certification
  - Facility meets Design / Construction Standards
  - Facility has Closure Plan
- ▣ Ops Manual Certification
- ▣ Demonstration of Legal Control
- ▣ SCC Certification
- ▣ Proof of FA
- ▣ Public Participation Results
- ▣ Facility Specific Info
  - Compost
  - Waste Piles
  - Facilities reclaiming PCMs
- ▣ Permit Fee

# PBR Application Review

- ▣ DEQ to perform Completeness Review only
- ▣ Facility Modification Clarifications
  - Modification of Facility Design or Operation requires permit fee
  - Specifies documentation to be submitted depending on modification requested



# Option for SWP

- ▣ 9 VAC 20-81-410.A.4. ... *The department may require the operator to submit the full permit application and to obtain a regular solid waste management facility permit if it is determined the requested operation does not qualify for permit-by-rule status.*
- ▣ Simplified DEQ Form SW PTB provided
- ▣ Facility to follow Submission Instructions No. 1, 3 or 4, 6, and 10, as applicable

# QUESTIONS?

Thanks to:

Kathryn Perszyk, Solid Waste Permit Coordinator