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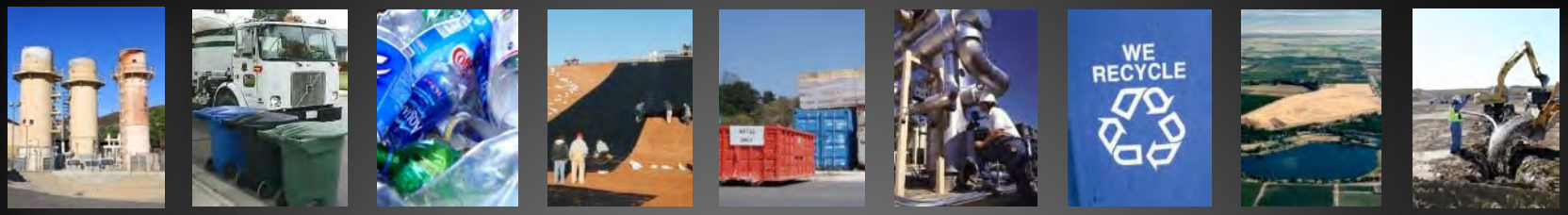


New Mexico EG Rules for Landfills

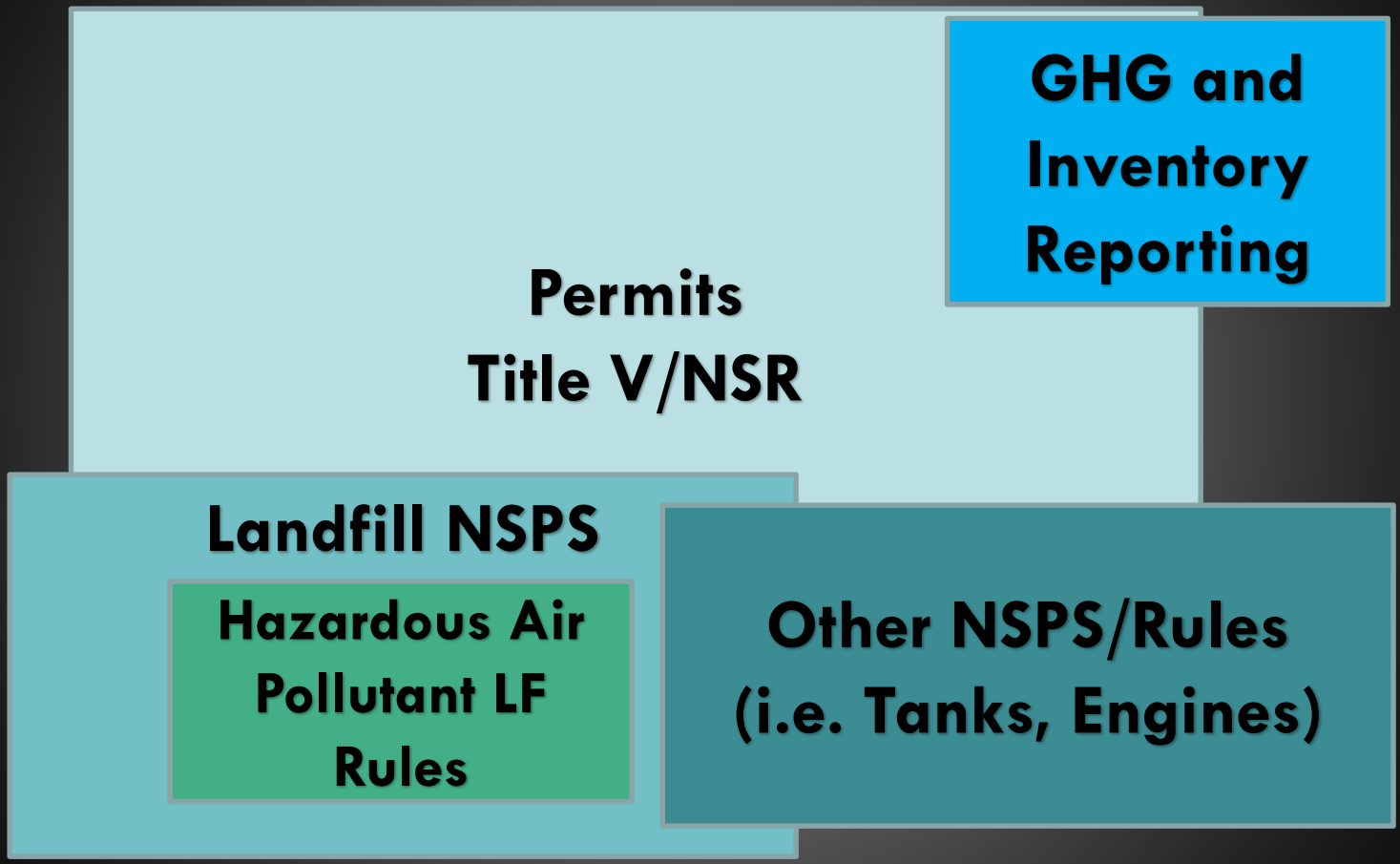
Regional Roundtable - October 8, 2019

Presented by:
David Mezzacappa, P.E.

New Source Performance Standards (NSPS)

- EPA-Issued (40 CFR 60)
- Air Pollutants by Industry
- > 90 Industries Covered
- MSW Landfills Covered Since 1996
- New NSPS for Landfills 2016
- Requirements Filtering Down
- Gas Control System

How NSPS Relates



General NSPS Implementation

"Existing" and Subject to State or Federal EG Requirements

July 17, 2014

Commence Construction, Reconstruction, or Modification

"New" and Subject to NSPS Requirements

New, Reconstructed, Modified?

- Know where your Landfill Stands
- New Sites = Construction, not Permitting
- Reconstruction/Modification
  - Capacity Increase
  - Not Minor (Alt. Liner or Daily Cover)
  - Construction not when Permitted
  - Unique Construction to Increase
- Once Shifts to NSPS always NSPS

Landfill NSPS and EG

- Subparts WWW and Cc Originally Issued on March 12, 1996
- Subpart Cc Followed Requirements of Subpart WWW
- Instead of Revising Subpart WWW and EG Subpart Cc Directly, EPA Updated via Issuance of new Subparts (Subparts XXX and Cf, Respectively)
- Each Landfill NSPS has an EG Rule

EG Timelines NSPS Issued

- Local/State Plans:
  - Until May 29, 2017 to Submit Plan to US EPA for Approval
  - EPA has 4 Months to Review the Plan
  - If Needed, 2 Months to Address EPA Comments and Revise Plan
  - Effective no later than November 2017 (actual October 2019)
  - If no Plan then Defaults to Federal Plan (due by Nov. 2017/Issued August 2019)
- NM/Bernalillo Met May 2017
- Per Above EPA Approval Later
- EPA has Since Extended Dates

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Original NSPS (40 CFR 60, Subpart WWW)

- Proposed in 1991
- Finalized in 1996
- Hazardous Rules in 2003 (40 CFR 63, AAAA)
- Accepted waste > November 8, 1987 or has Remaining Capacity
- Capacity > 2.5 Million Mg or m^3
- Triggered Gas Systems for a few Landfills

New NSPS 2016 (40 CFR 60, Subpart XXX)

- Finalized August 29, 2016
- Immediately Impacted "New" or "Modified" Landfills (after July 17, 2014)
- Lowered Threshold for Gas System Install
- Did not Address Existing NSPS Rules
- Resubmit Prior NSPS Items
- With EG will Apply to all NM Landfills

?

Landfill NSPS and EG

Landfills that were last constructed / modified …	Emission Guidelines		NSPS	
	Cc (old)	Cf (new)	WWW (old)	XXX (new)
… before May 30, 1991	X	X		
… on or between May 30, 1991 & July 17, 2014		X	X	
… after July 17, 2014			X	X

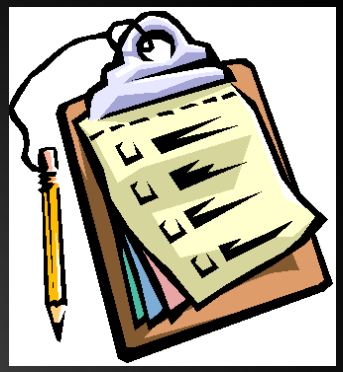
Major Provisions of Rules

- Landfill Sizes that Trigger Rule Provisions
  - Remain the same - 2.5 million Mg or m^3
- NMOC Emissions Threshold to Control LFG
  - Reduced from 50 Mg/year down to 34 Mg/year
  - Closed Landfills Remain at 50 Mg/year (Subcategory)

New Mexico EG, 2016 thru Now

- When New NSPS Final in 2016……
  - EG for "Existing" Sites Solicited by EPA
  - New Mexico/Bernalillo Plans Submitted May 2017
  - EPA Sued, Delayed, lost Court Case
  - New Mexico/Bernalillo Approved
  - Effective October 11, 2019
  - First Submittals Due 90 Days (January 9, 2020)

Immediate To-Do List



- Landfill "New" or "Existing"
- EG Covers NM/Bernalillo, NOT Tribal Lands
- Don't Forget Closed Landfills
- Initial Filings 90 Days After EG Final
  - Initial Design Capacity Report
  - Initial Emissions Calculations (NMOC)
- Update Permit if Needed
- Plan for Subsequent Steps

Initial Design Capacity Report

- Ultimate Landfill Capacity
  - Permitted Number
  - Includes any Incidental Site Disposal Areas
  - If Mass/Density or Density/Mass Recalculate Annually
- Location Map/Map Showing Disposal Areas
- If Under Threshold Re-Report if Increases
- Being Over Capacity Requires Title V Permit if not Closed
- If Over Capacity and Closed, File Closure Report

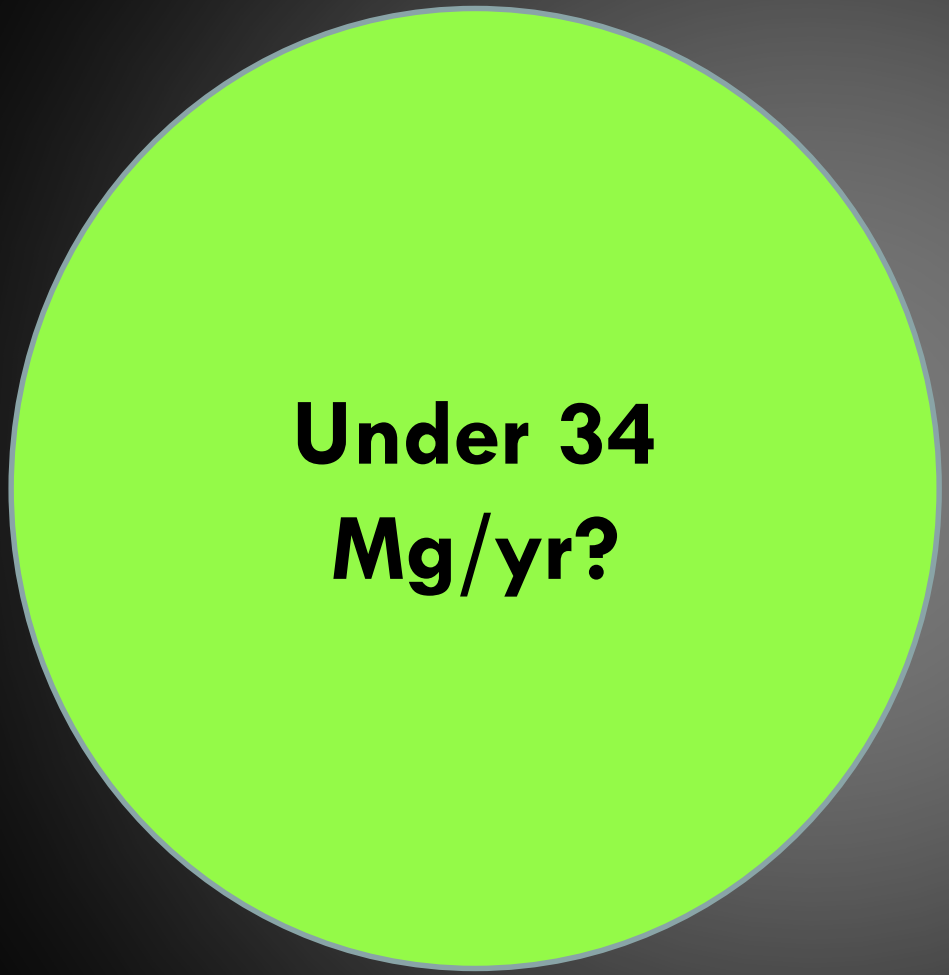
Tier 1 Emissions Calculations

- Rule Requires Gas System for Landfills that Emit > 34 Mg/yr of NMOCS (50 Mg/yr Closed)
- Within 90 Days Report NMOCs
- Can Combine with Initial DCR
- Site-Specific NMOC from Prior NSPS?
- Use Default 4,000 ppmv NMOC?
- Use LandGEM Spreadsheet (Dry k)
- Remove Non-Degradable Trash

Closed Landfill Subcategory

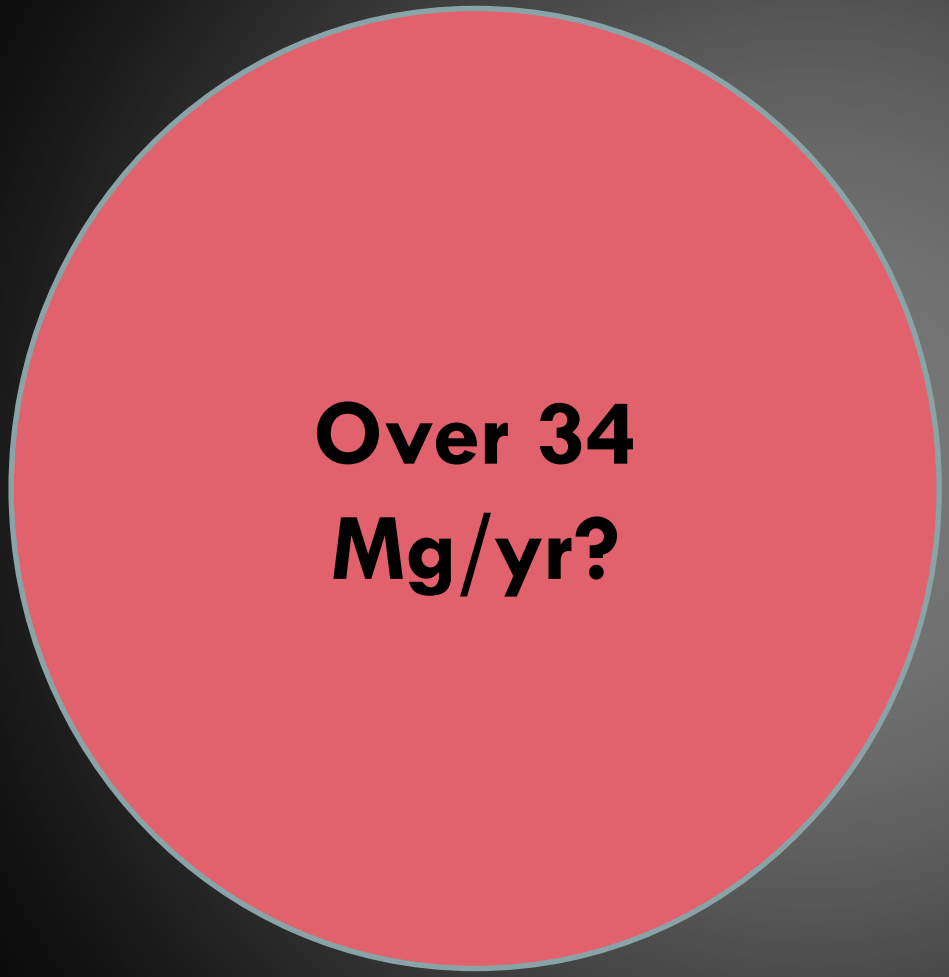
- In EG Rule, MSW Landfills Closed by September 27, 2017 (13 Months after EG Rules Published) Continue with 50 Mg/yr NMOC threshold
  - Note that 40 CFR 60.38(f) has a Closure Report Requirement
  - Still Calculate Emissions
  - Not Available to NSPS Landfills

Tier 1 Emissions?



- Recalculate/ Report Annually
- 5-Year Reports if under 34 Mg/yr all 5 Yrs.
- Prepare to Test if Near 34 Mg/yr

Tier 1 Emissions?

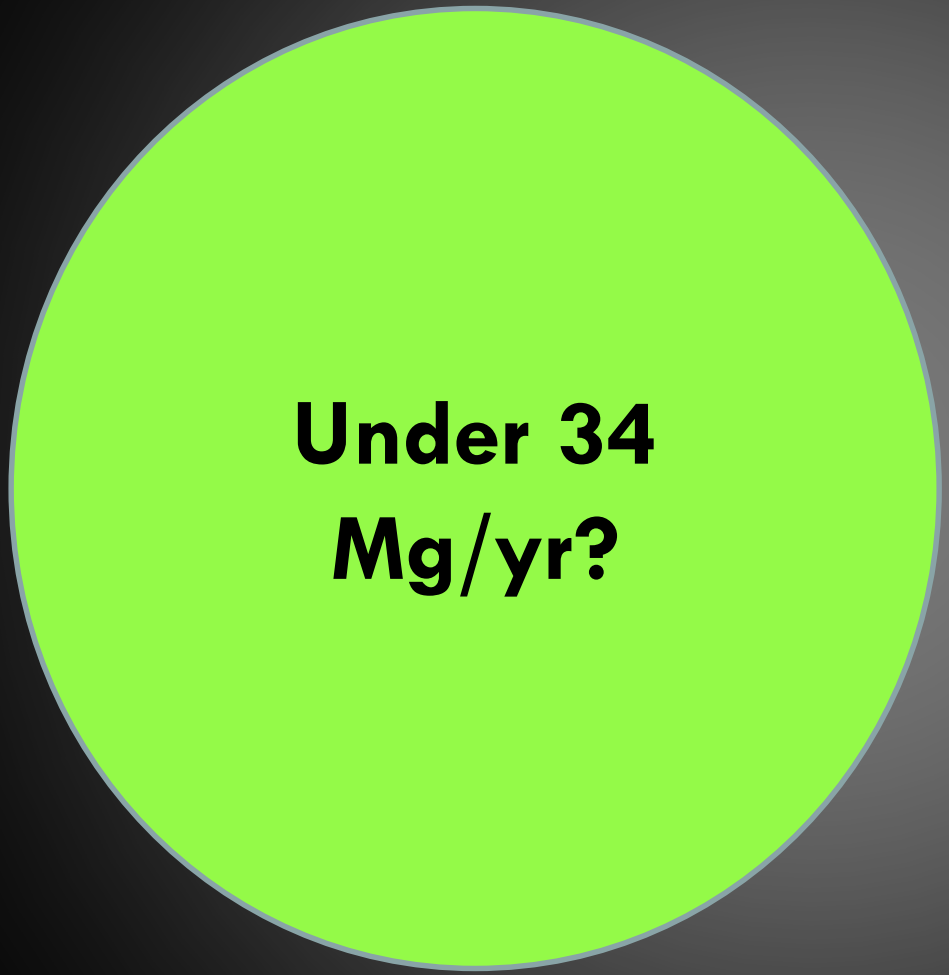


- Consider Site-Specific Testing?
- Plan for Gas System Contingency?

Tier 2 Landfill Gas Testing

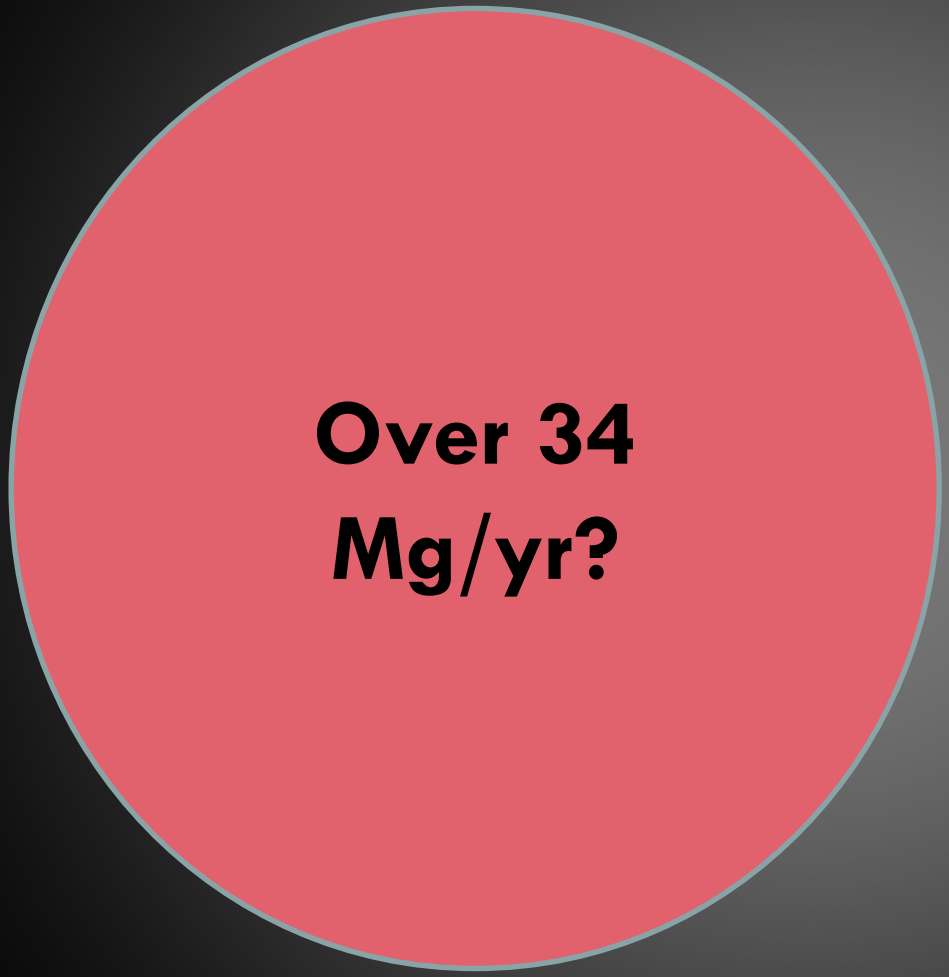
- Default NMOC Conc. = 4,000 ppm
- Testing Should Show < 1,000 ppm
- Called "Tier 2" Testing in the Rule
- Have 180 Days to Re-Report after Tier 1
- Up to 50 Samples from Landfill
- Can Take from Gas Systems
- Use Summa Cans/Push-Probe Rigs

Tier 2 Emissions?



- If < 34 Mg/yr Report Up to 5 Years
- Know When Over/ Watch Waste Intake

Tier 2 Emissions?



- Results Look Okay?
- Consider Further Tiers
- Plan Whether Design Gas System Same Time

Over 34 Mg/yr What Next?

- Tier 3 Testing?
  - Drilling Wells and Determining Site-Specific k
  - Within 1 Year of Showing >34 Mg/yr
  - Generally Quite Costly
  - Wells/Pressure Probes and Equipment
  - EPA Method 2E
  - Can Skip to Tier 4

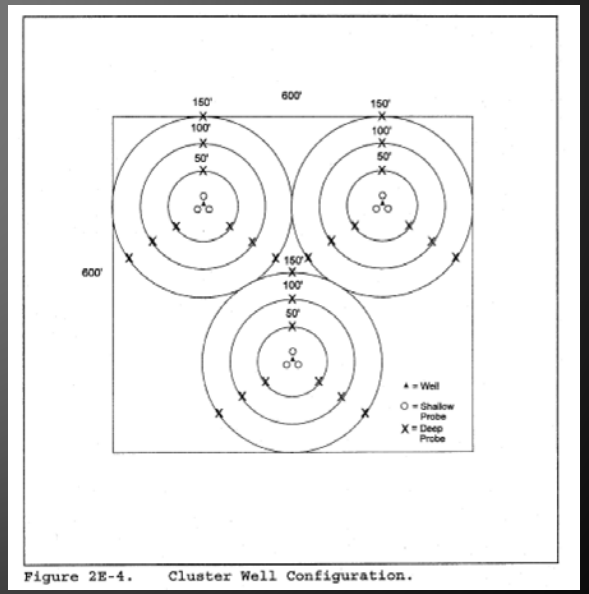


Figure 2E-4. Cluster Well Configuration.

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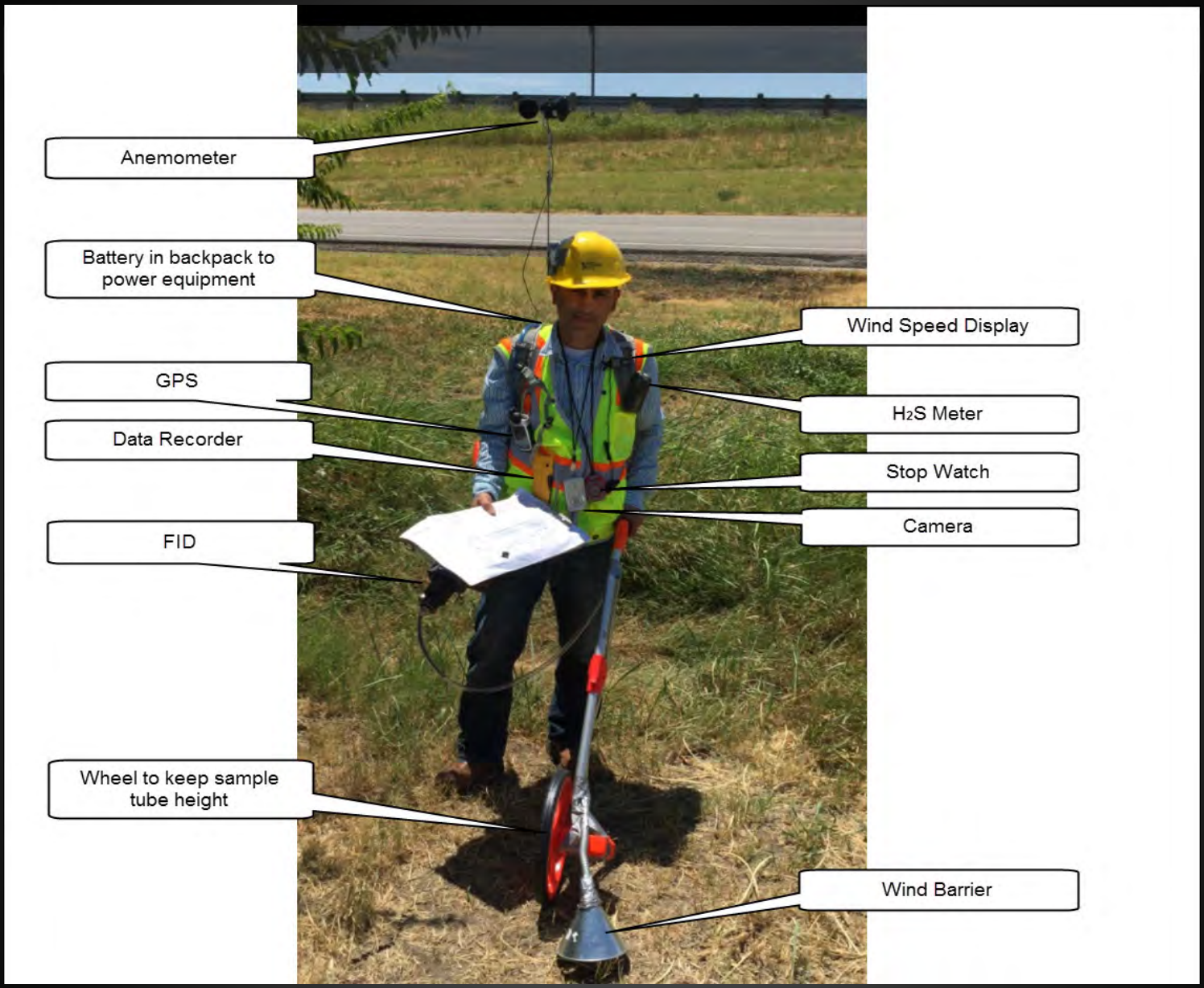
Tier 4 Demonstration

- Tier 1, 2, 3 Remain the Same to Calculate NMOC Emissions
- Sites Between 34 - 50 Mg/yr Eligible for new Tier 4
  - Can Skip from Tier 2 to Tier 4
  - Cannot go back to Earlier Tiers after Tier 4

So what is it ?

Tier 4 Demonstration

- Surface Scan (30-Meter Intervals/Penetrations)
- Must Perform 4 Quarterly Readings
- No Exceedances Above 500 ppm
- Continue to Report NMOC Emissions Annually
- Wind Speed Limits/Shield Required
- Can Leave Existing GCCS On (with Demonstration)
- Requires Notification of Testing/Electronic Reporting
- Requires Meticulous Recordkeeping
- If Fail Install GCCS 30 Months After NMOC Report >34 Mg/yr



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What Happens Ultimately >34

- GCCS Design Plans Still Required
  - Now Requires only Notification and Signature Page Certifying it when Completed
  - If no Contact in 90 Days or told that no Review Needed Owner Continues at Own Risk
- When Must GCCS Design Plans be Updated?
  - 90 Days of Expanding GCCS to Area not Previously Covered in Plan
  - Prior to Expanding GCCS in a way not Included in Plan
- Flexibilities Require Approval/Updates

What's in a GCCS Design Plan?

- Discussion of Materials and Compatibility
- Gas System Design through Landfill Closure
- Discussion of End Use
- Surface Monitoring Plan
- Flexibilities Section
- Maximum Flow Expected
- Condensate Generation and Management
- Several Other Items

GCCS Design Plan

Implementation Issues and Next Steps?

- Since "at Own Risk" Still Need Approvals?
- Know What to File if Have an Existing GCCS
- What about Previously Approved Flexibilities under NSPS?

Increments of Progress

- EG Rule Requires Multiple Interim Submittals
  - 18-Month Period between GCCS Plan and Startup
  - Contracts/Purchase Orders 6 Months
  - Start Construction/Installation 9 Months
  - Construction/Installation Complete 29 Months After Initial NMOC Over 34 Mg/yr (1-Month Cushion)
  - Initial Performance Test Scheduled at least 150 Days after Control Date (Report Due 180 Days)

Gas System and Control

- 30 Months after Reporting > 34 Mg/yr
- Cover Areas 2 Years Final/5 Years Intermediate
- Open Flare Still Acceptable
- Surface Scans Quarterly
- Monthly Well Monitoring
- Initial and Annual Reporting Required

Reporting – Liquids Practices

- EPA did not Create Category for Landfills that add Liquids
- But….if Over Capacity Threshold Must Report Data
- Collect Data
  - Volume Recirculated
  - Quantity Based Records or Engineering Estimates
  - Surface Area and Waste in Mg in Recirculation Area
  - Waste Disposed of Annually in Recirculation Areas
  - First Report Initial Year and Last 10 Years
  - Due 13 Months After Rule Finalized

Electronic Reporting

- Requiring Electronic Reporting
  - EPA Central Data Exchange (CDX)
  - Compliance & Emissions Data Reporting Interface (CEDRI)
- Following Reports Required:
  - NMOC Emissions Rate Reports
  - Annual Reports
  - Performance Tests
  - Tier 4
  - Liquids Recirculation/Additions Data

Electronic Reporting (cont.)

- Only if Form Available; Otherwise Hard Copy
- Once form Available for 90 Days Required
- Any Source Test Results must be Reported Electronically within 60 Days of Testing
- Hard Copy Reports not needed for EPA but will likely Submit through CDX since Rules Require

Landfill NESHAP Schedule

- 40 CFR Part 63, Subpart AAAA Currently Requires Landfills to Comply with Existing Rules (NSPS Subpart WWW and EG Subpart Cc)
- Proposed Revision Removes Several Requirements, Harmonizes NSPS Rules
- Court Case Requires Final Rule by March 2020

Will This Action Resolve NSPS Rules?

Startup, Shutdown, and Malfunction

- Standards Apply at all Times, Including Periods of Startup Shutdown and Malfunction (SSM)
- Removed 5-day and 1-hour Downtime Limitations
- Site must Close Valves/Stop Gas Mover within 1-hour of Shutdown (Work Practice Standard)
- Sites must Comply with Work Practice Standards
- Specific SSM Criteria for Required Monitoring Equipment (e.g., Flow and Temperature)

Quarterly Surface Scans

- Sites with Required Gas Systems
  - Still Quarterly – 500 ppm
  - Must Monitor Penetrations
  - No Integrated Sampling/Numerical Wind Limits
  - Must Report Longitude/Latitude of Each Exceedance
  - Instrument Accuracy of at least +/- 4 Meters
  - Coordinates must be in Decimal Degrees with at least Five Decimal Places
  - Follow-Up Requirements for Exceedances Same

Surface Scan Details

Implementation Issues and Next Steps if Required to do Scans?

- New Monitoring Equipment for GPS
- Additional Resources Required for Monitoring
- Know Definition of Penetration
  - Includes Wellheads, Gas System Penetrations
  - Includes Distressed Plants, Cracks, Seeps
  - Does NOT Include: Litter Fencing, Flags, Signs, Trees, Utility Poles

Wellhead Standards

- Removal of the Operation Standards for Oxygen/Nitrogen
  - Monthly Wellhead Monitoring/Recordkeeping Still Required
  - Negative Pressure and Temperature Requirements Maintained

Alternative Timelines

- Well Corrections for Temperature and Pressure
  - Rules say 5 Days for Initial Adjustment and 15 Days to get into Operating Range
- New Tiered System for Alternative Timeframes
  - 15 Days (Standard In Rule)
  - Between 15-60 Days
  - Between 60-120 Days
  - 120 Days
- Be Aware of Prior Flexibilities in GCCS Design Plans

Alternative Timelines

- 5/15-Day Adjustments (Standard)
- Up to 60 Days Allowed – Root Cause Analysis
  - Kept On-Site, not Submitted or Approved
  - Analysis Investigates to Find Cause
  - Document the Corrective Action Also
- >60 but <120 Days Implementation Schedule Required
  - Notification Required within 75 Days
  - No Approval Needed but Include in Semi-Annual Report (Schedule, Root Cause Analysis, Document Corrective Action)
- >120 Days
  - Submit Root Cause Analysis and Timeline within 75 Days
  - Assume Proceed After Submittal – Don't Wait on Approval
  - Document that and Corrective Action in Next Semi-Annual Report

LFG Treatment

- Defined Treatment System: *System that Filters, De-Waters and Compresses Landfill Gas for Sale or Beneficial Use*
- Expanded Types of Beneficial Use
  - Vehicle Fuels, high-BTU for Pipeline Injection, Raw Material for Chemical Manufacturing
- Clarified Beneficial End-Use Dictates Level of Treatment
- Clarified End-User of Treated Gas not Subject to Rule; end User must Follow Applicable Rules (i.e., ZZZZ, JJJJ)
- Prepare Site-Specific Treatment Monitoring Plan

Treatment Implementation Issues

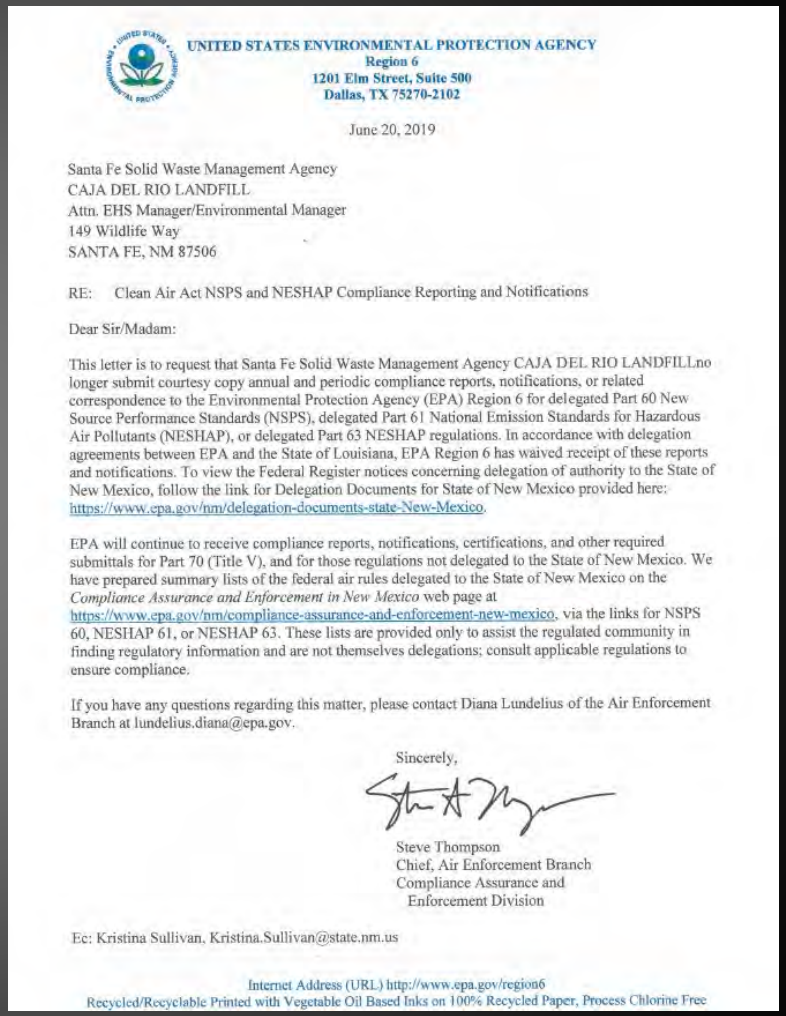
- If Landfill Clarify Responsibilities
- Treatment Monitoring Plan in Landfill GCCS Plan
- Current Treatment Exemption Conversion (Timing)
- Set Monitoring Parameters

Capping/Removing GCCS

- Alternative Criteria for Capping/Removal
  - Landfill is Closed
  - GCCS has Operated for at Least 15 years; or
  - Demonstrate Unable to Operate due to Declining Flows
  - Must show NMOC Emissions < 34 Mg/year (or 50) for 3 Consecutive Sampling Events
- Also…..
  - For 1% Rule, if Closed and Separate, Actual Gas Recovery and Tier 2 Data Can be used for Estimates

New Mexico-Specific Questions

- Update Permits?
- General Condition B101.A(13)
- Title V Permit Language
- NSR For Flare?
- No Copies to EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270-2102

June 20, 2019

Santa Fe Solid Waste Management Agency
CAJA DEL RIO LANDFILL
Attn. EHS Manager/Environmental Manager
149 Wildlife Way
SANTA FE, NM 87506

RE: Clean Air Act NSPS and NESHAP Compliance Reporting and Notifications

Dear Sir/Madam:

This letter is to request that Santa Fe Solid Waste Management Agency CAJA DEL RIO LANDFILLno longer submit courtesy copy annual and periodic compliance reports, notifications, or related correspondence to the Environmental Protection Agency (EPA) Region 6 for delegated Part 60 New Source Performance Standards (NSPS), delegated Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP), or delegated Part 63 NESHAP regulations. In accordance with delegation agreements between EPA and the State of Louisiana, EPA Region 6 has waived receipt of these reports and notifications. To view the Federal Register notices concerning delegation of authority to the State of New Mexico, follow the link for Delegation Documents for State of New Mexico provided here: https://www.epa.gov/nm/delegation-documents-state-New-Mexico.

EPA will continue to receive compliance reports, notifications, certifications, and other required submittals for Part 70 (Title V), and for those regulations not delegated to the State of New Mexico. We have prepared summary lists of the federal air rules delegated to the State of New Mexico on the *Compliance Assurance and Enforcement in New Mexico* web page at https://www.epa.gov/nm/compliance-assurance-and-enforcement-new-mexico, via the links for NSPS 60, NESHAP 61, or NESHAP 63. These lists are provided only to assist the regulated community in finding regulatory information and are not themselves delegations; consult applicable regulations to ensure compliance.

If you have any questions regarding this matter, please contact Diana Lundelius of the Air Enforcement Branch at lundelius.diana@epa.gov.

Sincerely,

Steve Thompson
Chief, Air Enforcement Branch
Compliance Assurance and
Enforcement Division

Ec: Kristina Sullivan, Kristina.Sullivan@state.nm.us

Internet Address (URL) http://www.epa.gov/region6
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New Regulation Navigation Tools

EPA Regulation Navigation Tools

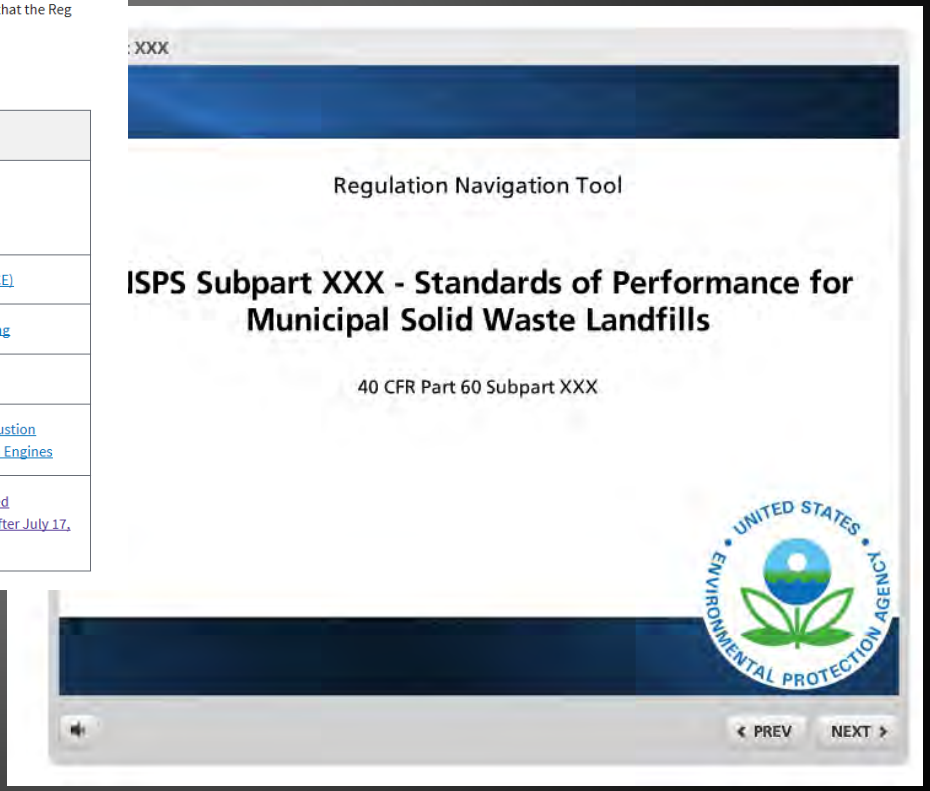
NEW- NSPS Subpart XXX: Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014.

Regulation Navigation (Reg Nav) tools help owners and operators of facilities in certain industries determine the requirements of specific regulations. Reg Nav tools are online and interactive, and use the information entered to assess potential regulatory requirements.

Reg Nav tools do not store or save information, so you must print or save any output that you want to use or reference. Note that the Reg Nav requirements may not be complete. Refer any questions to your local authority.

Reg Nav tools are available for seven regulations dealing with air pollutants:

Air Pollutant	Regulation	Reg Nav Tool
National Emissions Standards for Hazardous Air Pollutants under 40 CFR part 63	Subpart LLL	Portland Cement Manufacturing Industry
	Subpart ZZZZ	Reciprocating Internal Combustion Engines (RICE)
	Subpart JJJJJ	Brick and Structural Clay Products Manufacturing
	Subpart WWW	Municipal Solid Waste Landfills
New Source Performance Standards	Subpart IIII & Subpart JJJJ (one tool)	Stationary Compression Ignition Internal Combustion Engines and Spark Ignition Internal Combustion Engines
	Subpart XXX	Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014



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QUESTIONS?

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