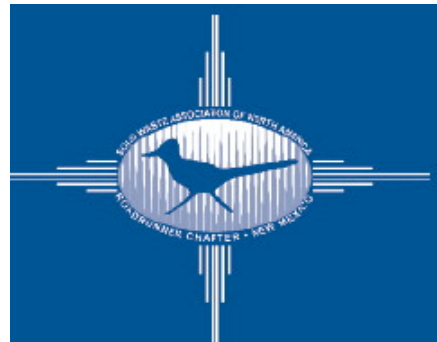


SCS ENGINEERS



Greenhouse Gas/Air Quality Impacts to Landfills in New Mexico



**Presented by:
David Mezzacappa, P.E.**

Overview

Follow-up to Last Year's Presentation on the
GHG Reporting Rule

- Federal Greenhouse Gas (GHG) Reporting Rule
- New Mexico GHG Reporting Rule
- New Mexico Cap and Trade Rule
- Tailoring Rule at State Level

FEDERAL GHG REPORTING RULE

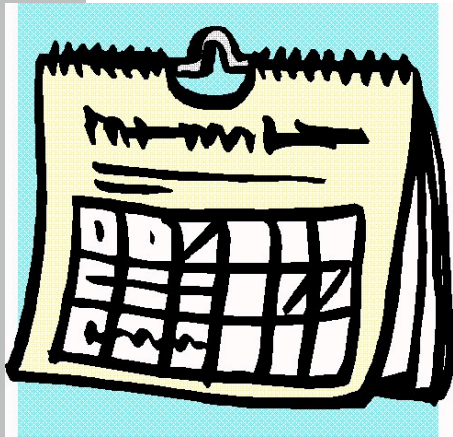


GHG Reporting Rule Overview

- Final EPA Rule October 30, 2009
- Requires Annual GHG Emissions Reporting
- Reporting for > 30 Source Categories
- Requirements Differ by Category
- Implemented at Federal Level
- Intended to Guide Future Policy to Reduce GHG Emissions
- Several Subsequent Revisions

Important Dates

- January 1, 2010 Measure Emissions to Report
- January - March 2010 Best Available Monitoring
- April 1, 2010 Follow Rule for Monitoring
- April 1, 2010 GHG Monitoring Plan Completed
- **By January 30, 2011 Certify the Designated Representative**
- **First Reporting Event March 31, 2011, then March 31st Annually**



Is my Landfill Required to Report?

- MSW Landfills Only
- No Exemption for Closed
- Accepted waste After
January 1, 1980?
- 2010 Methane Generation
> 25,000 metric tons CO₂e?
- Biogenic CO₂ in LFG Exempted



Two Categories of Interest to MSW Landfill Owners

- MSW Landfills (Subpart HH)
- General Stationary Fuel Combustion Sources (Subpart C)

Stationary Combustion Sources

- Required for all Landfills Subject to Rule
- Remember....Stationary, not Portable
- Emergency Generators
and Flares Exempt
- Some Examples of
Stationary Combustion



What Will be Reported?

GENERAL INFORMATION

- Surface Area of Landfill Containing Waste
- Waste History for Each Year
- Cover Types
 - Indication of Leachate Recirculation
 - Estimated Closure Year (if Open)
 - Landfill Capacity
 - Parent Company, NAICS Code ?



No Gas System What Emissions Reported in 2011?

- Model Methane Generation from Landfill
 - Incoming Waste Data
 - Sensitive to Rainfall
 - Recirculate Leachate?
 - Provide Verified Waste Intake History
- Include 10% Oxidation Adjustment to Generation for Methane Emissions
- Combustion Source Emissions
(with or without gas system)



Reporting With a Gas System

- With GCCS, Report Includes
 - Flow of Collected LFG
 - CH₄ Content of LFG
 - Temp/Pressure Data for LFG (or Incorporated from Equipment)
 - Description of Control Device(s) on/off Site
 - Device Operating Hours
 - Description of GCCS, Landfill Areas and Waste Depths



Current Monitoring Issues

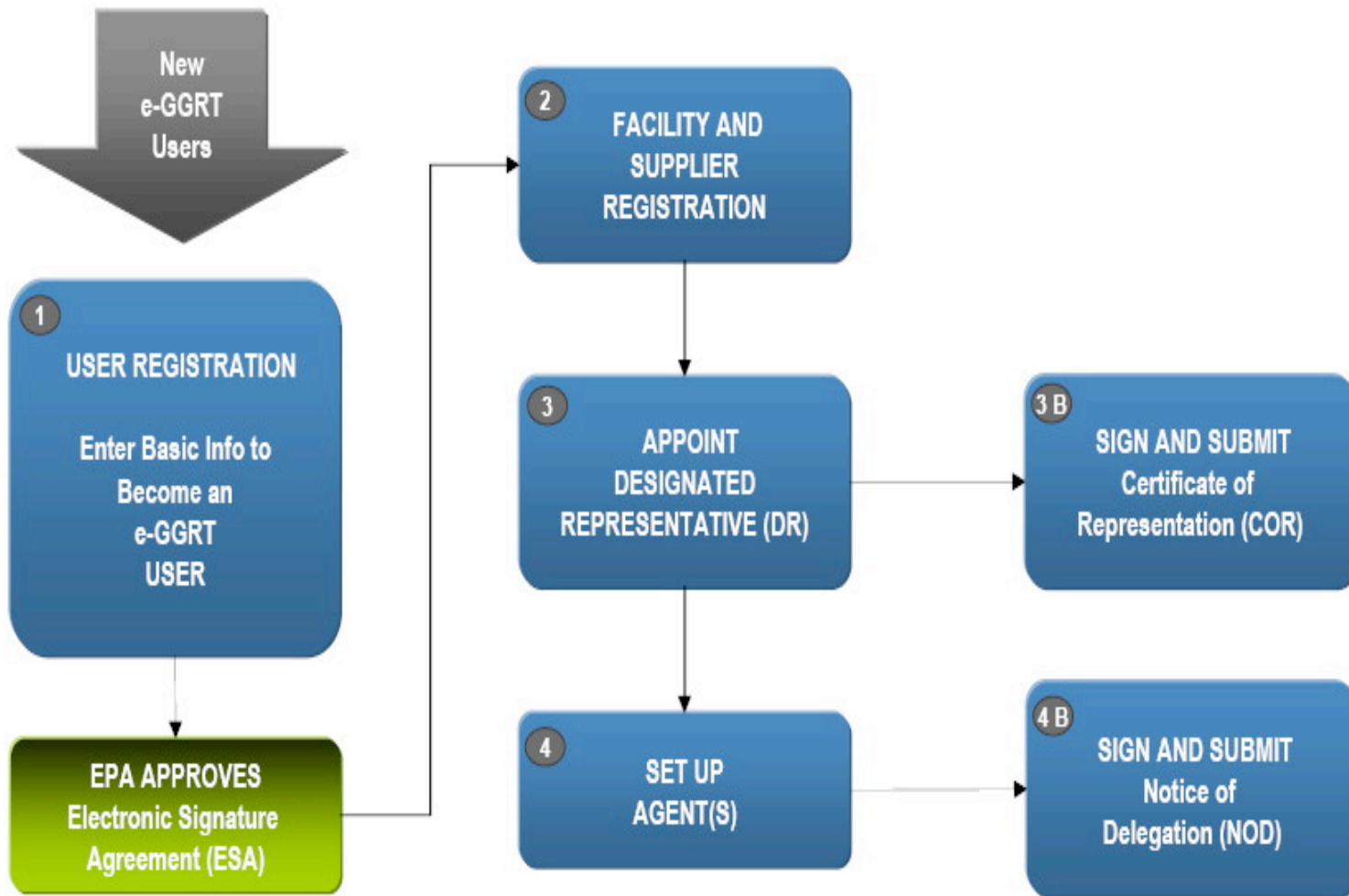
- Most Methane Measurement being Done Weekly with a GEM 2000
- Many Sites Required Equipment Calibration
- One Site Required Flow Meter
- For Sites with 3rd Party had more Coordination (How Often to Provide Data?)
- Documenting all Combustion Sources
- Scales Originally Required; not now but....
Use Scales if you have them

Electronic Data Reporting System

- Electronic Format and System Under Development (e-GGRT)
- Web-Based System
 - Will Guide Reporters
 - Built-In Defaults and Calculations
- Facility/User Registration (Soon)
- Reporting Modules (January 2011?)



Steps to Register in e-GGRT

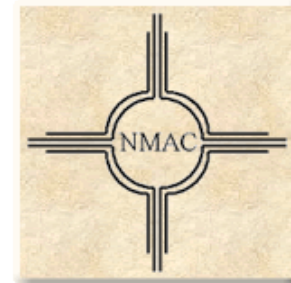


NEW MEXICO GHG REPORTING RULE



New Rules

- Environmental Improvement Board Approved Changes to State GHG Reporting on November 10, 2010
 - Repealed 20.2.87 NMAC (Federal Rule Replaces)
 - Adopted 20.2.300 (Reporting) and 20.2.301 NMAC (Verification)
 - Harmonizes with Federal Rule



Rule Requirements

- Tied to Cap and Trade Program
- Bernalillo County/Tribal Lands not Impacted
- Landfills Exempted (20.2.300.102(F))
- 20.2.300 NMAC “Markup” of Federal Rule
- 20.2.301 Requires Verification for Cap Facilities
- About 60-70 Statewide Facilities Impacted (Power Plants Refineries, Gas Plants, Large Compressor Stations)
- New Paperwork Needed in 2011

More on Landfills

- Specifically Exempted from New Rule
- However may be Required to Report in 2011 under 20.2.73 NMAC since Title V Sources
- For Combustion Sources Flares are Exempt but Biogenic CO₂ in other Combustion Sources is *not*



- Large Combustion Sources other than Flares could Trigger Reporting

Emissions Quantification Procedures



- Landfills *will* be Covered in State Guidance on Quantifying GHG Emissions
- Current Language Provides Range of Methods
- Federal Calculation Methods will be Added

NEW MEXICO CAP AND TRADE

Western Climate Initiative



Cap and Trade Regulation

- Environmental Improvement Board Approved Cap and Trade November 2, 2010
 - Included as 20.2.350 NMAC
 - Landfills are not Subject to this Rule but...
 - Cap and Trade Incorporated Within the Western Climate Initiative Network
 - Harmonizing Reporting/Program Requirements within the WCI System

Generation of Offsets



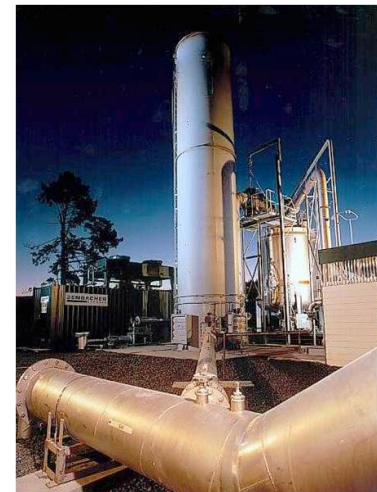
- Cap and Trade would Create an Offset Market where Current Market is Voluntary
- Offsets can be Generated by Landfills and Sold to Cap Facilities
- State of New Mexico not Planning on Issuing Offset Credits, but will Accept if.....
- Meets Typical GHG Credit Requirements (Permanent, Voluntary, etc.)
- Credits could be Generated Under Other Protocols (Climate Action Reserve, other WCI)

TAILORING RULE



Quick Summary of Tailoring Rule

- GHGs now a Regulated Pollutant due to EPA's Endangerment Finding
- But...Requiring Permitting for new GHG Sources at Typical 250 ton per year Level....
- This New Rule "Tailors" Permitting Thresholds
- Major Title V Threshold = 100,000 Tons CO₂ Equivalents
- Major Modification Threshold = 75,000 Tons CO₂ Equivalents

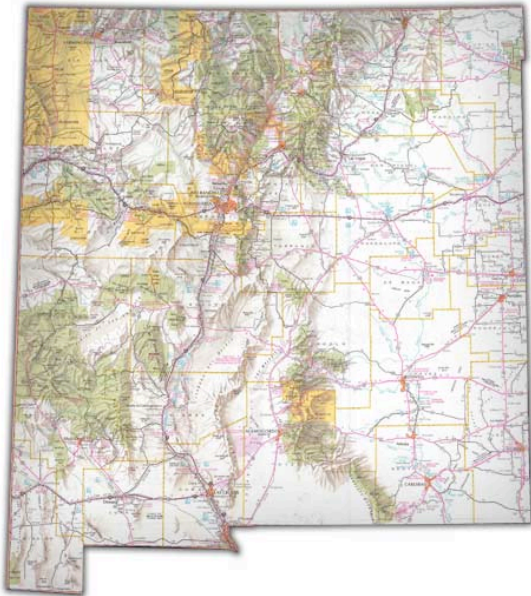


New Rule's Impacts

- Could Require Prevention of Significant Deterioration (PSD) Permitting
- Could Require Installation of Gas System Earlier through BACT Requirements
- Expensive, Complex Permitting
- Could Bring in Other Pollutants and/or Sources
- Think Landfill Expansions
- Tailoring Rule Specifics will be Discussed in other Presentation

State Implementation of Tailoring

- Amended 20.2.70 NMAC (Operating Permits)
- Amended 20.2.74 NMAC (PSD Permits)
- Revised Rule Language at State Level so Compatible with EPA's Language
- No Streamlined Provisions Included



Wildcards?

GHG Reporting Likely here to Stay but...

Stay Tuned for Tailoring and Cap-and-Trade



Questions?



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