



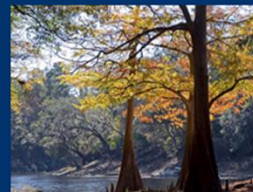
Florida Department of Environmental Protection

Hazardous Waste Updates for the Surface Finishing Industry

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Presentation Goals

- Historical overview and recent updates
 - How will the new generator improvements rule changes affect you?
 - Will the federal redefinition of solid waste affect you?
- Understanding points of generation
 - Identifying what wastes are generated
 - Identifying what wastes are treated
 - When the wastes are counted



Historical Perspective

- March 28, 1974 - Initial Clean Water Act Rule
 - Electroplating point source category
- May 19, 1980 – effective 11/19/1980
 - Identification and listing of hazardous waste
 - Required generators, transporters & disposal facilities to notify
 - Could operate under “interim status” until a final permit determination was made
 - Included facilities with plating waste surface impoundments and spray fields
 - Even if operating under a state industrial waste water permit
 - Elimination of categorical direct dischargers
 - “Zero Discharge” NPDES permits

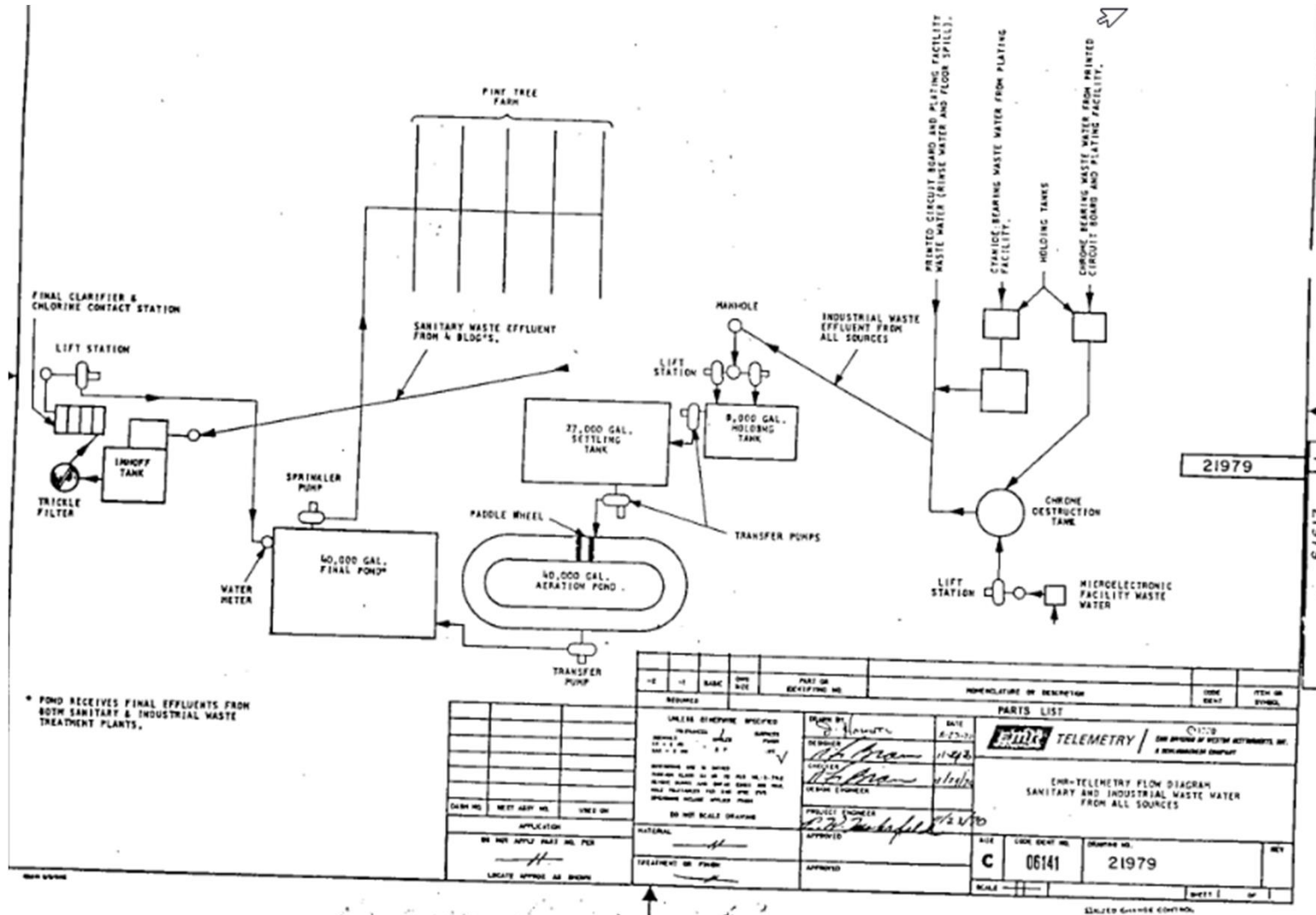


Florida's Programs

- Office of Air and Water Pollution Control
 - Dept. of Health
 - Issued permits for sewage treatment plants
- Department of Environmental Regulation
 - Created in the 1970s – new permitting agency
 - Hazardous waste statute passed by the legislature in 1980
 - Florida applied for authorization for federal program
- 1983 - Hazardous waste land disposal prohibited in Florida
 - Ponds were assumed to be storing sludge from waste water treatment
 - Required closure of interim status disposal sites



1971 Application Drawings



REV	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION

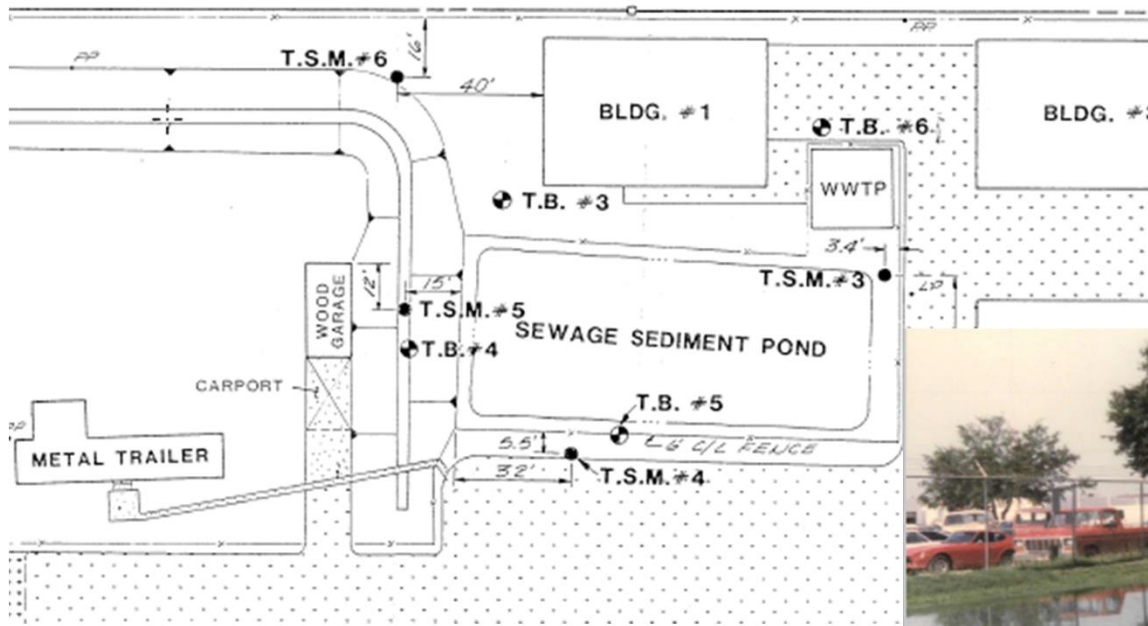
DESIGNED BY <i>[Signature]</i>	DATE 6-25-71
CHECKED BY <i>[Signature]</i>	DATE 11-4-71
PROJECT ENGINEER <i>[Signature]</i>	DATE 12-27-71

APPROVED	APPROVED
TREATMENT OR PUMP	APPROVED

SCALE	
DATE	
PROJECT NO.	

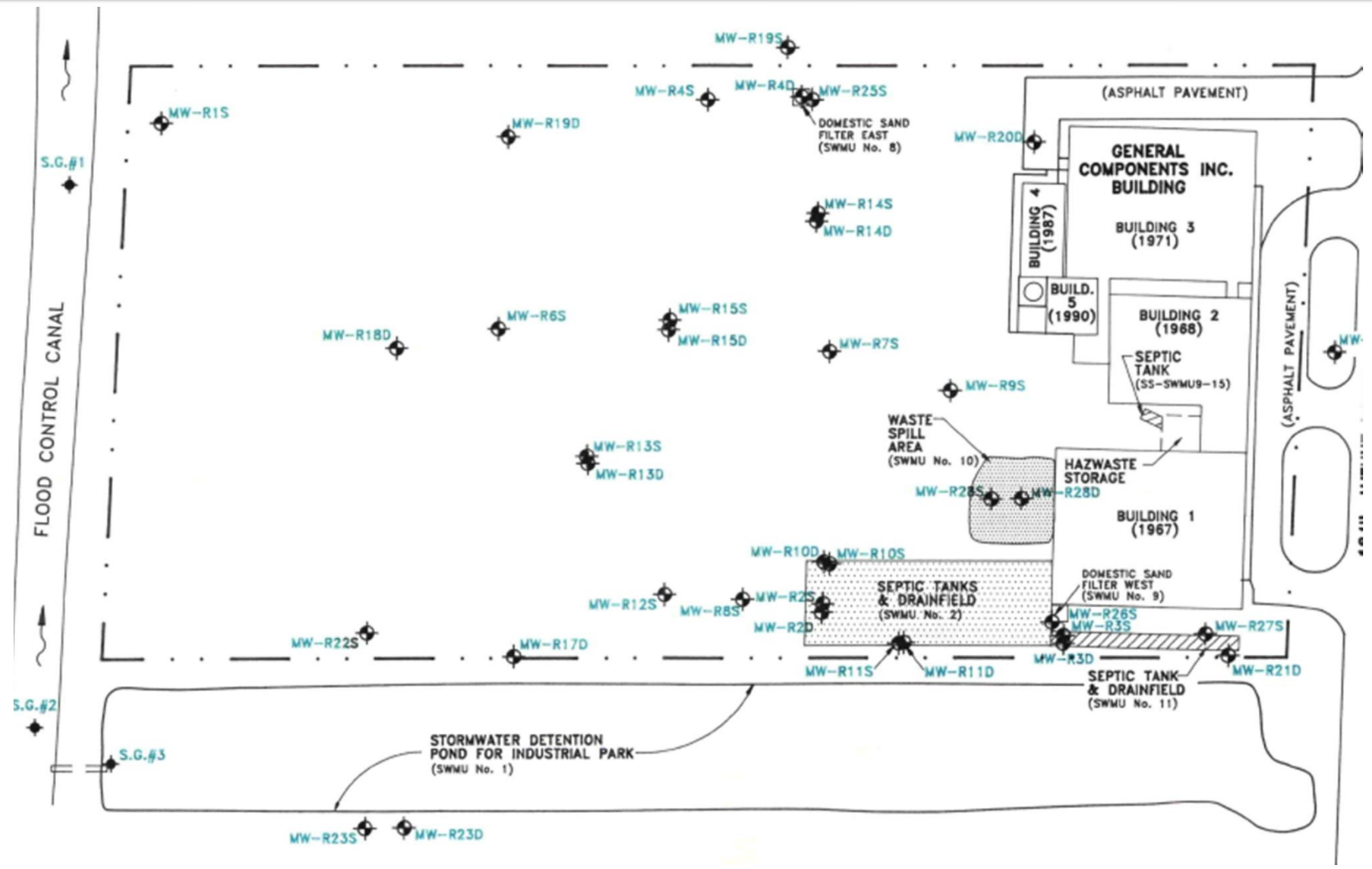


Surface Impoundments





Injection Wells





Industrial Pretreatment

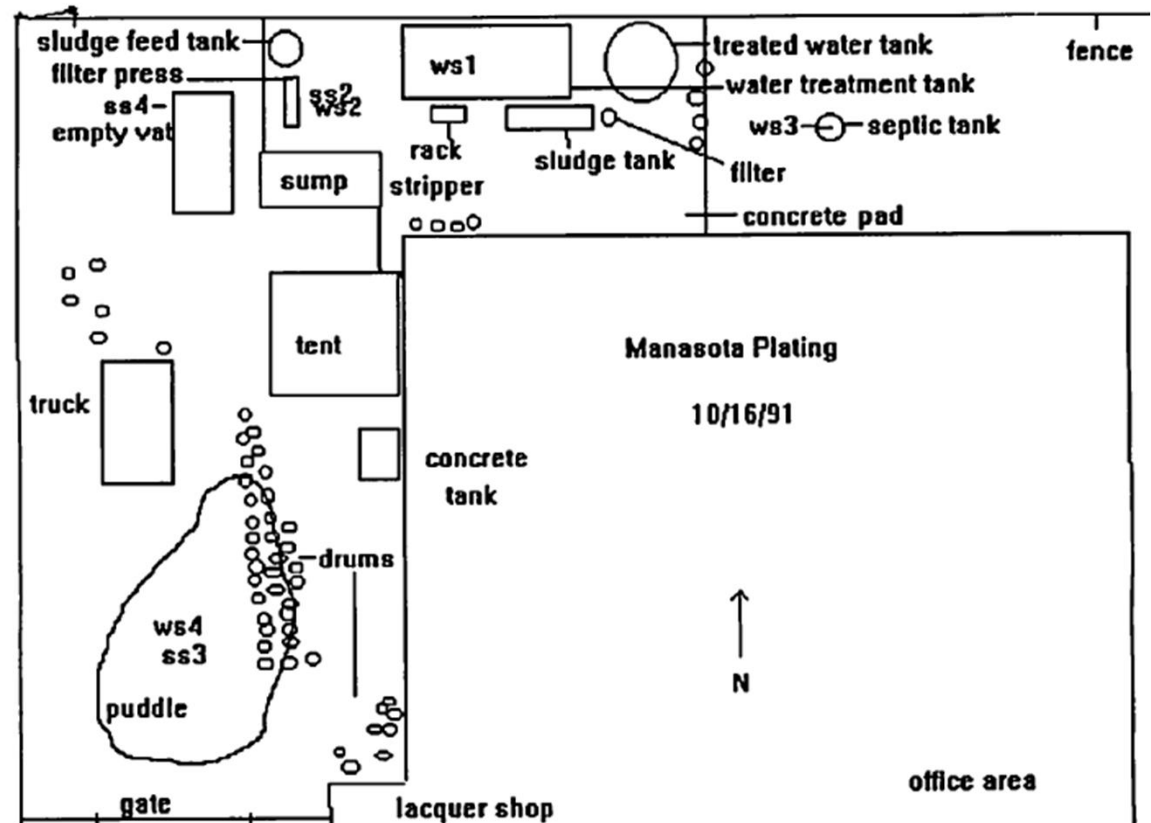
- Wastewater Treatment Unit exemption
 - Does not apply to wastes held before treatment
 - Does not apply to wastes released from treatment units
- Clean Water Act Regulated Discharges





Recycle Systems?

- Plater cut off from sewer system
- Tried to build a process water recycling system
- Didn't work





Accumulated Wastewater

“Recycle” System





Used Process Baths

"Marketable?"





Illegal Discharges

To the Ground



To Septic Systems





Evaporators

Regulatory Status?

Subpart X treatment?

Subpart J Tank System?





Hazardous Waste Basics

- Hazardous waste permits are not needed
 - Provided generators identify all the hazardous waste they generate
 - AND do not store or dispose of it on-site
 - AND comply with hazardous waste generator rules
- Problem areas:
 - Waste determinations resulting in improper disposal
 - Facility maintenance failures resulting in discharges
 - Storage of potentially useable secondary materials
 - Or wastes



Hazardous Waste Identification

- What is regulated vs. not regulated?
- What is excluded?
- Is the exclusion conditional?
- Listings vs. Characteristics of Hazardous Waste
 - Limitations of 1980 vintage analytical methods
 - Limited knowledge regarding chemical toxicity
 - Limited available treatment and recycling technologies



May 19, 1980 Original Listing

- F006 Waste water treatment sludges from electroplating operations
- F007 Spent plating bath solutions
- F008 Plating bath sludges from the bottom of plating baths from electroplating
- F009 Spent stripping and cleaning bath solutions from electroplating



November 12, 1980 Final Listing

- Amended in response to comments
 - Removed six specific processes from the scope of the F006 listing – sulfuric acid anodizing of aluminum, tin plating on carbon steel, chemical etching & milling of aluminum plus three others, not common in Florida.
 - Made F019 wastes a separate listing, chemical conversion coating of aluminum
 - listed for the presence of chrome and CN
 - But includes other processes that do not use chrome or CN
 - Changed the F007-9 listing descriptions to only include processes where CN is used



Cyanide Plating Wastes

- F007 - Spent cyanide plating bath solutions from electroplating operations
- F008 - Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process
- F009 - Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process



Clean Water Act Definition vs. RCRA exempt Processes

- CWA “Plating” category includes electroless processes, conversion coating, anodizing
 - But does not include many etching processes like those used to etch printing plates
- December 2, 1986 EPA issued an “interpretive rule” after a court case that limited the processes that can generate listed waste water treatment sludges
- Sludge from treating mixed process waste water is still listed.
 - Bath filters and anode bags



F006 Reinterpretation 51 FR 43351

Deleted Processes

- Chemical Conversion Coating
 - Ironically, this did not affect the F019 listing
- Electroless Plating
- Printed Circuit Board Manufacturing
 - Spent etching wastes, unless the waste water includes electroplating waste waters
- Etching?



Not Listed

- Process waste water
 - However wastewater shipped for off site treatment will generate an F006 sludge
- Spent non-cyanide process baths
 - Again, can generate an F006 sludge when shipped for off site treatment
- Electrolytic cleaning wastes not associated with electroplating
- Can still be characteristically hazardous



Etching Type Processes

- EPA RCRA Online Memo #14808 dated 5/18/07
- Electropolishing
- Chemical Machining
 - Electric Current passing through a circulating electrolyte causes the metal on a work piece to oxidize and dissolve
- Chemical Milling – using masks and imaging processes similar to printing
- Pre-paint operations
 - Usually called etching if on aluminum
 - Similar processes on steel are called conversion coating



Land Ban & TCLP

- Since 1986 very few rule changes have been adopted that affect generators
 - The phase in of the land disposal restrictions mainly added a notification requirement, except for generators that were treating waste on site
 - Identification of underlying hazardous constituents
 - Phase in was completed 1994
 - The Extraction Procedure Toxicity Test was replaced by the Toxicity Characteristic Leaching Procedure in 1990
 - This mainly added some organic constituents
 - Some additional exemptions and exclusions were added, such as the universal waste rules
- Florida did not adopt EPA's 2008 solid waste rule



Generator Improvements Rule

- EPA has been working on various proposals to make the hazardous waste generator regulations easier to understand for at about 15 years
- Their final rule was published November 28, 2016
 - It is not yet effective in Florida
 - Florida must adopt changes before July 1, 2018
- Most of the compliance requirements are the same
 - However there are some stricter provisions
 - Many of the rule citations have changed



Goals

- Reorganize the regulations to make them more user-friendly and thus enable improved compliance by the regulated community
- Provide greater flexibility for hazardous waste generators to manage waste in a cost-effective manner
- Strengthen environmental protection by addressing identified gaps in the regulations
- Clarify certain components of the hazardous waste generator program to address ambiguities and foster improved compliance



Stringency

- **More stringent:**
 - SQG re-notification
 - Identifying hazards of wastes being accumulated & labeling
 - Notification of closure
 - Closure requirements for LQGs accumulating hazardous wastes in containers
 - Clarifies biennial reporting is for the whole year,
 - Biennial reporting for recyclers
 - Quick Reference guide for contingency plans
- **Less stringent:**
 - VSQG consolidation
 - Episodic generation
 - Waiver from 50-foot rule



Reorganization

Provision	Existing Citation	New Citation
Generator Category Determination	§ 261.5(c)–(e)	§ 262.13
CESQG Provisions	§ 261.5(a), (b), (f)–(g)	§ 262.14
Satellite Accumulation Area Provisions	§ 262.34(c)	§ 262.15
SQG Provisions	§ 262.34(d)–(f)	§ 262.16
LQG Provisions	§ 262.34(a), (b), (g)–(i), (m)	§ 262.17



VSQG Provisions

- Now allows companies to consolidate VSQG waste from remote locations under the generator provisions
 - Waste may be consolidated at a LQG site under the control of the same person (as defined under RCRA) as the generator
 - Equipment maintenance at remote locations
 - Power companies servicing substations
- Containers marked & labeled VSQG Hazardous Waste
- LQGs must notify and identify the VSQGs
- Must keep records and manage waste as LQG waste
- Biennial Reports Required



Episodic Generation

- Both VSQGs and SQGs can use episodic generator provisions
- Can be used for both planned and unplanned events
- Once per calendar year with ability to petition for a second event
- Requires notification 30 days prior to planned event, and 72 hours after an unplanned event
 - VSQGs must obtain EPA ID number
 - Must manifest waste to a TSDF & maintain records
 - Must have an emergency coordinator



Renotifications

- Note that notification is required to make use of the episodic generator provisions
- Small quantity generators will have to re-notify at least once every four years
 - Elimination of legacy data from the 1980s
- Notification will also be required in order to take advantage of the new rules for management of hazardous secondary materials being recycled



Satellite Accumulation

- Satellite Accumulation Provisions – 40 CFR 262.14
 - Emergency equipment availability & staff training
 - Contingency plan must identify locations
 - SQGs must have their emergency information posting nearby
 - Container size limits and labeling changes
 - Specifies 1 quart liquid or 1 kg of solid acutely hazardous waste
 - Must be compatible with contents
 - Must be separated from nearby incompatible waste or materials
 - Must be labeled “hazardous waste” in addition to an indication of the waste hazards
 - Container may be open under limited circumstances – if venting is required for proper equipment function



Not Satellite Containers



More than 55 gallons



Central Accumulation Areas

- Florida will keep the state's container inspection recordkeeping requirement, even though the proposed federal requirement was not included in the final rule
- Container labels must also include an indication of the nature of the hazardous waste within
- SQGs will be allowed to accumulate waste in containment buildings and drip pads – 262 rules still cross reference Part 265 regulations
- LQGs have new requirements for closing central accumulation areas



Management

- Includes containers stored prior to treatment
- Date & label containers
- Inspect weekly
- Provide aisle space for inspections
- Provide spill control, decontamination, fire control and communication equipment
- Maintain the facility to prevent releases
 - Containers must be closed, in good condition, not leaking
 - Incompatible materials must be separated



Container Management





Storage Prior to Treatment

- Spent baths & other strong wastes being held for on-site treatment are regulated if characteristically corrosive, reactive or toxic
 - Materials held for re-use (secondary materials) are regulated if accumulated speculatively
 - The state can require you to demonstrate that secondary materials are not wastes
- Spent materials held for recycling are regulated unless your state has adopted EPA's redefinition of solid waste AND you have notified that you are generating these materials



Overfills, Leaks & Spills



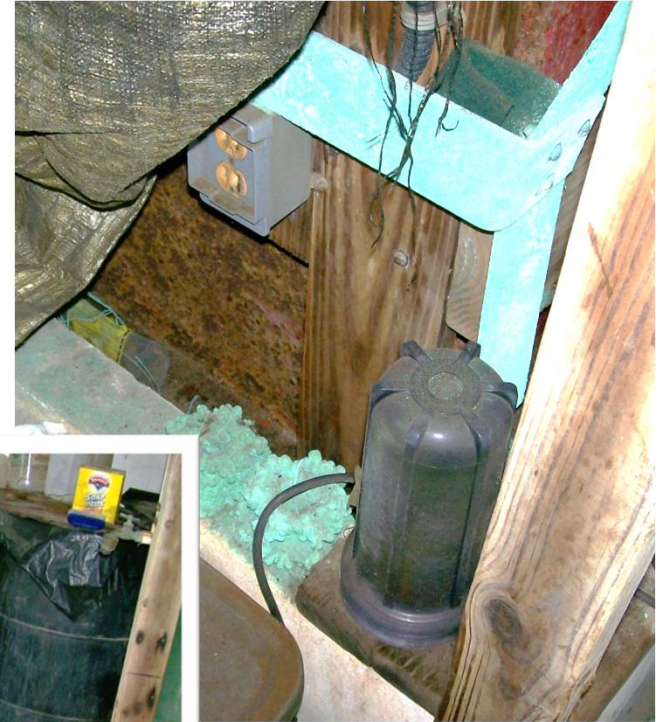
Acids will dissolve mortar

Concrete block walls are
not containment





Safety Issues





Closure

- **LQGs** must comply with the closure performance standard, removing all waste and decontaminating or removing all system components, contaminated soils, subsoils etc.
- If clean closure is not achieved, must close as a RCRA landfill
 - Time frames for closure apply
 - Notice of unit closure must be placed in the facility operating record
- If the facility closes, the operator must notify at least 30 days prior to closing on form 8700-12



Preparedness and Prevention

- The 50 foot setback from the property boundary for ignitable and reactive waste may be waived with the written approval of the local fire marshal
 - A copy must be available for inspection
- The contingency plan must include a quick reference guide at the time of the next update
- It may include a staffed position title with a guaranteed contact number, like a guard desk in lieu of the emergency coordinator's home information



Quick Reference Guide Content

- The types of hazardous waste on site, and associated hazards, in layman's terms
- The estimated maximum amount of each hazardous waste that may be on site at any one time
- The identification of any hazardous wastes where exposure could require unique or special treatment by medical or hospital staff
- A facility map showing areas where hazardous waste is generated, accumulated and treated, and routes for accessing these wastes



Guide Content (continued)

- A street map in relation to surrounding businesses, schools and residential areas
- The location of water supply (i.e. fire hydrant and its flow rate)
- Identification of on-site notification systems
- Name(s) of emergency coordinator(s) and contact number(s)



8700-12FL Form Updates

- Florida's Notification of Hazardous Waste Activity Form will be updated:
 - Episodic Generation
 - Generators receiving VSQG waste
 - LQGs closing central accumulation areas
 - Importer activities – HW and spent lead acid batteries
 - Electronic Manifest Brokering Activities
 - Hazardous Secondary Materials Recycling Activities
 - Both on site and off site
 - Storing/Not Storing before recycling
 - Academic Labs Rule (40 CFR 262 Subpart K) notifications
 - Notices of Participation and Withdrawal



Questions?