Hazardous Waste and Liquid Industrial By-Products Accumulation, Labeling, and Shipping

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Covid-19 Emergency

- On March, 23, 2020, Governor Whitmer issued her Stay Home, Stay Safe, Executive Order 2020-21 which was extended by Executive Order 2020-42 which took effect April 9, 2020
- According to the Stay Home, Stay Safe order, no person or entity shall operate a business or conduct operations that require workers to leave their homes or places of residence except to the extent that those workers are necessary to sustain or protect life or to conduct minimum basic operations
- Government, businesses and operations are to designate workers who are necessary to sustain or protect life or to conduct minimum basic operations
- Government, businesses and operations must also adopt social distancing practices and other mitigation measures to protect workers and patrons in the performance of that in-person work
- Executive Order 2020-42 designates workers who are necessary to sustain or protect life and adopts the March 19, 2020, U.S. Cybersecurity and Infrastructure Security Agency guidance for determining critical infrastructure workers
- In determining whether a business or operation is considered critical infrastructure for the purposes of the Stay Home Stay Safe order 2020-42, businesses and operations are to:
    - Review Executive Order 2020-42 available at Michigan.gov/Coronavirus
    - Refer to the March 19, 2020, Cybersecurity and Infrastructure Security Agency guidance,
- The executive order broadly prohibits in-person work unless it is necessary to sustain or protect life or conduct minimum basic operations
- Conducting minimum basic operations may include activities required to comply with EGLE permits and environmental laws/standards
- EGLE monitors questions related to EO 2020-21 and EO 2020-42 sent to EGLE-Reporting@mi.gov
- EGLE established a process for handling enforcement discretion due to COVID-19
- To access information on that process, go to Michigan.gov/EGLE, and see where it is spotlighted on the top of the page
- All requests for enforcement discretion should follow the procedures provided and be submitted to EGLE-EnforcementDiscretion@mi.gov
- Procedure requires that the following information be submitted to EGLE:
    - The specific regulatory requirement in question, including identification of any permit, order, or agreement that applies to the entity's obligations
    - A concise statement describing the circumstances preventing compliance and how the compliance issue is impacted by the COVID-19 response - regulatory flexibility is only for COVID-19 prompted non-compliance
    - The steps taken to avoid the compliance issue, including whether you contacted EGLE for assistance and why the compliance issue was not reasonably avoidable
    - The anticipated duration of the compliance issue and whether it may create an acute risk or imminent threat to human health or the environment, if this is the case, please call 800-292-4706
    - A description of measures planned to protect public health and environment during period the requirement(s) cannot be met
    - A central point of contact for the site be provided, including an email address and phone number

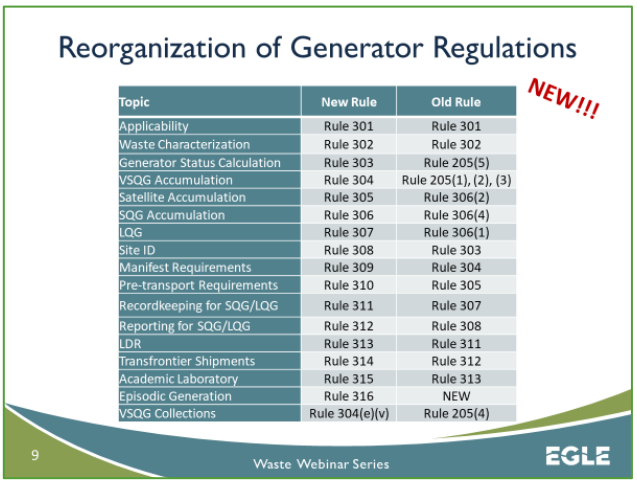
Presentation Goals

- Identify generator accumulation requirements for:
  - Liquid industrial by-products
  - Used oil
  - Universal waste
  - Conditionally Exempt Small Quantity Generators (CESQGs), aka Very Small Quantity Generators (VSQGs)
  - Small Quantity Generators (SQGs)
  - Large Quantity Generators (LQGs)

- Introduce basic applicability concepts related to hazardous waste tanks and Subpart CC
- Define closed container for liquid hazardous waste, solid hazardous waste and liquid industrial by-products
- Review generator transport requirements

Regulations Requiring Proper Accumulation, Labeling and Transport:

- Public Act 451, Natural Resources & Environmental Protection Act:
  - Part 111, Hazardous Waste Management, Statute and Rules
  - Part 121, Liquid Industrial By-Products, Statute
- Public Act 138, Michigan Hazardous Materials Transportation Act
- U.S. Department of Transportation Act and Rules



Topic	New Rule	Old Rule
Applicability	Rule 301	Rule 301
Waste Characterization	Rule 302	Rule 302
Generator Status Calculation	Rule 303	Rule 205(5)
VSQG Accumulation	Rule 304	Rule 205(1), (2), (3)
Satellite Accumulation	Rule 305	Rule 306(2)
SQG Accumulation	Rule 306	Rule 306(4)
LQG	Rule 307	Rule 306(1)
Site ID	Rule 308	Rule 303
Manifest Requirements	Rule 309	Rule 304
Pre-transport Requirements	Rule 310	Rule 305
Recordkeeping for SQG/LQG	Rule 311	Rule 307
Reporting for SQG/LQG	Rule 312	Rule 308
LDR	Rule 313	Rule 311
Transfrontier Shipments	Rule 314	Rule 312
Academic Laboratory	Rule 315	Rule 313
Episodic Generation	Rule 316	NEW
VSQG Collections	Rule 304(e)(v)	Rule 205(4)

Reorganization of rules is coming in 2020, as Michigan's adoption of the Generator Improvement Rules is in the final stages of rulemaking. Please see final rules for more details.

Do I Need to Know All of This?

- Hazardous waste regulations apply to all businesses, including municipalities, hospitals, & service industries, not just manufacturing industries and are written broadly:
  - To address hazards posed by all waste streams
  - To prevent releases and
  - To ensure adequate response to emergency situations

Why Cover These Topics?

- Hazardous waste and liquid industrial by-product regulations require each business to…
  - Properly label all containers of hazardous and liquid industrial by-product
  - Properly store all containers of hazardous and liquid industrial by-product to prevent the escape of any constituents into the environment
- Proper accumulation and storage will…
  - Prevent release to the environment
  - Prevent costly clean up expenses
- Waste accumulation, labeling and transport requirements vary based on the type and amount of waste

Liquid Industrial By-Products Accumulation

- Part 121, Section 12103 - Liquid industrial by-product, a liquid waste not subject to hazardous waste regulation, must be placed in containers or tanks that are labeled or marked to identify their contents

- Part 121, Section 12113 - Liquid Industrial by-product tanks and containers must be:
  - Kept closed or covered when not in use and free of by-product or residues on the exteriors
  - Protected from weather fire physical damage and vandals
  - Managed to prevent release to the environment

Used Oil

- Part 111, Rule 810 – Used oil must be:
  - Labeled "Used Oil" if stored in a container or above ground storage tank
  - Have fill pipes used to transfer used oil labeled "Used Oil"
  - Only stored in containers or tanks
  - Stored in containers and/or tanks in good condition with no leaks

Universal Waste

- Part 111, Rule 228 – Michigan's universal waste types include:
  - Aerosol Cans Aerosol Cans - Coming soon in NEW 2020 final rules that are not yet effective
  - Batteries
  - Pesticides
  - Mercury containing equipment
  - Lamps
  - Pharmaceuticals
  - Consumer electronics
  - Antifreeze

  } Michigan Only

Universal Waste Batteries

- Part 111, Rule 228(4) – Containers must be:
  - Labeled "Universal Waste Batteries," "Waste Batteries," or "Used Batteries"
  - Kept closed
  - Structurally sound & compatible with the contents
  - Managed to prevent leaks or releases to environment

Universal Waste Pesticides

- Part 111, Rule 228(4) – Containers must be:
  - Labeled "Universal Waste Pesticides" or "Waste Pesticides"
  - Kept closed
  - Structurally sound & compatible with the contents, and free of evidence of leakage, spillage or damage
  - Managed to prevent leaks or releases to environment
  - Meet all tank requirements

Universal Waste Mercury Containing Equipment

- Part 111, Rule 228(4) – Containers must be:
  - Labeled "Universal Waste Mercury Thermometers," "Waste Mercury Thermometers," or "Used Mercury Thermometers," (substitute device or name, if it is not a thermometer)
  - Structurally sound, compatible with device with no evidence of leakage or spillage
  - Designed to prevent the escape of mercury

Universal Waste Electric Lamps

- Part 111, Rule 228 (4) – Containers must be:
  - Labeled "Universal Waste Lamps" OR "Waste Lamps" OR "Used Lamps"
  - Structurally sound, compatible with lamps, and able to prevent breakage
  - Kept closed to prevent any mercury from escaping to the air, or other broken lamps pieces escaping, taping is acceptable

Universal Waste Consumer Electronics

- Part 111, Rule 228(4) – Packaging must be:
  - Labeled "Universal Waste Consumer Electronics" or "Universal Waste Electronics"
  - Managed to prevent breakage during normal handling conditions

Universal Waste Antifreeze

- Part 111, Rule 228(4) – Containers must be:
  - Labeled "Universal Waste Antifreeze," "Waste Antifreeze" or "Used Antifreeze"
  - Kept closed
  - Structurally sound & compatible with the contents
  - Managed to prevent leaks or releases to environment

Universal Waste Pharmaceuticals

- Part 111, Rule 228(4) – Must be managed to prevent release of any universal waste
- Packaging must be:
  - Structurally sound, compatible with contents, and able to prevent breakage
  - Kept closed
- Recommend label "Universal Waste Pharmaceuticals"
- See MHA Pharmaceutical Waste Management Guide, Universal Waste Guide Sheet (page 17)
- As of 8/21/19 healthcare is prohibited from drain disposing of any hazardous waste pharmaceuticals under 40 CFR 266, Subpart P, regardless of generator category
- Learn more at Michigan.gov/EGLEDrugDisposal - See the notice shared with all Michigan healthcare providers, recorded webinar, and webinar notes reflecting final Subpart P federal rulemaking

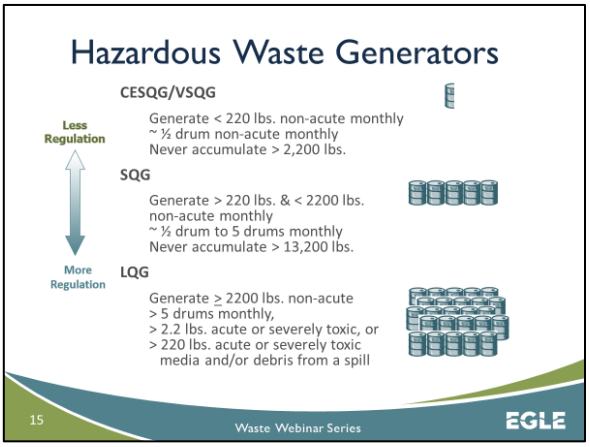
Aerosol Cans - Coming soon in NEW 2020 final rules that are not yet effective

- Part 111, Rule 228(2)(e) - Non-empty aerosol cans that contain pesticides may be managed as universal waste aerosol cans
- Part 111, Rule 228(4)(c) - HHW and VSQG aerosols when mixed with other universal waste are subject to the universal waste regulations
- Part 111, Rule 228(4) - Handler must:
  - Label can or container "Universal Waste—Aerosol Cans," "Waste Aerosol Cans," or "Used Aerosol Cans".
  - Manage universal in a way that prevents releases
  - Accumulate aerosol cans in a structurally sound container compatible with the aerosol can contents and lacking evidence of leakage, spillage, or damage that could cause leakage
  - Accumulate aerosol cans in an area protected from heat sources
  - Package aerosol cans showing leakage in a separate closed container or overpacked with absorbents, or immediately puncture and drain in accordance with the rule.
- Handler may:
  - Sort aerosol cans by type if the aerosol cans are intact
  - Mix intact cans in 1 container
  - Remove actuators to reduce risk of release
  - Puncture and drain **empty** aerosol cans, if the cans are recycled and residual liquids are properly characterized and managed
- If processing **empty** aerosol cans, handler must:
  - Use device designed to safely puncture aerosol cans and contain both liquid and air emissions
  - Maintain a copy of the manufacturer's specification and instruction on site
  - Ensure employees operating the device are trained in the proper procedures.
  - Establish and follow written procedures covering:

- safe processing
- proper assembly, operation, and maintenance of processing equipment
- segregation of incompatible wastes
- practices to prevent fires or releases; and how to respond to a release

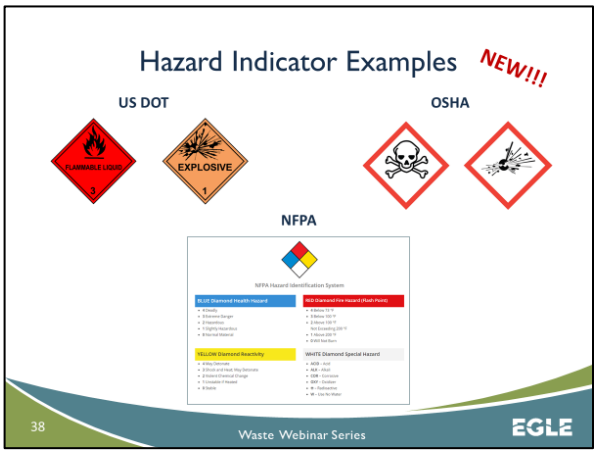
  - Ensure the device is permitted or exempted under Michigan's air pollution regulations

Conditionally Exempt Small Quantity Generators, soon called Very Small Quantity Generators



- Part 111, NEW Rule 304
  - Accumulation area must be protected from weather, fire, physical damage, and vandals
  - Waste must be accumulated so that constituents cannot escape by gravity into soil (directly or indirectly), into surface water or ground water, into drains or sewers, or to the air in violation of Michigan's air pollution regulations

Small Quantity Generators



- Part 111, NEW Rule 306 – Containers must:
  - Be labeled "Hazardous Waste" and with something indicating the hazards associated with the waste
  - Have accumulation date
  - Have hazardous waste numbers
  - Be in good condition
  - Be stored closed
  - Be handled & stored to prevent leaks
  - Be accumulated in an area protected from weather, fire, physical damage, and vandals
  - Be inspected weekly
  - Be compatible with the waste
  - Not contain incompatible wastes
  - Be separated from each other if incompatibles
  - Be washed if they previously held incompatibles
  - Have secondary containment if > 1000 kg (2,200 lbs.) or ~ 5 drums
  - Have written emergency plans and training coordinated with LEPC

Hazard Indicator Marking and Labeling – NEW 2020

- Labeling is required at the point of generation
- Generators can mark the outer/secondary container or attach a tag with the required information on containers with small containers inside (e.g.. tubes, vials, etc.),
- Existing marking and labeling is sufficient for containers that already have appropriate marking and labeling (e.g., a commercial chemical product (CCP) in its original container with an intact label), provided it indicates the hazards of the chemical when the generator adds the words "Hazardous Waste"

Satellite Containers

- Same for SQGs and LQGs
- Part 111, NEW Rule 305 – Must be accumulated at or near the point of generation and the containers must:

- Be < 55 gallons of hazardous waste (all types/all containers combined)
- Be < 1 quart of acutely or severely toxic waste
- Be under the control of the operator
- Be labeled "Hazardous Waste"
- Be labeled with either the hazardous waste number(s) or chemical name and with something indicating the hazards associated with the waste
- Be in good condition
- Be compatible with the waste in them
- Be closed when not in use
- Be marked with accumulation date and moved to storage area within 3 days of exceeding 55 gallons non-acute or 1 quart severely/acutely toxic
- Be managed to prevent leaks

Comparing Hazardous Waste Regulations Labeling Requirements

- CESQG/VSQG Liquid Containers – CESQGs/VSQG do not have marking requirements under the hazardous waste regulations but they must be marked to identify their contents under the liquid industrial by-product regulations
- SQG/LQG Accumulation/Storage Containers - Both SQGs and LQGs have to mark accumulation containers with the words "Hazardous Waste", the waste code(s) of the waste, the accumulation start date, and soon with a hazard indicator (OSHA, U.S. DOT or characteristic)
- SQG/LQG Satellite Containers - Both SQGs and LQGs have to mark satellite containers with the words "Hazardous Waste" and either the waste(s) code for the waste OR the chemical name(s) for the waste and soon with a hazard indicator (OSHA, U.S. DOT or characteristic)
- Labeling of Episodic Hazardous Waste under the NEW 2020 regulations is discussed below

Large Quantity Generators

- Part 111, NEW Rule 307 – Containers must:
  - Be labeled "Hazardous Waste" and with something indicating the hazards associated with the waste
  - Have accumulation date
  - Have hazardous waste number(s)
  - Be in good condition
  - Be stored closed
  - Be handled & stored to prevent leaks
  - Be accumulated in an area protected from weather, fire, physical damage, and vandals
  - Be inspected weekly with inspections documented and records kept on-site for 3 years (see example inspection checklist)
  - Be compatible with the waste
  - Not contain incompatible wastes
  - Be separated from each other if holding incompatibles
  - Be washed if previously holding incompatibles
  - Have secondary containment
  - Have written emergency plans and training coordinated with LEPC and documented
  - Be stored 50 feet from property line if ignitable and/or reactive (written FD approval if distance < 50 ft

Generator Accumulation/Storage Time Frames

- SQG's
  - Generate > 220 lbs. & < 2200 lbs. non-acute monthly
  - Accumulate not more than 13,200 lbs.
  - Store 180 days or less

- LQG's
    - Generate ≥ 2200 lbs. non-acute, > 2.2 lbs. acute or severely toxic monthly, or > 220 lbs. acute or severely toxic media and/or debris from a spill
    - Store 90 days or less

Secondary Containment

- Same for SQGs and LQGs
    - For Small Quantity Generator – Part 111, NEW Rule 306(1)(d)(i)) refers to 40 CFR 264.175
    - For Large Quantity Generator – Part 111, NEW Rule 307(1)(b)(i) refers to 40 CFR 264.175
- Secondary containment must:
    - Have an impervious base free of cracks
    - Be sloped or otherwise designed to elevate/protect containers from liquids
    - Hold 10% of total container volume or 100% of the volume of the largest container, whichever is greater
    - Prevent run on -- unless of sufficient capacity
    - Have accumulated liquids removed to prevent over-flow

Episodic Generation Events NEW Rule 316

- NEW Rule 316 provides additional management requirements for episodic waste
- Allows VSQG and SQG to maintain their existing generator category during episodic event if they follow alternate requirements established in NEW Rule 316
- Requires notification
    - Planned event - 30 or more days prior with Site ID form
    - Unplanned event - Within 72 hours by phone/email, followed by a Site ID form
- Fee for higher status is not waived
- VSQG and SQG episodic hazardous waste must:
    - Be managed to meet the SQG accumulation provisions in NEW Rule 306
    - Be transported by a hazardous waste transporter using a manifest to a licensed hazardous waste TSDF
    - Be shipped within 60 calendar days of the episodic event
    - Be labeled "Episodic Hazardous Waste," with the hazard indicators, and the date the event started
- VSQG episodic hazardous waste is not subject to the Land Disposal Restrictions discussed later, but SQG episodic waste is subject to the Land Disposal Restrictions

VSQG Consolidation NEW Rules 304, 306, and 307

- When a LQG and VSQG are under the control of the same person, the LQG can consolidate the VSQG's waste for which they control and send it for hazardous waste disposal
    - Person means an individual, trust, firm, joint stock company. federal agency, corporation, including a government corporation, partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body
    - Control means the power to direct policies at the facility
- VSQG having their controlling LQGs consolidate must:
    - Characterize waste streams and keep records of the determinations for at least 3 years
    - Maintain information to verify the VSQG monthly generator category determination for at least 3 years
    - Mark each container of hazardous waste with the words "Hazardous Waste"
    - Mark each container of hazardous waste with a description of the waste and an indication of the hazards of the contents
    - Accumulate VSQG hazardous waste liquids in an area protected from weather, fire, physical damage, and vandals and prevents hazardous waste from escaping by gravity into the soils,

directly or indirectly, into surface or groundwaters, or into drains or sewers and so that fugitive emissions do not violate the air pollution control regulations.
    - Ensure no hazardous wastes with free liquids are landfilled
    - Use a shipping document and liquid industrial by-products permitted and registered transporter for transporting VSQG liquids
- LQGs consolidating VSQGs waste under their control must:
    - Notify EGLE of the VSQG consolidation activities at least 30 days prior to receiving the first shipment using the Site ID Form
    - Label VSQG containers with the date accumulation starts, which is the date the hazardous waste was received from the VSQG.
    - If the LQG consolidates hazardous waste from a VSQG with its own hazardous waste or with hazardous waste from other VSQGs, the LQG must label each container or tank with the earliest date any hazardous waste was placed in the container at the LQG location
    - Maintain adequate aisle space at all times for emergency personnel to access hazardous waste
- Maintain records that provide the following details for each VSQG shipment for at least three years:
    - VSQG name and site address
    - VSQG contact, phone number and e-mail
    - Description of the hazardous waste received
    - The quantity and the date the hazardous waste was received
- Manage consolidated waste as fully regulated LQG hazardous waste
- Send the VSQG waste for treatment/disposal at a licensed TSDF within **90 days** of the accumulation date
- Use a hazardous waste permitted and registered transporter
- Document shipment for recycling/disposal on a Uniform Manifest
- Reports VSQG consolidation activities in Biennial Reporting using a G51 source code to distinguish from the LQG's own waste

Academic Laboratories - Part 111, Rule 313 & 40 CFR 262.200 –

- Applies to colleges, universities, or college - university affiliated teaching hospitals and non-profit research institutes
- Allows academic entities to decide when & where on-site hazardous waste determinations are made
- Requires hazardous waste determinations to be made by trained professionals (not students)
- Requires development of a lab management plan
- Requires hazardous waste to be removed every six months
- Unused hazardous wastes generated during once/year lab clean-out are not counted towards generator status
- See comparison of Subpart K, Academic Lab Rule vs. Satellite Accumulation available on-line at www.epa.gov/wastes/hazard/generation/labwaste/saa-vs-alr.pdf.

Hazardous Waste Tanks (Part 111, NEW Rules 306 and 307 & 40 CFR 265)

- Applies to SQG & LQG
- Found in 40 CFR 265, Subparts J
- Tanks must:
    - Be labeled "Hazardous Waste"
    - Be marked with accumulation date
    - Not contain wastes which could cause rupture, leaks, corrosion or other failures
    - Be managed to prevent reactions that would threaten human health and the environment
    - Be decontaminated (washed) if they previously held incompatible waste before adding waste
- Additional tank requirements:

    - Ignitable and reactive wastes (40 CFR 265.198)
    - Controls and practices to prevent spills & overflows (40 CFR 265.194)
    - Secondary containment (40 CFR 265.193)
    - Inspection requirements and records (40 CFR 265, Subparts J)
    - Tank certification (40 CFR 265.192)
- Inspection requirement and records
    - All tanks must be inspected each day, including overflow, spill control devices, and secondary containment
    - All tank inspections must be documented, and records must be kept for at least 3 years

Hazardous Waste Tanks Certification (Part 111, Rule 306 & 40 CFR 265.192)

- Must obtain a written assessment that is reviewed and certified by a "qualified professional engineer: that includes:
    - Design standards
    - Hazard characteristics of the waste
    - Determination performed by corrosion expert if the external shell of a metal tank is in contact with soil or water
    - Design considerations if tank affected by vehicles
    - Professional engineer written certification must be kept on file AT FACILITY
    - As of a 2006 federal rule change which is adopted by reference into the Michigan rules, an "independent" and "registered" professional engineer is no longer required

Subpart CC Rules - What Are They?

- EPA rules for controlling certain air emissions from hazardous waste storage containers
- Part 111, NEW RULE 307(1)(b) and Rule 634 adopts by reference 40 CFR Part 264, Subpart CC
- Certain LQGs and treatment, storage, and disposal facilities (TSDFs) are subject to 1 of 3 different sets of requirements for containers/tanks
- Container/tank requirements depend on:
    - The size of container
    - The organic content of the waste placed in the container
    - Whether or not waste stabilization occurs in container
- Treatment, storage and disposal facilities as well as certain LQGs must comply with Subpart CC if they:
    - Generate a hazardous waste which has an average volatile organic (VO) concentration > 500 parts per million by weight (ppmw) at the point of waste origination and
    - It is stored in containers larger than ~ 26 gallons

Subpart CC Rules - Exemptions

- Exemptions:
    - SQGs
    - Wastewater treatment units
    - Elementary neutralization units
    - Emergency or spill management units
    - Waste recycling units
    - Satellite accumulation units
    - RCRA empty containers
    - If organic content is reduced prior to waste being placed in container

Subpart CC Rules - Records

- If hazardous waste < 500 ppmw, records to be kept include:
    - Test results

    - Date, time, and location of sampling for EACH hazardous waste
    - Measurements
    - Calculations
- Records documenting the rationale for the exemption must be reviewed and updated, when necessary, and at least once every twelve months
- Records must be maintained on-site for 3 years

Subpart CC Rules -Definitions

- 40 CFR 265.1081 – "Light Liquid Service" means:
- Vapor pressure of one or more of the organic constituents is > 0.3 kilopascals at 20 degrees Celsius and the total concentration of organic constituents is equal to or greater than 20percent by weight

Subpart CC - Container Requirements

- Level 1 Container (26 to 122 gal. light liquid service)
    - 40 CFR 265.1087(c)
    - DOT Approved
    - Covers and closure devices for all openings
    - Open top with organic vapor suppressing barrier
- Level 2 Container (>122 gal. light liquid service)
    - 40 CFR 265.1087(d)
    - DOT approved
    - Vapor tight or operated with no detectable emissions
- Level 3 Container (Waste Stabilization Unit)
    - 40 CFR 265.1087(e)
    - Vented (or located in enclosure that is vented) through closed vent system to a control device

Subpart CC Rules - Tanks Defined

- Level 1 Tanks - 40 CFR 265.1084(c)
- Level 2 Tanks – 40 CFR 264.1084 (d)

Subpart CC Rules - Tank Requirements

- All tanks subject to Subpart CC control requirements must be inspected
- Inspection procedures and requirements vary by type of tank
- Records of all inspections regardless of the tank control level must be kept at the facility for a minimum of 3 years after the date of the inspection
- More detailed recordkeeping and inspection requirements are required for floating roof tanks and tanks or enclosures which vent to a control device

Closed Container - What Is It?

- Regulations do not define "closed container"
- Requiring containers to be closed is a means to minimize emissions of volatile wastes, to protect ignitable or reactive wastes from sources of ignition or reaction, to prevent spills, to reduce the potential for mixing of incompatible wastes and reduce direct contact of personnel with waste

Closed Container - Liquid Hazardous Waste

- For containers in satellite accumulation:
  - Lids properly affixed to prevent spills
  - Funnels with manual or spring-loaded lids or tightly screwed into bung hole with a one-way valve
- For containers in accumulation/storage:
  - Cover secured with snap rings bolted
  - Bungholes capped
  - If needed, pressure-vacuum relief valve to avoid explosions

Closed Container – Solid Hazardous Waste

- Container is closed if there is complete contact between the lid and the rim all around the top of the container.
- If continuously receiving wastes, containers should be capable of catching and retaining all of the material.

Closed Container - Liquid Industrial By-Products

- Same as liquid hazardous waste except:
  - Non-pressurized mobile oil drain pans, at a minimum, must be emptied when not in use or generally at the end of the day to be considered closed
  - Those not emptied when not in use must be equipped with closure device to prevent spills in the event the container is knocked over

Pre-transport Labeling

- Rule 310 Pre-transport requirements - Before transporting hazardous waste or offering hazardous waste for transport, small quantity and large quantity generators shall:
  - (d) Mark each container of 119 gallons or less with the following words and information :
  - (v) The hazardous waste number identifying the waste.
  - (e) A generator may use a nationally recognized electronic system, such as bar coding, to identify the hazardous waste number, as required by subdivision (d)(v) or subdivision (f) of this subrule.

Transport - Manifests & Shipping Documents

- Track waste from "cradle to grave“ or from the time it is created, while it is transported, to where it is treated, stored, and until it is ultimately disposed.
- As of a March 2016 law change, uniform manifests are no longer required for documenting shipment of liquid industrial by-products, which includes CESQG/VSQG liquids
- Shipping document is required for shipping liquid industrial by-products and CESQG/VSQG liquids
- Shipping document can be written or electronic

Shipping Document

- Can be a log, invoice, bill of lading, or uniform hazardous waste manifest (see example shipping document)
- Required information:
  - Name and address of the generator
  - Name of the transporter
  - Type and volume of by-product shipped
  - Date the by-product was shipped
  - Name, address and Site ID number of the designated facility
- Generator or generator representative signs/certifies shipping document - keeps record for inspection
- Transporter signs/certifies shipping document -- keeps record during transport and for inspection

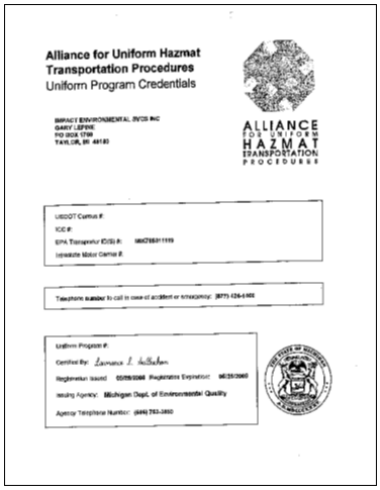
- Transporter delivers only to the designated facility identified on the shipping document
- Designated facility provides confirmation of receipt to the generator – keeps record for inspection
- If confirmation from designated facility is not received timely, generator must contact designated facility, and if receipt is not verified, report to the EGLE

Uniform Manifests/e-Manifests

- Uniform manifests are required for shipping hazardous waste from a SQGs and LQGs
- In April 2017, new rules became effective in Michigan requiring use of e-Manifest system
- Now all hazardous waste manifest must be loaded to the e-manifest system by the receiving facility who receives a fee to cover the cost of processing
- e-Manifest options
    - paper manifest (via mail) - $25
    - scanned, adobe (pdf) image of each paper manifest - $20
    - data file of all manifests - $14
    - e-manifest, originated in the e-manifest system, signed electronically by the generator, transporter and receiving TSD (paperless manifest) - $8
    - commonly transporters or receiving facilities also charge their own manifest processing fee on top of the above EPA manifest processing fees
- The $7 e-Manifest option is known as the "hybrid manifest" option which is what most hazardous waste disposal facilities are using to submit information electronically to EPA
- The hybrid e-Manifest is populated by an agent for the generator in the e-Manifest system
- The generator:
    - Is provided with a paper copy of the e-Manifest
    - Signs the paper copy by hand
    - Files and retains the paper copy after it's signed by the transporter
    - Transporter carries paper Uniform Manifest copy in the transport vehicle to meet U.S. DOT regulations

E-Manifest Tracking

- After registering for e-manifest use, the generator can track waste movement from the transporter to the receiving facility in the e-Manifest system
- Only if a paper manifest is used will the TSD be **required** to send the generator a signed copy of the manifest by mail
- Generators not registered in the e-manifest system using the hybrid manifest must make arrangements with the receiving facility to return a hand signed paper copy of the manifest
- Generators must track shipments and verify delivery at the disposal facility (SQG must verify within 60 days and LQG must verify within 45 days)
- Generators unable to verify receipt of shipments must submit an exception report to EGLE



Permitted & Registered Transporter

- Transporters must be permitted and registered by EGLE under Act 138
- Generators can only offer shipments of liquid industrial by-products to permitted/registered transporters
- Credential must be carried in power unit at all times
- Separate authorizations are issued for transport of hazardous waste and liquid industrial by-products

Questions?