
Workshop Reference Book

- HW regulations including:
 - F, K, P, U lists
 - 2008 40 CFR 261.2, Table 1
- Characterization record, steps, and Q & A
- Interpretive letters/memos
- LDR resources
- Sampling resources
- Subpart CC resources
- LIW/used oil regulations and resources
- Online resources

Workshop Agenda

- Hazardous waste defined, exclusions, listed/characteristic criteria
- LDRs, UHCs, sampling & analysis
- Liquid industrial waste & used oil defined, exclusions, criteria
- Example exercises

DEQ Highlights

- Generator:
 - Responsible for characterization
 - Most familiar with waste and changes
 - Must coordinate with purchasing and disposal facility
- Michigan:
 - Implements Part 111 regulations, not RCRA
 - Not adopted EPA DSW changes establishing RCRA hazardous secondary materials
 - Not adopted EPA disposable wipes rule
 - DSW and disposable wipes will expected to be evaluated at next rulemaking

The Common Question

- “Is my waste a hazardous waste regulated under Part 111 of Act 451 and the corresponding RCRA provisions?”
- Hazardous Waste Determination
 - Rule 302 (40 CFR 262.11)
 - “A person who generates a waste as defined in R 299.9202 shall determine if that waste is a hazardous waste...”

How do you determine if your waste is a hazardous waste?

- Answer the following:
 - Is the waste a listed waste?
 - See Rules 213 and 214 (40 CFR 261.30)
 - Is the waste a characteristic waste?
 - See Rule 212 (40 CFR 261.20)
 - Is the waste excluded (full or partial)?
 - See Rule 204 (40 CFR 261.4) and Rules 228, 206, 231, 831, etc.)

What is a Solid Waste? (Rule 202 and corresponding federal regulations under 40 CFR 261.2)

- “A solid waste is any discarded material that is not excluded under Rule 204 (40 CFR 261.4(a))...”
- A solid waste includes solids, liquids, semisolids, or gaseous materials

- A discarded material is...
 - Any material which is:
 - Abandoned
 - Recycled
 - Considered inherently waste-like
 - A military munition
- Abandoned materials are abandoned by being:
 - Disposed
 - Burned or incinerated; or
 - Accumulated, stored, or treated before being disposed of, burned, or incinerated

Point of Origination (Rule 203(2))

- The point of origination is when a material is first considered a waste subject to regulation
- The point of origination is when a material is “discarded” and the waste ...
 - First meets a listing in Rule 213 or 214 OR
 - Is mixed with listed hazardous waste or severely toxic hazardous waste OR
 - First exhibits a characteristic in Rule 212

Hazardous Waste Determination, Answer the following:

- Is the waste excluded (full or partial)?
 - See Rule 204, 205, and 207 (40 CFR 261.4) and Rules 228, 206, 231, 831, etc.)?
 - Is the waste listed?
 - See Rules 213 and 214 (40 CFR 261.30)?
 - Is the waste a characteristic waste? See Rule 212 (40 CFR 261.20)

Is the waste excluded?

- Three possible ways:
 - It is excluded from the definition of a solid waste
 - It is excluded from the definition of a hazardous waste
 - It is partially excluded and must be managed to meet a special rule (e.g. universal waste, recyclable material, CRT Rule or precious metals)

Solid Waste Exclusions (Rule 204(1) (40 CFR 261.4(a)))

- More than two dozen exclusions
- Common examples:
 - Domestic sewage
 - Shredded circuit boards

More solid waste exclusions and hazardous waste exclusions (Rule 204(2) & (3) (40 CFR 261.4(b))

- Household waste
- Agricultural waste – growing of crops and raising of livestock

Is Waste a Listed Hazardous Waste? Rules 213 and 214 (40 CFR 261.30)

- Listings are a narrative description of a specific type of waste
- Only the knowledge of the process that generated the waste is needed to determine if the waste is listed
- EPA criteria for listing include:
 - Toxic listed wastes
 - Acutely hazardous wastes
 - Characteristic wastes
 - Listed Hazardous Waste
Hazard Codes
 - Toxic Waste = (T)
 - Acute Hazardous Waste = (H)
 - Ignitable Waste = (I)
 - Corrosive Waste = (C)
 - Reactive Waste = (R)
 - Toxicity Characteristic Waste = (E)

Four Types of Listed Hazardous Waste Codes

- “F-Listed” Codes
- “K-Listed” Codes
- “P-Listed” Codes
- “U-Listed” Codes
- “F-Listed” Waste Codes

Rule 213(1)(a) Table 203a (40 CFR 261.31)

- Includes hazardous wastes from non-specific sources
- Hazardous waste codes F001 – F039
- Seven manufacturing or industrial processes create the categories of F-Listed wastes

“F-Listed” Categories

- Spent solvent wastes (F001 - F005)
- Electroplating and other metal finishing operations (F006 - F012 and F019)
- Dioxin-bearing waste (F020 – F023 and F026 – F028)
- Wastes from the production of certain chlorinated aliphatic hydrocarbons (F024 and F025)
- Wastes from wood preserving (F032, F034, and F035)
- Petroleum refinery wastewater treatment sludges (F037 and F038)
- Multisource leachate (F039)

Spent Solvent Wastes

- Includes 31 specific halogenated and non-halogenated organic solvents
- The organic solvent must be spent and must have been used for its “solvent properties”
- Includes the still bottoms from the recovery of these spent solvents
- F001 - Spent halogenated solvents used in degreasing
- F002 - Spent halogenated solvents
- F003 to F005 - Spent non-halogenated solvents

F001, F002, F004, and F005 Spent Solvents include...

- Mixtures and blends containing, before use, a total of 10% or more by volume of one or more of any of the solvents listed in F001, F002, F004, or F005.
- Spent Solvent Wastes

F003 spent solvents include...

- Mixtures and blends containing, before use, only the solvents listed in F003.
- Mixtures and blends containing, before use, one or more of the solvents listed in F003 and a total of 10% or more by volume of one or more of any of the solvents listed in F001, F002, F004, and F005.

Spent Solvent Wastes - Key information and knowledge

- “Spent” and “solvent properties”
- Names of the solvents
- Before use concentration for each of the solvents
- 10% or more concentration
- Aggregate of one or more of the solvents

Example #1

- Before use concentration mixture:
 - 5% Methylene Chloride (F002)
 - 3% Nitrobenzene (F004)
 - 2% Toluene (F005)
 - 90% Water
- Spent solvent is F002, F004, and F005

Example #2

- Before-use concentration mixture:
 - 5% Tetrachloroethylene (F002)
 - 3% Acetone (F003)

- 7% Isobutanol (F005)
 - 85% Water
- Spent Solvent is F002, F003, and F005

“K-Listed” Waste Codes

- Rule 213(1)(b), Table 204a (40 CFR 261.32)
- Includes hazardous wastes from specific sources
- More than 100 K-Listed waste codes
- Detailed descriptions of wastes generated from specific industries

“K-Listed” Waste Codes

- Two primary questions to ask:
 - Is the facility listed as one of the industries that generate K-Listed wastes?
 - Does the waste match one of the specific K-List waste descriptions?
- K-Listed Industries:
 - Wood Preservation
 - Inorganic Pigments
 - Organic Chemicals
 - Inorganic Chemicals
 - Pesticides
 - Explosives
 - Petroleum Refining
 - Iron and Steel
 - Primary Aluminum
 - Secondary Lead
 - Veterinary Pharmaceuticals
 - Ink Formulation
 - Coking
- K005 - Wastewater treatment sludge from the production of chrome green pigments
- K101 - Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds

Discarded Commercial Chemical Products

- Rule 214, Tables 205a, 205b, 205c (40 CFR 261.33)
- Includes discarded commercial chemical products, off-specification products, container and spill residues
- Listed product not meeting customer specifications or contaminated with another material, requiring disposal
- Designated as hazardous wastes when discarded or intended to be discarded
- Includes commercial chemicals with listed material as sole “active” ingredient, not all materials containing listed commercial chemical product
- Includes commercial chemical product or manufacturing chemical intermediate
- Commercially pure grade of chemical
- Technical grade of chemical
- Sole active ingredient

Discarded Commercial Chemical Products

- Includes three lists of generic chemical names:
 - Table 205a (40 CFR 261.33(e))
 - P-Listed waste - ALL acutely hazardous!
 - Tables 205 b (federal) (40 CFR 261.33(f))
 - U-Listed wastes (federal)
 - Table 205c (state)
 - U-Listed wastes (Michigan only)
- Includes all commercial chemical products and manufacturing chemical intermediates having one of the generic chemical names
- Includes off-specification products
- Includes residues and spill cleanup debris
- The P-listing and U-Listings only applies to unused and discarded commercial chemical products

Characteristic Hazardous Waste

- Waste that exhibits properties that can cause death or injury to humans or lead to ecological damage
- Characteristics are detectable using a standardized test method or by applying general knowledge of the waste properties
- Four Characteristics
 - Ignitability (D001)
 - Corrosivity (D002)
 - Reactivity (D003)
 - Toxicity (D004 – D043)

Ignitability D001 Characteristic

- Rule 212(1)(a) (40 CFR 261.21)
- Wastes that can readily catch fire and sustain combustion
- Includes both liquids and non-liquids

Four Properties of Ignitability

- Liquids, other than an aqueous solution containing less than 24% alcohol by volume, with a flash point <140° F
 - Aqueous: ≥50% water by weight
 - Alcohol exclusion: <24% by volume
 - Flash point test: ASTM standard
- Non-Liquids that can spontaneously catch fire and burn vigorously and persistently
- Ignitable compressed gases (DOT regulations)
- Oxidizers (DOT regulations)

Corrosivity D002 Characteristic

- Rule 212(2) (40 CFR 261.22)
- Wastes that are highly acidic or highly basic
- Wastes that can readily corrode or dissolve flesh, metal, or other materials
- Two Properties of Corrosivity
 - Aqueous waste with pH ≤ 2 or ≥ 12.5
 - Liquids that corrode steel at a rate of greater than 0.25 inches per year
- Test if waste contains sufficient water to perform pH test

Reactivity D003 Characteristic

- Rule 212(3) (40 CFR 261.23)
- Wastes that readily explode or undergo violent reactions or react to release toxic gases or fumes
- Narrative criteria to define a reactive waste
- Eight Properties of Reactivity
- Normally unstable and undergoes violent change without detonating
- Reacts violently with water
- Forms potentially explosive mixtures with water

Eight Properties of Reactivity

- Produces toxic gases, vapors, or fumes when mixed with water
- Cyanide- or Sulfide-bearing waste that releases toxic gases when exposed to pH conditions between 2 and 12.5
- Is a forbidden DOT explosive
- Eight Properties of Reactivity
- Capable of detonation or explosive reaction if subjected to a strong initiating force or if heated under confinement
- Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure

Toxicity Characteristic

- Rule 212(4) (40 CFR 261.24)
- D004 – D043 Waste Codes
- EPA identified 40 toxic compounds and elements known to have leached into the groundwater after being disposed of in landfills
- Eight elemental metals (D004-D011)

- Eight pesticides and herbicides (D012-D017, D020, and D031)
- Twenty-four non-halogenated and halogenated organic compounds (D018, D019, D021-D030, and D032-D043)
- EPA designed a laboratory procedure to replicate the leaching process that occurs when wastes are buried in a landfill
- EPA established threshold regulatory levels for each toxic compound and element
- EPA Designated Laboratory Procedure

Toxicity Characteristic Leaching Procedure (TCLP)

- Reduce the size of the waste by grinding
- Add an acid to the grindings to create a leachate
- Analyze the leachate and determine the concentration levels
- Evaluate the concentration levels against the regulatory levels

20 Times Rule

- TCLP allows use of total constituent analysis in lieu of TCLP for solids
- For solid sample, divide total results by 20 and compare to TCLP limit in Table 201a
- For semi-solid, see EPA formula in reference book

Mixture Rule

- Rule 203(1)(c) (40 CFR 261.3(a)(2)(iv))
- Any mixture consisting of a listed hazardous waste (F-, K-, U-, and P-Listed) and any other solid waste is still considered to be hazardous waste

Derived From Rule

- Rule 203(3) (40 CFR 261.3(c)(2)(i))
- Any waste generated from the treatment, storage, or disposal of a hazardous waste is also a hazardous waste

Land Disposal Restrictions (LDR)

- Rule 311 (40 CFR 268)
- Requires treatment of hazardous waste prior to disposal
- Minimize the long-term threat posed to human health and the environment

Land Disposal Restrictions (LDR) Responsibilities

- Identify the hazardous waste codes for each waste
- Determine the treatment standards for each waste code
- Identify any underlying hazardous constituents (UHC)

Review Hazardous Waste Codes

- Hazardous only due to listed waste codes (F, K, P, and U)
- Hazardous only due to characteristic waste Codes (D)
- Hazardous due to both listed and characteristic waste codes

Determine the LDR Treatment Standards

- Treatment standards for hazardous wastes in 40 CFR 268.40 table
- Listed by hazardous waste code
- Standards for wastewaters and non-wastewaters forms of each hazardous waste

Wastewater vs Non-wastewater

- Wastewater - Waste containing <1% by weight total organic carbon (TOC) and <1% by weight of total suspended solids (TSS)
- Non-wastewater – Aren't wastewaters or waste containing > 1% by weight total organic carbon (TOC) and > 1% by weight of total suspended solids (TSS)

What Are the Treatment Standards?

- Three types of treatment standards:
 - Total Concentration (mg/kg)
 - TCLP Results (mg/l TCLP)
 - Technology Standards (letter codes)

Technology Standards

- 40 CFR 268.42 provides treatment code key
- Treatment Standards that require a specific treatment technology
- Expressed as a five-letter code like:
 - INCIN = Incineration
 - NEUTR = Neutralization

Underlying Hazardous Constituents (UHCs)

- Listed in the universal treatment standards in 40 CFR 268.48 table
- Applicable to all wastes that carry a characteristic hazardous waste code (D-Codes)
- The UHCs are not what causes the waste to exhibit a characteristic

Definition of UHCs

- 40 CFR 268.2(i)
- Any constituent listed in the Universal Treatment Standard table found in 40 CFR 268.48 which can reasonably be expected to be present at the point of generation of the hazardous waste at concentrations above the constituent specific treatment standards

Questions to Ask About Waste with UHCs

- Does the waste carry a characteristic hazardous waste code (D-Code)?
- Does the treatment standard for the D-Code at the 40 CFR 268.40 table specify “and meet 268.48 standards”?
- Are the concentrations of the UHCs “reasonably expected” to be above the treated standard levels?

LDR Notifications

- 40 CFR 268.7
- LQGs and SQGs must determine if the waste requires treatment before land disposal
- LQGs and SQGs must provide notice of LDR information for the initial waste shipment to each off-site TSD
- LDR Notifications
- LDR notification must include:
 - Manifest document number
 - EPA hazardous waste numbers
 - Treatment standards
- There is no standard EPA notification form for the LDR notice

Hazardous Waste Determination

- Who is responsible?
- Completion of waste surveys and waste characterizations
- Analytical testing versus generator knowledge

Representative Waste Sampling

- What is a “Representative Sample?”
- 40 CFR 260.10 – EPA definitions
- “A sample of a universe or whole which can be expected to exhibit the average properties of the universe or whole”

How to Obtain a Representative Sample

- Use EPA-approved sampling protocols
- 40 CFR 261, Appendix I
- Methods and equipment vary based on the form and consistency of the waste
- ASTM standards

What is Being Sampled?

- Extremely viscous liquids
- Crushed or powdered materials
- Containerized liquid waste
- Liquid wastes in pits, ponds, lagoons, and similar reservoirs

Subpart CC

- Generally requires sampling to verify LQGs are < 500 ppmv and not subject
- Only simple processes using 1 or 2 volatile organic products in consistent ratios can use calculations to determine ppmv
- See reference book for calculations and testing details

Technical Definition of Liquid Industrial Waste

- Per Part 121, MCL 324.12101(n)...
"Liquid industrial waste" means any brine, by-duct, industrial wastewater, leachate, off-specification commercial chemical product, sludge, sanitary sewer clean-out residue, storm sewer clean-out residue, grease trap clean-out residue, spill residue, used oil, or other liquid waste that is produced by, is incident to, or results from industrial, commercial, or governmental activity or any other activity or enterprise determined to be liquid by method 9095 (paint filter liquids test) ...
- Per Part 121, MCL 324.12101(n)...
 - Liquid industrial waste does not include any of the following:
 - Hazardous waste regulated and required to be manifested under part 111
 - Septage waste regulated under part 117
 - Medical waste regulated under part 138 of the public health code...
 - A discharge to the waters of the state in accordance with a permit, order, or rule under part 31
 - A liquid generated by a household
 - A liquid regulated under 1982 PA 239, MCL 287.651 to 287.683 (vegetable and animal fats managed under Bodies of Dead Animals Act)

Simple Definition of Liquid Industrial Waste

- Non-hazardous waste that contains free liquids, is a liquid industrial waste
 - Used oils
 - Used coolants/cutting fluids
 - Grease traps
 - Catch basin waste
 - Used weak acidic or caustic cleaners
 - Floor drains and sump waste
- Part 111 exempted liquid hazardous waste

Liquid Industrial Waste Statute

- Part 121 of Act 451: Go to www.michigan.gov/deqwaste, select "Hazardous and Liquid Industrial Waste Hazardous," "Liquid Industrial Waste Management" (center of page), see "Statutes and Rules" (near bottom of page), select "Laws and Rules," then Part 121, Liquid Industrial Waste" (scroll down)

Why Have a LIW Statute?

- Michigan is one of a few states that have a separate law for non-hazardous liquid wastes
- Most states regulate LIW under their solid waste regulations
- Michigan's LIW law
 - Provides better tracking of waste
 - Requires use of permitted/registered LIW transporter
 - Has goal of protecting our fresh water, the Great Lakes
- Per a well schooled waste inspector...
"The state of Michigan lies completely within the watershed containing 20% of the world's fresh water."

CESQG

- Exempt from certain hazardous waste regulations
- Not exempt from LIW statute
- Waste must still be managed by a licensed LIW designated facility
- LIW must be hauled by a permitted and registered LIW transporter with spill insurance

Used Oil - Topics

- What is a Used Oil?
- Oil Testing

- Rebuttable Presumption
- Chlorinated Paraffins
- Specification Used Oil
- PCB's
- Waste Segregation
- Transportation of Mixed Loads

Used Oil – Part 111

- Under Part 111, used oil is
 “any oil which has been refined from crude oil, or any synthetic oil, which has been used and as a result of use, is contaminated with physical or chemical impurities” and includes:
 - Used motor oils
 - Used hydraulic oils
 - Used transmission & brake fluids
 - All synthetic oils
 - Spent quench oils
 - Spent gear oils
 - Non-PCB transformer oils
 - Oil-water mixtures if sufficient oil exists for recycling
- Under Part 111, used oil does NOT include petroleum based products that were not designed to function as lubricating agents or other protective applications
- Under Part 111, used oil does NOT include:
 - Fuels (Gasoline, Diesel, Fuel Oils)
 - PCB oils (subject to TSCA)
 - Mineral spirits
 - Certain test/calibration fluids
 - Animal fat or vegetable based oil
- Used oil is subject to management standards under Parts 111, 121, and 167 of the Michigan Natural Resource and Environmental Protection Act
- Part 111 and 121 both establish hazardous waste and liquid industrial management standards for the used oil
- Part 167 requires that the used oil be recycled

Used Oil – Common Tests

- Total Halogens - Used for testing used oils for chlorine, fluorine, bromine, etc. to determine if a “presumed” hazardous waste
- Used oil test for halogens using SW-846 or equipment like “Chlor-D-Tect”

Used Oil - Part 111, Rules 109(p), 203(1)(e), and 809)

- Used oil generally does not include used oil containing > 1000 PPM halogens
- Used oil with > 1000 PPM halogens is a presumed listed hazardous waste unless sufficient characterization data can be presented to “rebut the presumption” that the halogens are present from mixing used oil with a listed hazardous waste (chlorinated solvents)
- “Rebutting the presumption” is complicated for transporters & processors accepting used oil from multiple sources and most will not accept used oil > 1000 PPM halogens
- Total halogens are usually tested using SW 846 or using on-site testing equipment like “Chlor-D-Tect”
- If used oil contains > 1000 PPM halogens, it is presumed to have been mixed with listed halogenated hazardous waste unless rebutted
- Can also use knowledge of waste to characterize, if feasible, but adequate documentation is required
- Transporter usually tests oil prior to pick-up to verify LIW regulatory status
- Generators should request and maintain copies of relevant test on file
- If > 1000 PPM halogens present, additional, costly testing is required to “rebut” whether used oil was mixed with hazardous waste:
 - Analyze for all halogenated Appendix VIII constituent and
 - if > 100 PPM used oil fails and must be managed as a hazardous waste
- **CONCLUSION:** Do not mix used oil with other wastes to facilitate required recycling and avoid being required to manage the mixture as a hazardous waste

Rebuttable Presumption

- EPA/DEQ has discretion in determining what concentration is a “significant concentration” prompting rebuttal
- RCRA does not contain regulatory threshold for each halogenated hazardous constituent likely in used oil
- Generally look for concentrations less than 100 ppm for common hazardous halogenated constituents per Federal Register preamble

Chlorinated Paraffins:

- Typically have a total organic halogen content of 4,000 ppm or more but can be recycled through a tolling agreement per Part 111, Rule 203(1)(e)(i)
- Not as valuable as non-chlorinated used oil

Specification Used Oil

Specification Used Oil:

Heating Value	17,000 BTU/Lb.
Arsenic	< 5.0 ppm
Cadmium	<2.0 ppm
Chromium	<10 ppm
Lead	<100 ppm
Sulfur	< 1.0 %, Typical
Total Halogens	<1,000 ppm

PCB's

- Polychlorinated biphenyls must be < 1 ppm for specification used oil blending use
- 1 ppm is detection limit for PCBs in oil using SW-846 Method 8082
- Oil from certain sources or areas require verification analysis

Waste Segregation

- Any LIW mixed with hazardous waste is a hazardous waste
- Mixing high chlorinated oil with low chlorinated oil
 - Reduces recycle value
 - Limits the potential market for the used oil
 - Increased the likelihood of expanded costly lab requirements

Transportation of Mixed Loads

- Commingling of used oil is common (e.g. route trucks picking up crankcase oil)
- Mixing of bulk compatible LIW is authorized
- Mixing bulk may increase treatment or disposal costs, even for compatible wastes as disposal sites may decline/reject the load if:
 - Advance approval not obtained
 - Cannot invoice separately based on weight

Notification

- Site (EPA)
- Identification (ID) Number
- DEQ Site ID Number
- Like EPA ID all LIW Generators are required to have a Site ID which is...
 - Site specific
 - Issued by DEQ
 - Same format as EPA ID
 - Starts with MIK (LIW and HW)
- Important to verify notification information is correctly represents site's waste activity

DEQ Site ID Number

- Notification notifies DEQ & EPA of:
 - Site owner/operator
 - Site contact
 - Site waste activity

- Activity reported includes:
 - CESQG, SQG, & LQG
 - LIW generator
 - Transportation - hazardous waste and/or LIW
 - Used oil collection & processing
 - Large quantity universal waste handlers
 - Treatment, storage, and/or disposal - hazardous waste and/or LIW

LIW Codes

- | | |
|------------------------------------|------|
| • Mixed Solvents | 007L |
| • Pharmaceutical | 014L |
| • Crank Case Oil | 017L |
| • Coolants & Water Soluble Oil | 019L |
| • Other Oil | 021L |
| • Brine | 022L |
| • Other Wastes | 029L |
| • Antifreeze | 030L |
| • Storm Sewer Cleanouts | 031L |
| • Sanitary Sewer Cleanout | 032L |
| • X-Ray & Photo Cleaning Solutions | 033L |
| • Water Based Cleaning Solutions | 034L |
| • Car Wash Sludges | 035L |
| • Grease Trap Wastes | 036L |

LIW Shipping Papers

- EPA Form 8700-22 – Uniform Hazardous Waste Manifest
- Use hazardous waste codes for manifesting:
 - CESQG exempted hazardous waste
 - universal waste liquids
 - Other exempted hazardous waste liquids that require manifesting under Part 121
- Use LIW Codes for all other liquids
- Use LIW Codes for materials excluded from the definition of hazardous waste pursuant to Rule 202 or Rule 204 of Part 111
- Note in Box 14 if manifest documents CESQG, universal waste, etc. shipment manifested pursuant to Part 121 to verify the non-hazardous regulatory status

Transporter Requirement

- Specific authorizations include:
 - Act 138 permit/registration to transport hazardous waste/liquid industrial waste
 - U.S. DOT Registration - Motor carrier number for hazardous materials transport
 - Site/EPA ID No. – Current notification of hazardous waste/ liquid industrial waste transport/transfer activity or other activity
 - MCS-90 – Verification of adequate spill insurance