

Best Practices for Navigating RCRA: New Rules, Permitting/Variations, Challenges with the New Administration, Updates, and the Future of Enforcement Post-Pandemic...Gain Confidence by Better Understanding these Important Waste Issues

Workshop D - July 20, 2022

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Agenda

Key Definitions and New Rules (DSW & AA/BB/CC)

RCRA Permits and Variances – What & Why

Intro to AMG, Best Practices, and Challenges

Rule Admin Process, Violations, and Enforcement

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Definition of Solid Waste (DSW) Overview

- Pursuant to RCRA, EPA promulgated a rule defining solid waste as “discarded material” not otherwise excluded from the agency’s regulations
 - Materials destined for recycling are included within this definition of solid waste
- Hazardous waste is a subset of solid waste that is either
 - Is listed as a type of hazardous waste or
 - Meets one or more of the four characteristics (ignitability, corrosivity, reactivity, and toxicity)
- Materials can fall outside the regulation of the EPA when established exceptions are met

EPA Intent for New DSW

“To ensure that the hazardous secondary materials recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary material.”

DSW: Lead-up to API v. EPA (2018) Court Decision

- 2015 Rule implemented three exclusions, two of which were at issue
 - Generator-Controlled Exclusion (40 CFR §261.4(a)(23))
 - Verified Recycler Exclusion - Replaced the previously implemented Transfer-Based Exclusion (40 CFR §261.(a)(24))
- 2015 Rule lifted the bar on spent catalysts allowing it to qualify for the available exclusions
- 2015 Rule established the four legitimate recycling factors mandatory as applied to all types of recycling to distinguish legitimate recycling from sham recycling
 - All hazardous secondary materials and hazardous waste recycling (whether regulated or excluded) must be legitimate

Amendments and Partial Vacatur to EPAs 2015 DSW through API v. EPA (2018) Decision

Verified Recycler Exclusion

- Requirement of Administrative Approval was found to be unreasonable
- Qualification of spent catalysts for exclusion was preserved without the Verified Recycler Exclusion

Factor 4 of Legitimate Recycling Factors

- Factor 4 was found to be unreasonable as a requirement that applied to all hazardous secondary material recycling
 - Required tasks were not directly related to disposal of material
 - Barred products from the “legitimate” certification even when recycling was truly legitimate
- Court vacated Factor 4 in its entirety as applied to all types of materials

DSW: EPA Promulgation

- EPA Admin signed the final rule responding to the vacatur of certain provisions of the DSW Rule on May 23, 2018
 - Rule was published in the Federal Register on May 30, 2018
- Final Rule implements the March 6, 2018 court decision regarding 2015 revisions to the DSW rule on the recycling of hazardous secondary materials

DSW: Legitimate Recycling Factors

- All recycling must be legitimate
- Four Factors
 - 1) useful contribution of hazardous secondary material
 - 2) recycling process must produce a valuable product or intermediate
 - 3) parties involved must manage the hazardous secondary material as a valuable commodity when within their control
 - 4) product of the process must be comparable to a legitimate product or intermediate
 - 2008 version retained – factor remains a consideration

DSW: Generator-Controlled Exclusion

- The generator-controlled exclusion (40 CFR 261.4(a)(23)) excludes certain hazardous secondary materials from the definition of solid waste if they are generated and legitimately reclaimed within the United States or its territories under the control of the generator
- Requirements
 - 1) reclamation process meets the definition of legitimate recycling under 40 CFR §260.43;
 - 2) the materials are not speculatively accumulated as defined in 40 CFR §261.1(c)(8);
 - including a recordkeeping requirement
 - 3) meet notification requirement (40 CFR §260.42);
 - 4) the materials are managed in a unit that meets the new definition of “contained” in 40 CFR §260.10; and
 - 5) generator satisfies certain emergency preparedness and response conditions found in 40 CFR §261 Subpart M

DSW: Transfer-Based Exclusion

- Transfer-Based Exclusion applies when the generator sends the materials to an off-site recycler (reclaimer)
- Spent catalyst qualifies for exclusion
- Requirements
 - 1) the materials are not speculatively accumulated as defined in 40 CFR §261.1(c)(8);
 - 2) parties must meet the notification requirement (40 CFR §260.42);
 - 3) the materials are managed in a unit that meets the new definition of "contained" in 40 CFR §260.10
 - 4) generator satisfies certain emergency preparedness and response conditions
 - 5) limited to recycling performed within the US
 - 6) parties must maintain certain records that document off-site shipments of hazardous secondary materials for a period of three years
 - 7) reclamation and intermediate facilities must manage the hazardous material
 - 8) any residuals that are generated from the reclamation processes must be managed in a manner that is protective of human health and environment
 - 9) financial assurance – reclaimer assures that it is financially sound enough to follow the recycling plan (and not discard) even though it may become costly

DSW: Remanufacturing Exclusion

- Higher-value solvents transferred between manufacturers for the purpose of extending the useful life of the solvent through remanufacturing
- Eligibility for Exclusion requires (1) listed solvent, (2) listed chemical functions of solvents, and (3) manufacturing sector business
- Requirements
 - 1) parties must meet the notification requirement (40 CFR §260.42);
 - 2) Remanufacturing Plan
 - 3) maintain at the facility records of shipments of hazardous spent solvents for a period of three years
 - 4) solvents should be stored in tanks or containers that possess inherent controls to address the issues of volatile air emissions, leaks, and fires or explosions
 - 5) subject to the speculative accumulation restriction 40 CFR §261.1(c)(8)
- Petitions are available to add to the listed solvents or listed chemical functions

AA/BB/CC

- The RCRA organic air emission standards establish performance, design, operation, monitoring, and maintenance requirements for certain hazardous waste management units
- Subpart **AA** establishes controls associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or stream stripping operations
- Subpart **BB** establishes controls for equipment leaks. Types of equipment regulated by Subpart BB include pumps, compressors, and valves
- Subpart **CC** establishes controls associated with the treatment, storage, and deposit of hazardous waste in tanks, impoundments, and other containers

AA/BB/CC

- Only having recently received statutory authority, Ohio is one of a few states that has not yet adopted the rules for Subparts AA, BB, and CC, meaning the federal government would still need to issue the permits
- When the Final Authorization takes effect, Ohio will issue permits for all the provisions for which it is authorized and will administer the permits it issues
- Q1 2023 to adopt then see EPA authorization
- Ohio would then be authorized to issue full RCRA permits and become the inspection authority
- This has significant logistical impacts on any industry intent on handling hazardous waste

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Key Definitions and New Rules (DSW & AA/BB/CC)

RCRA Permits and Variances – What & Why

Intro to AMG, Best Practices, and Challenges

Rule Admin Process, Violations, and Enforcement

What is a RCRA Permit and When is it Needed?

- Allows generators of hazardous waste to:
 - Treat/Sore up to one year
 - Utilize additional forms of treatment and within additional types of units
 - Dispose on-site (beyond wastewater discharge)
- Allows destination (off-site) facilities to:
 - Accept generator hazardous waste
 - Treat/Sore up to one year within various types of units
 - Dispose on-site
 - Manage universal waste beyond the limitations of a handler
 - Support recycling of hazardous waste

RCRA Permit Application

Part A

- Two short forms
- Contacts
- Activities
- Waste & process codes
- Design capacity
- Annual quantities
- Figures & photos

Part B

- Facility description
- Waste charac. & WAP
- Process & design
- Pro. to prevent hazards
- Closure plan
- Inspection program
- Training program
- Unit-specific
- Corrective Action
- AA/BB/CC

Siting

- Assist Director with initial issuance or mod
- Environmental impact
- Safety and risks
- O/O qualifications
- Location restrictions
- Simple to complex

RCRA Permit Considerations

- 10-year term; currently joint State and Federal*
- Maintenance – living documents; Class 1 through 3 mods
- Public involvement – notifications, meetings, comment periods
- Increased agency oversight compared to LQG
- Financial assurance for RCRA Closure
 - Most expensive scenario; third party; no salvage value
 - Annual update for inflation
- Director .02(G) exemption [ORC 3734.02(G)]

What is a Variance

- Variance from Classification as a Waste - exempts a material from classification as a solid waste *when recycled* for hazardous waste generators and offsite facilities



Available Types of Variances

Variances are available for the following recycled material (OAC 3745-50-23 and 40 CFR §260.30)

- Materials accumulated speculatively without sufficient recycling
- Materials reclaimed and reused within the original production process where generated
- Materials reclaimed but require further reclamation before completely recovered

Variance Application

Regulatory Criteria (OAC 3745-50-24)

- Economics, value, similarity to raw materials
- Material handling to minimize loss
- Accumulation & reclamation time periods
- Guaranteed end market
- Other relevant factors
- May require trade secret info

Supporting Docs (similar to Part B)

- Container management
- WAP
- Process info & unit design
- Contingency plan
- Training program
- Inspection program
- Removal & decontamination plan (RDP)
- Agency discretion

Variance Considerations

- 1-year term for speculative accumulation Variance; 10-year term for other Variance types
- Maintenance – living documents; similar to Class 1A mod
- Public involvement – notifications, comment period, possible meeting
- Less regulatory burden but increased agency oversight compared to LQG
- Financial assurance for Removal and Decontamination (fairly new)
 - Most expensive scenario; third party; no salvage value
 - Annual update for inflation

RCRA Permit vs Variance

	RCRA Permit	Variance
Applicability	Treatment, Storage, Disposal	Recycling-Related
Application Content	Substantial and Very Prescriptive	Moderate and Prescriptive
Overall Operational Flexibility	Limited without Mod	Greater without Needing Update
Financial Assurance	Required; Mod for Adjustment	Required; Can Incorporate Flexibility
Post Closure/RDP Care	Yes if Waste Remains	Yes if Waste Remains
Subpart AA, BB, CC	Must Address	Not Applicable to Variance Materials
CBI/Trade Secret	Allowed	Allowed
100-Year Floodplain	Significant Consideration	Possibly Not Relevant
Site-Wide RCRA Corrective Action	Ohio EPA Reserves Requirement	Ohio EPA Reserves Requirement
Public Involvement	Greater	Lesser
Environmental Justice	Consideration	Consideration
Agency Oversight	Increased from LQG	Increased from LQG; Less than Permit
Cost to Prepare and Maintain	Greater	Lesser
Term	10-Year Renewal Cycle	1- or 10-Year Renewal Cycle

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Will You Need a RCRA Permit or Variance to Recycle with the NEW DSW?

If...	You will need...
Operation cannot meet requirements of “legitimate recycling”	RCRA Permit
Operation cannot meet the speculative accumulation requirements prior to recycling	Variance
Generator, intermediate facility, and/or reclaimer/remanufacturer are in different states	Multiple entities may need RCRA Permit or Variance if new DSW is not adopted in each subject state
Follow one of the new DSW exclusions within the same state	Neither RCRA Permit or Variance

When might you want both?

Agenda

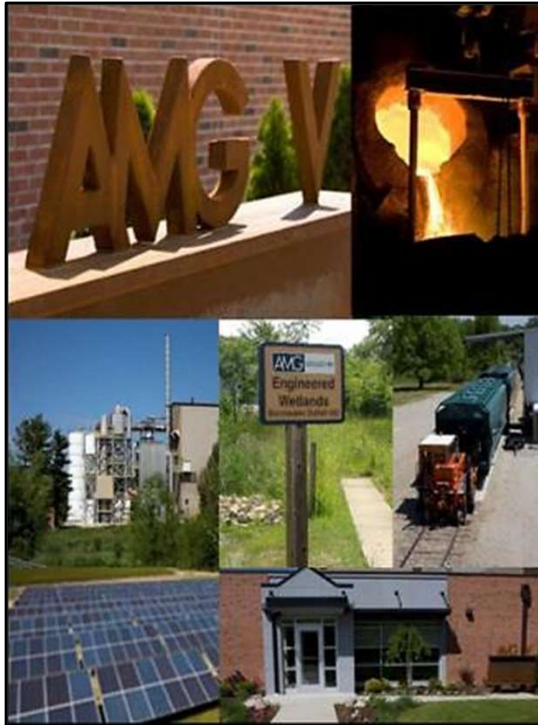
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AMG Vanadium Overview

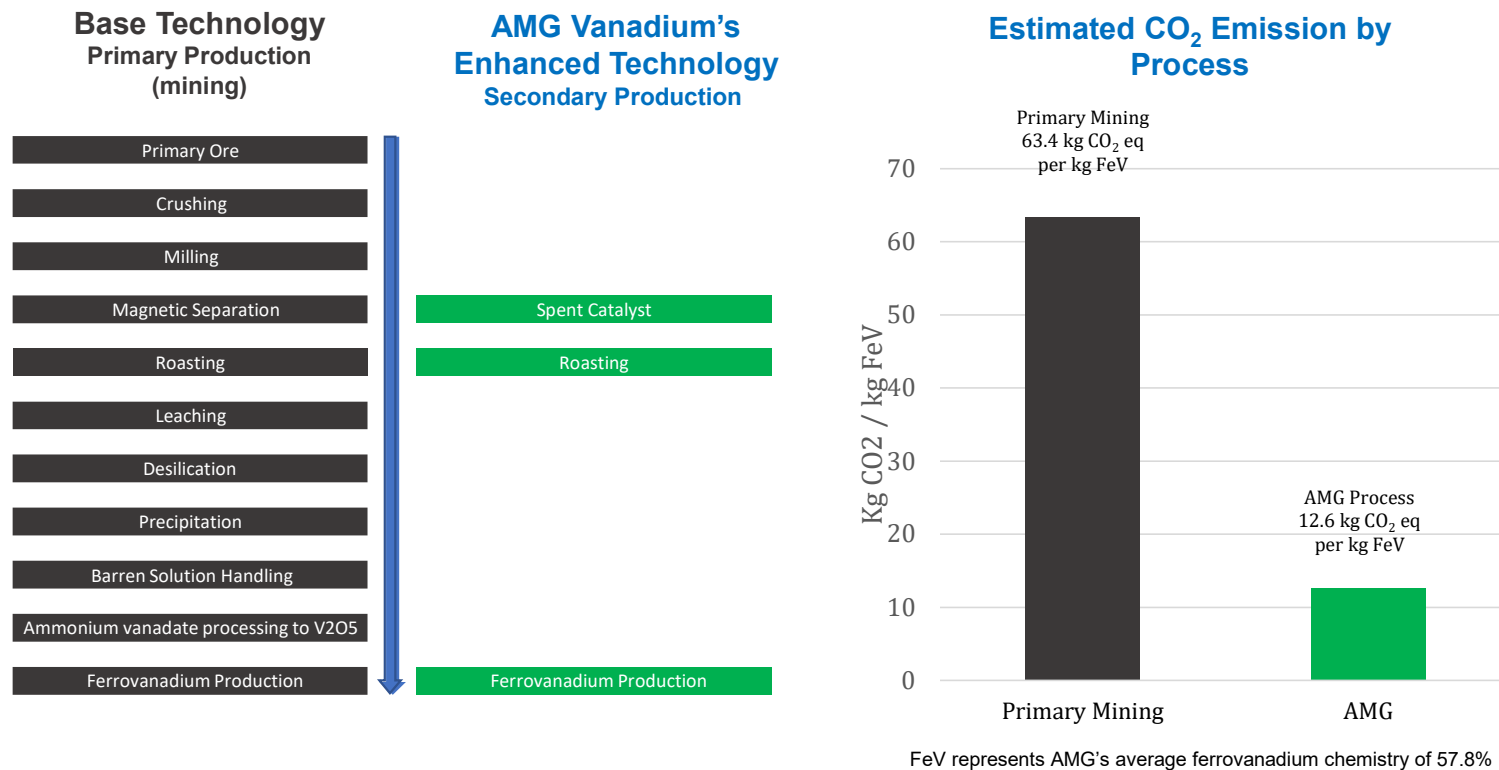


Cambridge, Ohio, USA

- **Largest processor in the world of Spent Resid Catalyst; utilizing Best In Class technology**
 - Largest U.S. ferrovanadium (FeV) producer
 - ISO 9001:2015 Registered
 - ISO 14001:2015 Registered
 - ISO 45001:2018 Registered
- **RCRA permit (Cambridge) - K171/K172 spent refinery catalysts**
- **Operating under OEPA variance (Cambridge & Zanesville) - spent catalyst is a raw material**
- Engineered Wetlands & Natural Wetlands

Mitigating: CO₂ Reduction – Mining vs. Recycling

AMG production mitigates ~**239,000 MT of CO₂** emissions per year



Source: Environmental Resource Management (ERM) AMG Ferrovan® Carbon Footprint Interim Report dated October 1, 2018






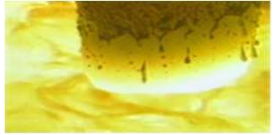


Enabling: CO₂ Reduction – FeV in HSLA Steel

HSLA Steel using AMG vanadium saves more than **3.1 MMTs of CO₂** per year

- Ferrovandium can be added to structural steel to reduce the quantity of steel required to perform the same function.
- A steel alloy containing vanadium results in a 25.9% reduction in mass.
- CO₂ is reduced through the value chain with lighter weight steel, enabling more efficient transportation and fabrication.



AMG Vanadium's Products

PRODUCTS	VALUE PROPOSITION	APPLICATIONS
 <p data-bbox="575 621 806 691">Ferovan[®] (Ferrovanadium)</p>	<ul data-bbox="842 558 1419 760" style="list-style-type: none"> • High strength low alloy (HSLA) steel used for construction, shipbuilding, pipeline, bridges, energy, automotive, etc. • Rail steels, tool and die steels • Rebar 	
 <p data-bbox="575 784 764 889">FeNiMoly[®] (Ferronickel-molybdenum)</p>	<p data-bbox="842 805 1398 873">Alloy addition for stainless steel and NiMo low-alloy steels</p>	
 <p data-bbox="575 930 730 1027">Revan[™] (Calcium Aluminate)</p>	<p data-bbox="842 946 1339 979">Slag-conditioner for the steel industry</p>	
 <p data-bbox="575 1084 806 1154">LimeAdd[™] (Calcium Sulfate)</p>	<p data-bbox="842 1105 1241 1138">Solidification and stabilization</p>	

AMG Products and Process Residuals Benefit from the Variance

- The Variance converts the Regulated Status of K171/K172 Spent Catalyst to a Raw Material (i.e., not a waste) once inside AMG fenceline and when transported between AMG facilities
- Products and process residuals that could otherwise be labeled “derived from” hazardous wastes by EPA can achieve beneficial reuse, rather than going to landfill

How to Ensure You Meet the Variance Criteria

- Understand your Process
- Work with Ohio EPA
 - To understand the requirements
 - To define whether your materials and processes meet the criteria
- Educate your suppliers on
 - The function and purpose of the variance
 - What you need from them for the application
- Educate other teammates on
 - How their roles impact variance compliance

AMG's Ability to Accomplish The Vision and Mission Has Been a Cooperative Endeavor with Ohio EPA

- AMG works very closely with Ohio EPA to ensure that permit requirements and our practices meet the standards established by RCRA
- We aim for full transparency with the agency

Recommended Best Practices for Obtaining a RCRA Permit and/or Variance

- Outside technical and legal support is helpful to:
 - navigate requirements
 - consider the long-term implications of commitments
 - avoid numerous iterations of the application
 - maximize potential for ongoing compliance
 - gain flexibility (where possible)
- Work with Ohio EPA to develop RCRA Permit and/or Variance language
- Maintain extensive communication with the agency

Recommended Best Practices for Obtaining a RCRA Permit and/or Variance

- If Air and Wastewater permitting are needed, establish close coordination
- Don't underestimate level-of-effort for Subpart AA, BB, and CC and its requirements
- Develop definitions in the application(s)
- Understand that the RCRA Permit and Variance each require substantial resources to obtaining and maintaining, but also provide a business advantage
- **Start the application early!**

Brave New World

- Post Covid Practices
 - USEPA
 - Next generation enforcement / desktop review
 - OEPA
 - In-person inspections
 - Electronic paperwork reviews
- Ohio Adoption of DSW

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Administrative Process and Timing for New Rules

- Current Rules in Process
- Next Rule Package in Process
- Authorization Application to US EPA
- Subsequent Rule Package
- Challenges to Rule Making Process

Current Rules in Process

- CRO in Proposal
 - No substantive changes
- Rule Review 2021 in Proposal
 - Most non-substantive, slight modifications to mirror federal rules more closely
 - Fee rules – Permit and Authorized facilities – fees found in statute
 - Aerosol Can rule change
 - Slightly more restrictive in order to be equivalent to US EPA rules

Next Rule Package in Process

Definition of Solid Waste and Organic Air Emissions (AA, BB, CC)

- Early Stake holder Outreach completed – no adverse comments
- Interested Party after Rule Review 2021 becomes final
- Comment Review and Response
- Proposal
- Anticipated adoption first quarter 2023

Authorization Application to US EPA

- Become fully authorized to implement program in lieu of US EPA
 - GIR
 - Pharm and Nicotine
 - Airbag
 - Aerosol Can
 - DSW
 - Organic Air
- Application process – Until authorized US EPA will continue to implement as well

Subsequent Rule Package

- Standardized Permitting
 - Streamlining Storage and some Treatment activities
 - Other old stray rules (e.g., Remedial Action Plan Permit)

Challenges in Rulemaking

- General process for rule making
 - Early Stakeholder Outreach
 - Interested Party Comment Period
 - Proposal
 - Common Sense Initiative Office
- Senate Bill 9
 - Recent passage
 - 2 for 1 reduction requirement

Most Common Hazardous Waste Violations

Top 5 since October 1, 2020 through July 1, 2022

- 52-11 – New requirements from GIR (128)
- 279-22(C)(1) – Used oil labeling (56)
- 52-41 – Biennial Report filing (49)
- 279-22(D) – Response to releases of used oil (30)
- 52-15(A)(5)(b) – marking satellite accumulation containers with an indication of the hazards (29)

Most Common Hazardous Waste Violations

Other common violations:

- 52-17(A)(5)(a)(ii) – Marking central accumulation area containers with an indication of the hazards (23)
- 52-17(A)(7)(c) – Annual personnel training (23)
- 52-262(B) – Contingency Plan QRG (23)

The Future of Compliance Monitoring Post-Pandemic

- Resuming in-person inspections
- Differences between “commitment inspections” and “non-commitment inspections”

The Future of Compliance Monitoring Post-Pandemic

Commitment inspections

- In-person site walk through
 - LQGs, TSDs/Authorized facilities
 - Can do follow up using remote techniques

The Future of Compliance Monitoring Post-Pandemic

Non-commitment inspections

- Virtual Site Visit inspections
 - TEAMS videoconferencing walk through
 - Document review
 - Photographs
 - Can still do in-person
 - Benefits - Saves resources (e.g., no need to drive)
- Complaints, follow-ups, facility self-disclosure, etc.

Enforcement

- No Change in Ohio EPA's process of escalated enforcement
- US EPA during the pandemic examined under-reporters and took several actions for failure to notify as LQG and file BR
- Substantial penalties (relative)

Combustion Capacity Backlog

- Hazardous waste combustion facilities backlogged
 - Staffing
 - Transportation
 - Maintenance
- Backlog causing delayed hazardous waste pick ups from generators
- US EPA memo
- Extensions – 30 days
 - Can be renewed
 - On-line form

Questions?

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Supplemental Information

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The Definition of Solid Waste (DSW)

- Through the Resource Conservation and Recovery Act (RCRA), the EPA was delegated authority to control hazardous waste “from-cradle-to-grave.”
- Hazardous waste is a subset of solid waste – solid waste is hazardous when it is either:
 - listed as a type of hazardous waste (F-, K-, P-, and U-listed), or
 - meets one or more of the four characteristics – ignitability, corrosivity, reactivity, and toxicity.
- To help determine what falls within the EPA’s regulatory authority, the Agency promulgated a rule defining solid waste:

“[A]ny garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility, and other discarded materials... resulting from industrial, commercial, mining, and agricultural operations, and from community activities...”
- Four categories/characteristics of “discarded materials” are:
 - garbage, refuse, and sludge;
 - materials that are thrown away, abandoned, or destroyed;
 - spent materials – waste which have served their intended purpose; and
 - tars, residues, slags, and other materials that are incidentally generated as part of manufacturing or mining process.

- “Solid waste” has been interpreted by the EPA to encompass both materials that are destined for final, permanent treatment and placement in disposal units, as well as certain materials that are destined for recycling.
 - EPA has the authority to label waste as discarded even when it is destined for recycling or beneficial reuse.

Current Exclusions from the DSW

- EPA’s intent for the new DSW was “To ensure that the hazardous secondary materials recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary material.”
- The final rule was published in the Federal Register on May 30, 2018 and included three exclusions from the DSW: (1) Generator-Controlled Exclusion, (2) Transfer-Based Exclusion, and (3) Remanufacturing Exclusion.
- **Generator-Controlled Exclusion:**
 - Must meet the definition of legitimate recycling. Parties performing the recycling of hazardous secondary materials under this exclusion must maintain documentation of their legitimacy determination on-site.
 - Documentation must be a written description of how the recycling meets all four legitimacy factors. Documents must be maintained for three years after the recycling operation has ceased.
 - Cannot be speculatively accumulated. A material is “accumulated speculatively” if it is accumulated before being recycled.
 - Materials must be placed in a storage unit with a label indicating the first date that the material began to be accumulated. If placing a label on the storage unit is not practicable, the accumulation period must be documented through an inventory log or other appropriate method.
 - A material is not accumulated speculatively if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled and that during the calendar year (commencing on January 1) the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period.
 - This provision will allow inspectors and other regulatory authorities to quickly ascertain how long a facility has been storing an excluded hazardous secondary material, and, therefore, whether that facility is in compliance with the accumulation time limits.
 - Submit a notification prior to operating under these exclusions and by March 1 of each even-numbered year thereafter to their regulatory authority.
 - The material must be managed in a unit that meets the definition of “contained.”

- The unit is in good condition, with no leaks or other continuing or intermittent unpermitted releases of the hazardous secondary materials to the environment, and is designed, as appropriate for the hazardous secondary material, to prevent releases of the hazardous secondary materials to the environment. Unpermitted releases are releases that are not covered by a permit (such as a permit to discharge to water or air) and may include, but are not limited to, releases through surface transport by precipitation runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures;
 - The unit is properly labeled or otherwise has a system (such as a log) to immediately identify the hazardous secondary materials in the unit; and
 - The unit holds hazardous secondary materials that are compatible with other hazardous secondary materials placed in the unit and is compatible with the materials used to construct the unit and addresses any potential risks of fires or explosions.
- Generators must follow certain emergency preparedness and response regulations.
- **Transfer-Based Exclusion:**
 - Cannot be speculatively accumulated consistent with the requirement for the Generator-Controlled Exclusion.
 - Notification requirement consistent with that of the Generator-Controlled Exclusion.
 - The material must be managed in a unit that meets the definition of “contained” consistent with that of the Generator-Controlled Exclusion.
 - Generators must follow certain emergency preparedness and response regulations consistent with the Generator-Controlled Exclusion.
 - Limited to recycling performed in the U.S.
 - Specific records must be maintained for three years. For each shipment of hazardous secondary material, the generator must maintain documentation of when the shipment occurred, who the transporter was, the name and address of the reclaimer(s) and, if applicable, each intermediate facility, and the type and quantity of the hazardous secondary materials in the shipment.
 - This recordkeeping requirement may be fulfilled by ordinary business records, such as bills of lading.
 - Hazardous secondary material generators are required to maintain confirmations of receipt from each reclaimer and intermediate facility for all off-site shipments of hazardous secondary materials in order to verify that the hazardous secondary materials reached their intended destination and were not discarded.
 - Records required to be kept by reclaimers or intermediate facilities are similar to generators.

- Reclamation and intermediate facilities must manage the hazardous secondary materials in a manner that is at least as protective as that employed for the analogous raw material, where there is an analogous raw material.
 - An “analogous raw material” is a material for which a hazardous secondary material substitutes and which serves the same function and has similar physical and chemical properties as the hazardous secondary material. Where there is no analogous raw material, the hazardous secondary material must be contained.
- Any residuals that are generated from the reclamation processes must be managed in a manner that is protective of human health and environment.
- The reclaimer must have financial assurance.
- **Remanufacturing Exclusion:**
 - Exclusion applies to certain manufacturing sectors for only 18 hazardous spent solvents that are currently regulated as hazardous wastes because their recycling involves reclamation. Only certain uses of the solvents are allowed after remanufacturing. Petitions are available to add to the list of solvents or the allowed uses.
 - Cannot be speculatively accumulated consistent with the requirement for the Generator-Controlled Exclusion.
 - Notification requirement consistent with that of the Generator-Controlled Exclusion.
 - A remanufacturing plan must be prepared to be prepared and maintained by both the hazardous secondary material generator and remanufacturer that includes (1) information on the types and expected annual quantities of excluded spent solvents, (2) the processes and industry sectors that generate the spent solvents, and (3) the specific uses and industry sectors for the remanufactured solvents.
 - For each shipment of hazardous spent solvent, the generator and remanufacturer need to maintain documentation of when the shipment occurred, who the transporter was, and the type and quantity of the hazardous spent solvent in the shipment.
 - Solvents should be stored in tanks or containers that possess inherent controls to address the issues of volatile air emissions, leaks, and fires or explosions.

Legitimate Recycling

- If you are recycling materials, it must be legitimate as defined in 40 CFR § 260.43. For recycling to be legitimate:
 - the hazardous secondary material must be a useful contribution to the recycling process (requirement).
 - Contributes valuable ingredients to a product or intermediate; or
 - Replaces a catalyst or carrier in the recycling process; or

- Is the source of a valuable constituent recovered in the recycling process; or
- Is recovered or regenerated by the recycling process; or
- Is used as an effective substitute for a commercial product.
- the recycling process must produce a valuable product or intermediate (requirement).
 - Sold to a third party, or
 - Used by the recycler or the generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process.
- the hazardous secondary materials must be managed as a valuable commodity (requirement).
 - Where there is an analogous raw material, handle the secondary material in an equally protective manner.
 - If there is no raw analogue for comparison, EPA requires that the secondary material be contained consistent with the Generator-Controlled Exclusion requirement.
- the product of the process must be comparable to a legitimate product or intermediate (consideration).
 - designed to determine when toxics that are “along for the ride” are discarded in a final product and the hazardous secondary material is not being legitimately recycled.

Solid Waste Variance

- A solid waste variance exempts a material from classification as a solid waste when recycled, which places the material outside of the DSW and EPA’s regulation authority.
- Qualification requirements needed for a variance:
 - Legitimate recycling of materials;
 - Financial assurance;
 - Facilities free from formal enforcement in previous three years – not a non-complier;
 - Equipment and trained personnel to meet emergency preparedness and response requirements;
 - Meet residual management requirements if generated during process; and
 - Address potential risk to proximate populations.
- Three types of variances are available: 1) speculative accumulation, 2) reclaimed and reused in original production process, and 3) partially reclaimed and requiring further reclamation.
 - **Speculative Accumulation Variance** - The Administrator may grant requests for a variance from classifying as a solid waste those materials that are accumulated speculatively without sufficient amounts being recycled if the applicant

demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. If a variance is granted, it is valid only for the following year, but can be renewed, on an annual basis, by filing a new application. The determination is based on the following criteria:

- The manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur;
 - The reason that the applicant has accumulated the material for one or more years without recycling 75 percent of the volume accumulated at the beginning of the year;
 - The quantity of material already accumulated, and the quantity expected to be generated and accumulated before the material is recycled;
 - The extent to which the material is handled to minimize loss; and
 - Other relevant factors.
- **Reclaimed and Reused in Original Production Process Variance** - The Administrator may grant requests for a variance from classifying as a solid waste those materials that are reclaimed and then reused as feedstock within the original production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination is based on the following criteria:
- How economically viable the production process would be if it were to use virgin materials, rather than reclaimed materials;
 - The extent to which the material is handled before reclamation to minimize loss;
 - The time periods between generating the material and its reclamation, and between reclamation and return to the original primary production process;
 - The location of the reclamation operation in relation to the production process;
 - Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;
 - Whether the person who generates the material also reclaims it; and
 - Other relevant factors.
- **Partially Reclaimed and Requiring Further Reclamation Variance** - The Administrator may grant requests for a variance from classifying as a solid waste those hazardous secondary materials that have been partially reclaimed, but must be reclaimed further before recovery is completed, if the partial reclamation has produced a commodity-like material. This determination is based on the following criteria:
- Whether the hazardous secondary material is legitimately recycled, and

- Whether all of the following decision criteria are satisfied:
 - Whether the degree of partial reclamation the material has undergone is substantial as demonstrated by using a partial reclamation process other than the process that generated the hazardous waste;
 - Whether the partially-reclaimed material has sufficient economic value that it will be purchased for further reclamation;
 - Whether the partially-reclaimed material is a viable substitute for a product or intermediate produced from virgin or raw materials which is used in subsequent production steps;
 - Whether there is a market for the partially-reclaimed material as demonstrated by known customer(s) who are further reclaiming the material;
 - Records of sales and/or contracts and evidence of subsequent use, such as bills of lading; and
 - Whether the partially-reclaimed material is handled to minimize loss.

Subparts AA/BB/CC

- The RCRA organic air emission standards establish performance, design, operation, monitoring, and maintenance requirements for certain hazardous waste management units
- Subpart AA establishes controls associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or stream stripping operations
- Subpart BB establishes controls for equipment leaks. Types of equipment regulated by Subpart BB include pumps, compressors, and valves
- Subpart CC establishes controls associated with the treatment, storage, and deposit of hazardous waste in tanks, impoundments, and other containers
- Ohio is one of a few states that has not yet adopted the rules for Subparts AA, BB, and CC, meaning the federal government would still need to issue the permits
- When the Final Authorization takes effect, Ohio will issue permits for all the provisions for which it is authorized and will administer the permits it issues
- Q1 2023 Ohio will adopt then seek EPA authorization
- Ohio would then be authorized to issue full RCRA permits and become the inspection authority
- This has significant logistical impacts on any industry intent on handling hazardous waste

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