

Missouri's Resource Recovery Program vis-à-vis EPA's 2015 Definition of Solid Waste Final Rule

Rich Nussbaum
Hazardous Waste Program

REGFORM Hazardous Waste Seminar
Oct. 18, 2016



Resource Recovery (RR) Statutory Basis 260.395 RSMo

- **260.395 13.(3) A hazardous waste facility permit is not required for a resource recovery facility which the department certifies uses hazardous waste as a supplement to, or substitute for, nonwaste material, and that the sole purpose of the facility is manufacture of a product rather than treatment or disposal of hazardous wastes;**
- **260.395 14. Facilities exempted pursuant to subsection 13 of this section must comply with the provisions of subdivisions (3) to (7) of section 260.390 and such other requirements, to be specified by rules and regulations, as are necessary to comply with any federal hazardous waste management act or regulations hereunder.....**

RR Statutory Basis 260.395 RSMo (cont.)

- **260.395 14.any person, before constructing, altering or operating a resource recovery facility in this state shall file an application for a certification. Such application shall include:**
 - **(1) Plans, designs, engineering reports and other relevant information as specified by rule that demonstrate that the facility is designed and will operate in a manner protective of human health and the environment; and**
 - **(2) An application fee of not more than five hundred dollars for a facility that recovers waste generated at the same facility or an application fee of not more than one thousand dollars for a facility that recovers waste generated at off-site sources.....**

RR Rules 10 CSR 25-9

- **“Original” Proposed Rules in MO Register Feb. 1, 1982**
- **Orders of Rulemaking published July 1, 1982**
- **Four commenters requested “delay” of promulgation until EPA develops a new rule on the subject. Commission responded:**
 - **“There is no guarantee that any EPA proposal will be released in the near future and even if it were, the new rule would be challenged. The commission feels that by promulgating this rule it will encourage those facilities contemplating resource recovery certification to apply in the near future.”**
- **“Original” rules effective Aug. 1, 1982, and repeatedly amended until Dec. 31, 1990, when rescinded and replaced by “New” (Current) RR Rules, which were also later amended**

RR Program Goals

- **Encourage responsible recycling of hazardous waste (HW) utilizing the best available technologies and practices**
- **Track facilities and provide basic standards**
- **Provide mechanism for closure of RR facilities that accept waste generated off-site**
- **Track amount and nature of HWs sent for recycling or recycled on-site at facilities**
- **Provide for reasonable oversight of HW recycling**

RR Program Applicability

- **Applicable to facilities that reclaim or reuse hazardous waste or transform HW into new products which are not hazardous waste**
- **Not applicable to precious metals recovery**
- **Not applicable to processes requiring a state HW (RCRA-equivalent) permit**
- **Not applicable to HW recycling in “Totally Enclosed Treatment Facilities”**
- **Not applicable to used oil managed per 40 CFR 279**

RR Facility Types – Exempt

- **Exempt – uses, reuses, legitimately reclaims or recycles less than one thousand kilograms (1000 kg) of HW from on-site in a calendar month**
- **How many do we have?**
 - **>164 currently**
- **Requirements**
 - **Notification to the department identifying:**
 - **Owner and operator**
 - **Name and location of the facility**
 - **Identification of the waste(s) recovered**
 - **Method(s) of recovery**
 - **Approximate monthly quantity of waste recovered**



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

RR Facility Types – Exempt



RR Facility Types – U

- **U - Facilities that use, reuse, legitimately reclaim or recycle more than one thousand kilograms (1000 kg) of HW on-site in a calendar month**
- **Cost**
 - **\$500 non-refundable application fee plus engineering review costs for two year certification**
- **How many do we have?**
 - **20 currently, but four are closing, >355 inactive/closed**

RR Facility Types – U (cont.)



RR Facility Types – R1

- **R1 - Owners and operators of mobile recycling processes that recycle HW (any quantity) for reuse at the site of generation and does not involve the recycling of HW to be reused off-site of generation**
- **Cost**
 - **\$1000 non-refundable application fee plus engineering review costs for two year certification**
- **How many do we have?**
 - **Currently one**



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

RR Facility Types – R1 (cont.)



RR Facility Types – R2

- **R2 - This classification applies to a facility which accepts HW (any quantity) from off-site**
- **Cost**
 - **\$1000 non-refundable application fee plus engineering review costs for two year certification**
- **How many do we have?**
 - **Four currently, but one is closing**



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

RR Facility Types – R2 (cont.)



RR Facility Requirements – All

- **Apply for certification prior to commencing operations**
- **Application form**
 - **Flow sheet showing generation through recovery**
 - **Quality control plan**
 - **Drawing of facility (to scale)**
- **Obtain approval prior to modification of operation**
- **Notify prior to closure and obtain approval of closure plans**
- **Re-apply for a new certification every two years**
- **Demonstrate facility closed according to the approved plans**
- **Comply with manifest system of 40 CFR 264.71 and 40 CFR 264.72 when shipping or receiving waste**
- **Maintain operating record as in 40 CFR 264.73(b)(1)&(2)**

RR Facility Requirements – All (cont.)

- **Operate according to site-specific conditions set in certification approval and as stated in application**
 - **Operating requirements**
 - **Record-keeping requirements**
 - **Monitoring requirements**

R2 RR Facilities Additional Requirements

- **Provide a sampling and analysis plan for incoming shipments with application**
- **Maintain a daily log of manifest**
- **Provide a closure plan with application, closure cost estimate and closure financial assurance**

2015 Definition of Solid Waste (DSW) Final Rule

- **Proposed rule issued June 30, 2011**
- **Builds on original 2008 DSW Rule**
- **Final rule issued Jan. 13, 2015 – 80 FR 1694-1814, effective July 13, 2015**
- **Potentially affected entities – 5,000 industrial facilities in 634 industries (NAICS code level) that generate or recycle hazardous secondary materials (HSMs)**
- **Pending lawsuit implications?**

2015 DSW Final Rule Revisions

- **Revises provisions related to definition of solid waste as it applies to regulation of HW under Subtitle C of RCRA**
- **Affects certain types of HSMs that are currently conditionally excluded from the DSW when reclaimed**
- **HSM means a secondary material (e.g., spent material, by-product or sludge) that, when discarded, would be identified as hazardous waste under 40 CFR Part 261**

Required Elements

- **Definition of legitimacy (four standards) including definition of “contained”**
- **Sham recycling prohibition**
- **Notification requirements and speculative accumulation record keeping**
- **Standards and criteria for variances from classification as a solid waste**

Legitimacy Standards – 40 CFR 260.43

- **Previously driven by policy not regulation**
- **Four standards for HSM being recycled**
 - **Must provide a useful contribution to the recycling process or to a product or intermediate**
 - **Recycling must produce a valuable product or intermediate**
 - **Must be managed as a valuable commodity**
 - **The product of recycling must be comparable to a legitimate product or intermediate**

Codifies “contained” standard for units

40 CFR 260.10

- In **good condition**, with no leaks or other continuing or intermittent unpermitted releases to the environment
- Designed, as appropriate, for the HSMs to prevent releases to the environment
- **Properly labeled** or otherwise has a system (such as a log) to immediately identify the HSMs in the unit
- Holds HSMs that are **compatible with other HSMs placed in the unit** and is **compatible with the materials used to construct the unit** and addresses any potential risks of fires or explosions
- HSMs in units that meet the HW tank and container standards are **presumptively contained**

Sham Recycling Prohibition – 40 CFR 261.2(g)

- **All four legitimacy standards must be met**
- **Example**
 - **Legitimate: lead-contaminated foundry sands reused in foundry molds**
 - **Sham: Lead-contaminated foundry sands reused as playground sand**
- **Makes legitimate recycling regulations more transparent and enforceable**
- **Reduces risk of environmental damage from sham recycling operations**
- **Those complying with current recycling exclusions (e.g., scrap metal) not required to take any action**

Notification Requirements – 40 CFR 260.42

Notification before operating and by March 1 of each even-numbered year thereafter indicating:

- **Regulation under which HSMs are managed**
- **When began or expected to begin HSM management**
- **List of HSMs to be managed with EPA HW numbers**
- **HSMs or any portion thereof to be managed in land-based unit(s)**
- **Annual quantity of each HSM to be managed**
- **Certification (EPA Form 8700-12) signed by authorized facility representative**

Notification within 30 days of ceasing HSM management using EPA Form 8700-12 if no HSM management for at least one year

Speculative Accumulation – 40 CFR 261.1(c)(8) & 261.2(c)(4)

A material is “accumulated speculatively” if it is accumulated before being recycled

A material is not accumulated speculatively if it can be shown that:

- **The material is potentially recyclable**
- **The material has a feasible means of being recycled**
- **During a calendar year 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.**
- **Meets the other requirements of 40 CFR 261.1(c)(8)**

Materials subject to speculative accumulation provisions are listed in Table 1 of 40 CFR 261.2(c)(4)

Revision of DSW Variances and Non-Waste Determinations – 40 CFR 260.30 - 260.34

- Requires facilities to **send a notice** to the Administrator/State Director and potentially reapply for a variance **in the event of a change** in circumstances that affects how a HSM meets the criteria upon which a solid waste variance has been based
- Establishes **a fixed term, not to exceed ten years, for variance and non-waste determinations,** at the end of which facilities must re-apply for a variance or non-waste determination
- Requires facilities to **re-notify every two years** with updated information

Revision of DSW Variances and Non-Waste Determinations – 40 CFR 260.30 - 260.34

- Revises the criteria for the **partial reclamation** variance to clarify when the variance applies and to require, among other things, that **all the criteria** for this variance **must be met**
- For the non-waste determinations in 40 CFR 260.34, requires that petitioners **demonstrate why the existing solid waste exclusions would not apply** to their HSMs

“Variance” Considerations in Rule Adoption

- “Variance” and related criteria for issuance as defined in 260.405 RSMo differ from the federal concept of “variance” contained in the 2015 DSW Final Rule
- 10 CSR 25-3.260(1)(A)25 provides that: The term variance in 10 CSR 25 means an action of the commission pursuant to section 260.405, RSMo. **In any case where a federal rule that is incorporated by reference in 10 CSR 25 uses the term variance,** but the case-by-case decision or action of the department or commission does not meet the description of a variance pursuant to section 260.405, RSMo, **the decision or action shall be considered an exception or exemption based on the conditions set forth in the federal regulation** incorporated by reference or the omission from regulation
- 10 CSR 25-3.260(2)(C) currently reads: **“40 CFR part 260 subpart C, Rulemaking Petitions, is not incorporated in this rule.”** This includes 40 CFR 260.30-260.34 so these sections would need to be incorporated via future rulemaking if the state is to process variance requests pursuant to the 2015 DSW rule

Optional Elements

- **Generator-controlled Exclusion - 40 CFR 261.4(a)(23)**
- **Verified Recycler Exclusion - 40 CFR 261.4(a)(24)**
- **Remanufacturing Exclusion - 40 CFR 261.4(a)(27)**

Generator-controlled exclusion

40 CFR 261.4(a)(23)

Generator-controlled exclusion applies to HSMs reclaimed by the generator:

- **On-site**
- **Within the same company**
- **Within certain tolling agreements**

Generator-controlled Exclusion Requirements

- **Recordkeeping** for same-company and toll manufacturing reclamation
- **Notification** a condition of the exclusion
- Required to **document legitimate recycling**
- Adds **emergency preparedness and response conditions**
- **Amends the speculative accumulation provision** to add a **recordkeeping requirement**

Generator-controlled Exclusion Versus State RR

- **Exempt, U and R1 State RR facilities would fall in this category (\pm 95% of universe)**
- **Many additional regulatory requirements when compared with current RR regulations/process, especially for exempt RR facilities**
- **Could retain option of RR Exemption or U/R1 certification and continue to manage as recovery of HW or choose to operating under the exclusion**
- **In either case, state RR regulations would need to be updated to reference four DSW required elements**

Generator-controlled Exclusion Versus State RR

If exclusion option is chosen:

- **Would need to comply with those requirements in lieu of RR recovery**
- **Additional Hazardous Waste Program (HWP) funding impacts would be realized due to loss of HW generator fees and RR engineering review cost recovery/RR certification fees**
- **HWP work load would shift/increase from HWP's Permits Section (RR certifications) to Compliance and Enforcement Section (inspections)**

Verified Recycler Exclusion 40 CFR 261.4(a)(24)

Ensures that HSMs transferred to a third party for recycling will go to “verified” recyclers, that either have a RCRA permit or have obtained a variance from the state or EPA

- Decreases potential for adverse impacts to human health and the environment
- Allows opportunities for public participation
- Upfront verification requirement allows states/EPA to verify that facility has rigorous safety measures in place to manage HSMs
- Variance process allows states/EPA to review and approve facility financial assurance plans prior to operation to ensure financial stability and availability of funds
- HSM exports not allowed under the verified recycler exclusion

Verified Recycler Exclusion Conditions

- Subject to the **speculative accumulation provision** including new recordkeeping
- Must **notify** using EPA Form 8700-12
- HSMs must be **contained**
- Must follow certain **emergency preparedness and response** requirements
- HSM must be sent to a **verified reclamation facility** (RCRA-equivalent permitted or obtained a DSW variance) in the U.S.
- Must **maintain records** documenting off-site shipments and confirmation of receipts for three years

Criteria to Become a Verified Recycler in the Absence of a RCRA-Equivalent Permit

Reclaimer must obtain a variance and become verified by:

- Demonstrating their recycling is legitimate
- Having financial assurance in place to ensure proper management of HSM
- Having no formal enforcement actions for RCRA violations in the previous three years and not be classified as a significant non-complier with RCRA Subtitle C, or must provide other credible evidence that the facility will manage the HSMs properly
- Having proper equipment, trained personnel and meet emergency preparedness and response requirements to safely reclaim HSMs
- Managing residuals from reclamation properly
- Addressing risks to nearby communities related to potential releases of HSMs in consideration of existing environmental stressors

Verified Recycler Exclusion Versus State Resource Recovery

- All current R2 State RR facilities fall in this category (< 5 percent of universe), some RCRA (HW treatment, storage and disposal facilities) permitted
- Many additional regulatory requirements overall when compared with current RR regulations/process
- If DSW rule adopted, R2 RR category would be kept and R2 certifications could likely be used in lieu of RCRA-equivalent HW permits or issuance of variances
- Primary work load would remain with HWP's Permits Section (HW permitting and R2 certifications)

Remanufacturing Exclusion - 40 CFR 261.4(a)(27)

- **This exclusion encourages the recycling of 18 higher-value hazardous spent solvents used for reacting, extracting, blending or purifying chemicals in the pharmaceutical, organic chemical, plastics and resins, and the paint and coatings sectors**
 - **Based on preliminary research, Missouri has 34 potentially affected facilities**
- **The production and the disposal of solvents covered by this exclusion currently requires large amounts of energy and the solvents are used in very high volumes**
- **Because of their origin, these solvents are only lightly contaminated and need minimal processing to be returned to a commercial-grade product**
- **Greenhouse gas reductions and energy and resource savings result from maximizing the number of uses of a high-purity grade chemical product as an aid to chemical manufacturing and processing**

Conditions for the Remanufacturing Exclusion

- **Both generator and remanufacturers must:**
 - **Notify using EPA form 8700-12**
 - **Jointly develop and maintain a remanufacturing plan**
 - **Maintain record of shipments/confirmation of receipts for three years**
 - **Manage spent solvents in RCRA-equivalent tanks and containers including meeting applicable air emission standards**
 - **Manage spent solvents subject to the prohibition on speculative accumulation**

2015 Rule Adoption in Missouri

- **RCRA-authorized states must adopt the more stringent provisions of the 2015 DSW rule by July 1, 2016 (or July 1, 2017, if a state statutory change is necessary)**
- **EPA commonly extends the adoption deadlines for states on a case-by-case basis**
- **Based on Missouri's current rulemaking package timeline, adoption is projected to occur in late 2017**

State Adoption Status – 2015 Rule

- **10 States already adopted**
 - Ala., Fla., Ill., Ga., N.C., N.J., Pa., Va., Texas and Utah
- **Nine States currently planning to adopt**
 - Ark., Ind., La., Mich., Mont., Neb., Okla., S.C. and S.D.
- **One state currently operating under 2008 rule**
 - Idaho
- **Effective in two non-authorized states**
 - Alaska and Iowa

So, What Is Next for Missouri?

- **Need to stay on the path for adoption, incorporation and authorization for required (more stringent) DSW rule elements.**
 - This will have to include changes to 10 CSR 25-9 RR rules and all other chapters directly affected by incorporation of federal rules
- **Need to make final decisions regarding adoption, incorporation and authorization for optional (less stringent) DSW rule elements.**
 - This will have to consider whether both state (RR) and federal (DSW) rules will both remain as management options or if a single or hybrid approach will be pursued



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Questions?

Richard Nussbaum, P.E., R.G.
Hazardous Waste Program
rich.nussbaum@dnr.mo.gov
573-751-3553