



Recent Changes to the Federal Haz Waste Regs

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What are “generator improvements” from EPA’s viewpoint?

- Reorganizing the hazardous waste generator regulations (HWGR) to make them more user-friendly
- Improve HWGR understanding by users
- Address gaps in HWGR
- Increase flexibility of HWGR
- Technical corrections to HWGR



Timeline of HWGR Improvements

- September 24, 2015: Proposed rule
- November 5, 2015: Comment period extended
- December 24, 2015: Close of comment period
- November 28, 2016: Final rule published
- May 30, 2017: Final rule effective*

*Effective only in states without state program, i.e., Iowa and Alaska. Other states must adopt for stringent requirements. Optionally adopt less stringent requirements.



Summary of Changes

- Clarification/partial renaming of generator thresholds
- Allowing consolidation of VSQG* Waste at LQG
- Allowing episodic generation w/o change in generator status
- Increased Labeling at SAA and CAA
- Changes at Satellite Accumulation Areas
 - Addresses continuous flow or pressure building wastes
 - Clarifies “3 days” as calendar not working
 - Adds weight limit to existing volume maximum
 - Included in contingency plan for LQGs

* Very Small Quantity Generator – term replaces Conditionally Exempt Small Quantity Generator (CESQG)



Summary of Changes

- Expand regulations re: hazardous waste determinations
 - “Clarifications” decrease (not increase) flexibility
- Modifies Emergency Planning and Preparedness plan
 - Adds executive summary to contingency plans
 - Acknowledges changes in ER since rules written such as LEPCs and cell phones
 - Requires maps of HW generation/storage locations
 - SAA now required as part of contingency plan
- SQG Re-reporting to keep lists of generators current
- Allow waiver from AHJ for 50’ set back for reactive/ignitable



What's good for Higher Ed?

- Episodic generation
- Consolidation of VSQG Waste at LQGs
- Acknowledgement of continuous flow and pressure building waste streams at SAA
- 50-foot waiver for reactive/ignitable

Note: ALL of these are LESS stringent than current rules
and are NOT required to be adopted by authorized states



What's bad for Higher Ed?

- Labeling changes
- Increases in biennial reporting requirements
- A “quick reference guide” (that will be anything but for Higher Ed) in the Contingency Plan
- Potentially being treated as a landfill to achieve “closure”

Note: ALL of these are MORE stringent than current rules
and are MUST be adopted by authorized states



What's bad for Higher Ed at SAA?

- Labeling changes at SAA
- Documentation of Hazardous Waste Determinations at the point of generation (likely the SAA) before any dilution, mixing or other alteration of the waste occurs
- Including SAA in contingency plan for LQGs
- Specifically requiring documented training of SAA workers at LQG
 - Previously only HW workers at LQG must be trained but all employees at SQG. Granted this made little sense.

Note: ALL of these are MORE stringent than current rules and are MUST be adopted by authorized states



From the Preamble...

The Agency is also aware that many generators, such as academic and industrial laboratories, generate new or different waste streams frequently, and that making hazardous waste determinations for multiple waste streams is more difficult than when a generator has a small number of waste streams that seldom vary. However, EPA stresses that in the laboratory setting, it **may be even more important to make accurate** hazardous waste determinations at the point of generation, so that **emergency scenarios** involving mixing of incompatible wastes or other dangerous situations **can be avoided** and **lab worker safety** maintained.



One take on this “safety” argument

- The Agency does not understand that a partially accurate HWD will likely prevent the mixing of incompatible wastes.
- The Agency does not understand the complicated HWD is not about RISK. In fact, in general RCRA is not based on RISK, otherwise volumes and concentrations WOULD BE INCLUDED IN THE PROCESS and therefore the RISK to workers is not addressed by the HWD.
- As an aside, except for FIFRA, worker safety is not even under the authority of EPA. In fact the 1991 MOU between OSHA and EPA clearly delineates authority.



Slides (and some commentary) from...

Training to Colleges and Universities on the Hazardous Waste Generator Improvements Rule

US EPA

Office of Resource Conservation and Recovery

January 31, 2017




From talking to those in attendance

- Higher education attendees demonstrated they were more familiar with the intricacies of RCRA than EPA
 - e.g., pointed out blatant error by EPA on how F003 is applied
- EPA showed a lack of understanding of the higher ed sector
 - Spent an enormous amount of time on a coding example of a solvent mixture of two ingredients. (Having only two solvents in a mixture is the exception, not the norm, in higher ed.)
 - Spent considerable time on drip pads, containment buildings and tanks (between rare and nonexistent in higher education) – mentioned in a little over 10% of their 169 slides
 - The VSQG consolidation example was for the Army (in a day long training specifically targeting a higher education audience)
 - Frequently mentioned “feedstocks” and “production”



Changes to the HWD regulations

Comparison of New vs. Old §262.11

New	Old
A person who generates a solid waste, as defined in 40 CFR 261.2 , must make an accurate determination as to whether that waste is a hazardous waste	A person who generates a solid waste, as defined in 40 CFR 261.2 , must determine if that waste is a hazardous waste using the following method:
(a) The hazardous waste determination for each solid waste must be made at the point of waste generation, before any dilution, mixing, or other alteration of the waste occurs, and at any time in the course of its management...that may change the properties of the waste such that the RCRA classification of the waste may change.	
(b) A person must determine whether the solid waste is excluded from regulation under 40 CFR 261.4.	(a) He should first determine if the waste is excluded from regulation under 40 CFR 261.4.
(c) If the waste is not excluded under 40 CFR 261.4, the person must then use knowledge of the waste to determine if the waste meets any of the listing descriptions under subpart D of 40 CFR part 261.	(b) He must then determine if the waste is listed as a hazardous waste in subpart D of 40 CFR part 261.



Changes to the HWD regulations

Comparison of New vs. Old §262.11

NEW	OLD
<p>(c) Continued</p> <p>Acceptable knowledge that may be used in making an accurate determination as to whether the waste is listed may include waste origin, composition, the process producing the waste, feedstock, and other reliable and relevant information. If the waste is listed, the person may file a delisting petition under 40 CFR 260.20 and 260.22 to demonstrate to the Administrator that the waste from this particular site or operation is not a hazardous waste.</p>	



Changes to the HWD regulations

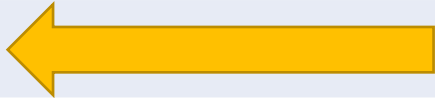
Comparison of New vs. Old §262.11 (cont.)

New	Old
<p>(d) The person then must also determine whether the waste exhibits one or more hazardous characteristics as identified in subpart C of 40 CFR part 261 by following the procedures in paragraph (d)(1) or (2) of this section, or a combination of both.</p> <p>(1) The person must apply knowledge of the hazard characteristic of the waste in light of the materials or the processes used to generate the waste. Acceptable knowledge may include.....; testing that illustrates the properties of the waste; or other reliable and relevant information about the properties of the waste or its constituents. A test other than a test method set forth in subpart C of 40 CFR part 261, or an equivalent test method approved by the Administrator under 40 CFR 260.21, may be used as part of a person's knowledge to determine whether a solid waste exhibits a characteristic of hazardous waste. However, such tests do not, by themselves, provide definitive results. Persons testing their waste must obtain a representative sample of the waste for the testing, as defined at 40 CFR 260.10.</p> <p>(2) When available knowledge is inadequate to make an accurate determination, the person must test the waste according to the applicable methods set forth in subpart C of 40 CFR part 261 or according to an equivalent method approved by the Administrator under 40 CFR 260.21</p>	<p>(c) For purposes of compliance with 40 CFR part 268, or if the waste is not listed in subpart D of 40 CFR part 261, the generator must then determine whether the waste is identified in subpart C of 40 CFR part 261 by either:</p> <p>(1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or</p> <p>(2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.</p>



Changes to the HWD regulations

Comparison of New vs. Old §262.11 (cont.)

NEW	OLD
(e) If the waste is determined to be hazardous, the generator must refer to parts 261, 264, 265, 266, 267, 268, and 273 of this chapter for other possible exclusions or restrictions pertaining to management of the specific waste.	(d) If the waste is determined to be hazardous, the generator must refer to parts 261, 264, 265, 266, 267, 268, and 273 of this chapter for possible exclusions or restrictions pertaining to management of the specific waste.
(f) Recordkeeping for small and large quantity generators.	
(g) Identifying hazardous waste numbers for small and large quantity generators.	



Why did EPA expand HWD regulations?

- 10-30% noncompliance with HW determination
 - Studies referenced in the FR – there appears little to no data about the generator status of these 10-30%
 - EPA notes LQGs generate over 99% of total HW yet make up only 3-5% of total generators
- If most noncompliance is VSQG or SQG (likely since EPA notes ignorance of RCRA is a root cause) then actual % of non-compliant HW is way less than 1%
 - Prime example of how statistics may not tell the whole story
 - Sector most affected by change – Higher Education

Generator Category	Number of Facilities	Total Hazardous Waste Generated (tons)	Percent of Total Hazardous Waste Generated
VSQGs	353,400–591,800	46,000–148,000	<1%
SQGs	49,900–64,300	66,000–141,000	<1%
LQGs	20,800	35.2 million	99%
Total	424,100–676,900	35.3–35.4 million	100%



Scenario 1

- A lab is trying to determine the optimal ratio of three chemicals (hazardous only due to characteristic) that will achieve the desired result
- 35% chemical 1; 35% chemical 2; 30% chemical 3
- 34% chemical 1; 36% chemical 2; 30% chemical 3
- 35% chemical 1; 36% chemical 2; 29% chemical 3
- 34% chemical 1; 35% chemical 2; 31% chemical 3
- 34% chemical 1; 34% chemical 2; 32% chemical 3
- And so on...



Scenario 1 Implications

- Under current rules – campus would view this as a waste stream – with variance that doesn't change the hazardous waste determination – have it collected in a single container and ultimately perform an HWD on the container
- New rule would require a documented HWD on every iteration the lab intends to discard in an experiment
- To be clear, the point is not that these wastes can't be placed in the same container – they most likely can – but now labs will be stopping to make an HWD on every iteration of an experiment and maintaining copies of those determinations for a minimum of three years
- How does this address EPA's concern about improper HWD?

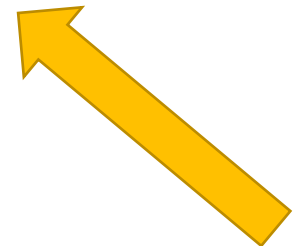


SAAAs now included in Emergency Planning

Emergency Preparedness and Planning

Scope of the Emergency Preparedness and Planning Regulations

- Previous emergency preparedness regulations in part 262.34 stated that generators must comply “with the requirements for owners and operators in subparts C and D in 40 CFR part 265” for LQGs and “the requirements of subpart C of part 265” for SQGs
- Subparts C and D of part 265 do not include applicability statements relevant to generators of hazardous waste, making it unclear where these requirements apply at a generator’s site
- Revised regulations clearly specify that the emergency planning and preparedness requirements apply where hazardous waste is being generated or accumulated at the generator’s site—including points of generation, satellite accumulation areas, and central accumulation areas (90-day areas)
- One-Plan is still applicable for generators under multiple statutes





Scenario 2

- A typical large university generates enough hazardous waste monthly to qualify as a large quantity generator
- A typical large university has hundreds, if not thousands, of individual locations where hazardous waste may be generated
- The locations are constantly evolving as labs are opened and closed or relocated
- Current contingency plans only addresses the CAAs



Scenario 2 Implications

- Under “improved” rules all hazardous waste in layman’s terms and hazards and total maximum quantity for the entire facility (CAAs + SAAs) plus a map showing all SAAs and CAAs must be included *in the Quick Reference Guide*
 - Adding thousands of SAAs will defeat the “quick” part
- Additionally “adequate space” must be maintained at the SAA (“...to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of a facility operation in an emergency...”)
 - Do your labs have this kind of space?



Question: What is EPA's response to Higher Education Concerns?

- Adopt Subpart K. In spite of...
- Many authorized states have not adopted Subpart K
 - Only about 50% of the institutions of higher education have access to Subpart K
- Subpart K requires a confusing dual management system at a single generator ID number
 - Arguably due to an error EPA made in interpreting their own data
- Note: More comments to generator improvements rule from Higher Ed sector than any other single sector
 - EPA continues to believe that in spite of extremely low Subpart K adoption and the errors made in the process (next slide) it is the answer to all things academic – it isn't as long as it requires dual management methods



Subpart K Dual Management Justification

- Proposed rule (71 FR 29720) “laboratory waste generation only amounts to approximately 9% (or 2,939 tons) of the total hazardous waste generated by colleges and universities”
 - EPA initially failed to realize most higher ed solvent waste streams are commingled laboratory solvents rather than facility operations
- Final rule (73 FR 72918) “we now estimate that for college and university LQGs, 73% of their total hazardous waste is from laboratories. The percent of hazardous waste coming from laboratories at teaching hospitals and non-profit research institutes is even higher—81% and 92%, respectively.”
 - When asked to reconsider dual management – they responded they were too far along – seems they wanted to get it out, not get it right



My request to regulators in the room...

If Subpart K is the answer to all things Higher Ed including these “improvements” - then please use your influence to correct this egregious error and allow a single waste management method for those adopting Subpart K



Questions?

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