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Attn: Docket No. F-1999-NEUP-FFFFF
Comments on EPA's Proposed Project XL Site-Specific Rulemaking for University Laboratories

RCRA Information Center Docket Clerk (5305W)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

August 24, 1999

Dear Environmental Protection Agency,

I am submitting comments on the proposed rule for Project XL Site-Specific Rulemaking for University Laboratories, which was published in the July 27, 1999, Federal Register (64 FR 40695-40715).

There is no doubt that complying with some RCRA regulations can be a challenging task – especially for laboratory organizations. In that vein, it is commendable that the University of Massachusetts – Boston, Boston College, and the University of Vermont are attempting to change RCRA regulations to make them both more workable for laboratories and more protective of the environment. However, the consequences of the Lab XL must be carefully considered to ensure that they are, in fact, more workable for the institutions, and, most importantly, more protective of the environment. Careful review of this proposal is especially important given "EPA's hope that this system could be translated into a national program, to address the confusion regarding the RCRA rules..." (64 FR 40707).

Problems The Universities Have Identified

Undoubtedly, universities encounter real problems in implementing RCRA. One problem, long recognized as a substantial issue for universities, is the need for many university campuses to have more than one generator ID number owing to EPA's definition of "on-site." Similarly, laboratory organizations have long argued that they should be allowed to conduct bench-top treatment of hazardous wastes. The XL proposal only indirectly deals with these longstanding laboratory issues. Instead, the XL proposal identifies the following four "problems" which the participants believe can be solved through this rulemaking.

Single System Addressing Hazardous Chemicals (64 FR 40699)

Presently, the universities are concerned that they are "required to implement and to track two parallel, and not always consistent chemical management systems within the laboratory setting." The proposal implies that compliance with RCRA requirements and OSHA's Lab Standard will be covered by the laboratory environmental management system (EMS) outlined in proposed Subpart J. Yet most elements in OSHA's lab standard (29 CFR 1910.1450) are not addressed in Subpart J. Perhaps the universities intend to integrate OSHA lab standard requirements into the EMS on their own. Even if this is the case, the universities will have more than one chemical management system in place. Consider that hazardous wastes generated in art studios, photo

labs and maintenance areas would still be covered under current RCRA requirements while the laboratories would be covered under Subpart J. This would be a confusing situation.

Training (64 FR 40699)
Training of laboratory workers is cited as a key problem for the universities and the proposed rule is an attempt to streamline training requirements (see Section III. B. of the proposal). One can imagine that, for universities, training thousands of students on safe lab practices can be an awesome task. But, in actuality, the need for such training is not driven by regulations. The proposal cites OSHA's laboratory standard and RCRA generator requirements as being the drivers for such training. In fact, OSHA's lab standard only applies to employees (not students) and RCRA training requirements do not apply to individuals who only work with hazardous waste in satellite accumulation areas. Subpart J sets forth very stringent training requirements that would apply to all lab workers, including students. Although it is admirable that the participating universities intend to train all students on proper environmental management practices, it would be very unfortunate to train thousands of students on a system that has no applicability to the laboratories they will enter following graduation. Students at the participating universities will lose the opportunity to learn about RCRA hazardous waste regulations during college and will enter the job market less prepared than students from nonparticipating universities.

Decentralized Setting Leads to Unnecessary Disposal of Chemicals (64 FR 40700)
The Lab XL proposal states that existing regulations preclude reuse of chemicals on-site. How is this true? EPA needs only to look at its own ORD laboratories to see successful reuse programs ("chemical adoption programs"). One such program operates at EPA's large, decentralized laboratory in Research Triangle Park, NC.

It is difficult for Universities to Comply with 3-Day Removal Timeframes (64 FR 40700)
The Lab XL proposal correctly points out that laboratories typically generate "small amounts of multiple wastes on a noncontinuous basis." But the very next sentence says, "it can be difficult for universities to comply with the current requirements that result in 3 day removal timeframes for hazardous waste in excess of 55 gallons at their satellite areas." A satellite accumulation areas (SAA) is "at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste" (262.34(c)(1)). [Typically, SAAs are considered to be in the same room where the waste in generated; however, this interpretation varies.] How are university laboratories accumulating 55 gallons of hazardous waste at the point of generation? Given the trend towards microscale experimentation, this is especially difficult to conceive. Many laboratory operations voluntarily limit SAAs to a maximum of 5 gallons of hazardous waste. Is this a true problem for university laboratories today?

Proposed 262.102 -- Special Definitions
As with all regulations, the meaning of the XL regulatory proposal hinges on the definitions employed in the proposal. If the definitions are not precisely understood, then implementation is guesswork. For the XL proposal, the definitions also must work well with existing RCRA definitions.

"Acutely Hazardous Laboratory Waste" and "Laboratory Waste"
I am concerned by the creation of the new definitions for "Laboratory Waste" and "Acutely Hazardous Laboratory Waste" (AHLW). First, if this proposal is finalized, EPA has regulatory authority over wastes that are not currently within its purview. The universities would have to comply with the minimum performance criteria for lab waste – even if the waste does not meet EPA's definition of hazardous waste. This gives EPA jurisdiction over a whole set of wastes.

Second, the commingling of RCRA-regulated and non-RCRA-regulated lab wastes will create difficulty. Visualize a five-gallon pail into which all waste from a given experiment is placed. The pail will likely hold some lab waste that is not RCRA hazardous and some lab waste that is RCRA hazardous. When this commingled waste arrives at the central accumulation area, the pail contents will have to be classified as hazardous waste (owing to the mixture rule). Ironically, the only way to avoid this scenario is to train laboratory workers about what lab wastes are RCRA hazardous and that these wastes need to be segregated from lab wastes that are not RCRA hazardous. This would place waste determination right back into the hands of the lab workers! If the lab workers do not possess the knowledge necessary to segregate non-RCRA-regulated lab waste from RCRA-regulated lab waste, there *will be* commingling. The result could be an increase in hazardous waste generation.

The commingling problem will also occur with acutely hazardous waste and AHLW. The impact could be more substantial in that generator status could easily be increased to LQG owing to an accumulation of more than 1 kilogram of acutely hazardous waste.

Also, with respect to AHLW, generally, the proposed definition for AHLW is far broader than for that of acutely hazardous waste. For example, benzene is a "particularly hazardous substance" in Chemical Hygiene Plans since it is a carcinogen. Therefore, a waste containing benzene may be designated as an AHLW; but under RCRA, the same waste would likely be designated D018. At the central accumulation area, this waste will be classified as acutely hazardous if it was commingled with P-listed wastes in the laboratory.

Based on the definition for AHLW, it's possible that some P-listed wastes may not be AHLW. Specifically, very dilute solutions of P-listed constituents (e.g., standards at ppt or ppb concentrations) may not "pose significant potential hazards to human health or the environment" and, therefore, may not be AHLW. This could result in P-listed waste being commingled with "laboratory waste." At the central accumulation area, personnel would need to classify the entire lab waste container as P-listed (again, owing to the mixture rule).

A primary objective of Lab XL is to take waste determination out of the hands of lab workers. In fact, under the proposal, lab workers would still be performing a type of waste determination – they would be determining if a waste meets the definition of laboratory waste, AHLW, or neither. Since the definition of AHLW refers to the P-list, lab workers would still need to determine if wastes are P-listed to make the AHLW determination. The proposal does not really remove waste determination from the lab workers – it simply places a different waste determination upon them. It is another layer in the waste determination scheme – and a layer that will likely result in consternation at the central accumulation area.

Hazardous Waste Accumulation Area
The proposal uses the term "on-site" in this definition. Are the proposed central accumulation areas really "on-site" as defined in 260.10? At each university, is the central accumulation area on the same contiguous property as the laboratories, or if roads divide the property (i.e., campus) are the entrances at cross roads intersection?

Laboratory
A "laboratory" is defined as an area within a facility. The definition allows for accumulation of laboratory wastes out of the actual room in which they were generated (i.e., away from the "point of generation"). Given this definition, the lab waste for an entire lab building could be accumulated in one room within the building – and that room would not be subject to provisions in 40 CFR 262.34.

The definition does not delineate what constitutes a laboratory. For example, is a laboratory for chemical research and analysis only, or is a photo lab also a "laboratory"?

Proposed 40 CFR 262.10(j) -- Consequences
The primary provisions in the Lab XL proposal are to (#1) exempt laboratory waste from 40 CFR 262.11 until it arrives at the accumulation area, and (#2) exempt hazardous waste in the laboratory from SAA requirements in 40 CFR 262.34(c). Obviously, if laboratory waste accumulating in the laboratory is not subject to the waste determination requirement (262.11), then it is not subject to SAA requirements or *any* RCRA hazardous waster regulations – since it has not been determined to be a hazardous waste. In other words, #2 follows as a direct consequence of #1 (which brings into question the need for #2). In fact, from #1 follow many consequences, some of which may be unanticipated. Below are a few consequences that are not discussed in the preamble to the XL proposal, but are worthy of consideration:

- Treatment of laboratory waste would no longer be subject to RCRA requirements (e.g., *no* permitting would be necessary). Given the proposed definition of "laboratory" (262.102), laboratory waste could be accumulated in an area away from the laboratory room in which it was generated and then treated. Also, given the proposed accumulation limits, the university could treat up to 110 gallons in a laboratory without being subject to any RCRA permitting requirements. With respect to treatment without a permit, the Lab XL proposal is far less restrictive than current RCRA regulations.

- The academic institutions may show a decrease in hazardous waste generation since waste accumulating in the laboratory is no longer subject to RCRA counting requirements in 40 CFR 261.5. For example, under proposed 262.10(j), if a given laboratory accumulates and then neutralizes 55 gallons of a acidic waste, the waste would never be counted as hazardous waste generated at the institution. The same would hold true for waste treated through any technique (e.g., distillation, precipitation, oxidation or reduction). Under current RCRA rules, laboratory personnel would determine the laboratory waste to be hazardous waste prior to treatment and it would be, in most cases, subject to counting requirements. This change in what waste is counted could result in a reduction in the amount of hazardous waste generated (not a *real* reduction, but a reduction on paper), and a concomitant decrease in generator status.

- Transportation to the central accumulation areas may no longer be subject to DOT transportation requirements since the laboratory waste will not be defined as hazardous waste. In its definition of "hazardous material," DOT includes hazardous wastes subject to manifest requirements in 40 CFR 262 (see 49 CFR 171.8). Many laboratory wastes are subject to DOT requirements only because they are EPA hazardous wastes. Currently very few hazardous wastes in transport are exempt from manifesting requirements and, therefore, not subject to DOT's hazardous materials transportation regulations (see 40 CFR 262.20(f)). The proposed change could result in laboratory waste being transported on public roads in a less safe manner than if DOT's regulations apply.

- If the institutions are connected to POTWs, they may currently be required to notify the POTW, EPA Region I and their respective states about discharges down the drain of any substance which if otherwise disposed of would be a hazardous waste under 40 CFR 261 (see 40 CFR 403.12(p)). Under the proposal, this Clean Water Act notification requirement would no longer apply to any laboratory waste discharged down the drain by participating institutions.

As indicated by the consequences highlighted above, the result of excluding laboratory wastes from 262.11 hazardous waste determination could be far reaching – and could result in more lax control of the laboratory waste.

Proposed Subpart J -- Minimum Performance Criteria
The minimum performance criteria spelled out for laboratory waste in 262.104 are similar to requirements that currently apply to hazardous waste in satellite accumulation areas. A few notable differences are discussed below.

Labeling
Under 262.34(c), waste containers at the point of generation must be marked with the words "Hazardous Waste" or with other words that identify the contents. This requirement has been interpreted and applied inconsistently by regulators and lab personnel. Some labs get by with a simple label such as "Waste Solvent," while regulators have instructed others that the containers must bear the chemical name for each material placed in the container. The Lab XL proposal does not allay this confusion. Proposed 262.104(a) reads "... label all laboratory waste with the chemical name and general hazard class." Can the label have a chemical family name or must the chemical names be specific? What is a "general hazard class"? DOT uses the term "hazard class," but some laboratory wastes don't fall into DOT hazard classes. Would a label reading "WASTE SOLVENTS - FLAMMABLE" be acceptable? Or, would each solvent name have to be listed? And how many hazard classes would have to be listed: would one have to also include irritant and neurotoxin. If the waste included traces of benzene, then would it have to be labeled a carcinogen too -- and, at what benzene concentration would carcinogen labeling be required? I realize that Subpart J is intended to be "performance-oriented," but without more specific guidance these issues will be troubling the universities for years and will arise during future enforcement actions.

Quantity Limits for "Temporarily Holding Laboratory Waste in the "Laboratory"
The minimum performance criteria allow each "laboratory" to "temporarily hold" up to 110 gallons of waste. As stated earlier, it is difficult to understand why laboratories would need to accumulate 55 gallons of waste – now the participants are requesting the limit be increased to 110 gallons. Is such a large accumulation limit is necessary? Certainly 110 gallons (whether in 2 55-gallon drums or 880 pint-size containers) far exceeds the definition of "lab-scale." Since this quantity is not "lab-scale," it follows that the temporary holding area no longer meets the definition of "laboratory" and, therefore, is subject to all requirements in 262.34.

Training
As noted above, the training requirements in the Subpart J are very demanding relative to current training requirements for lab workers.

Conclusion
EPA needs to carefully consider the implications of the Lab XL proposal before going final. In addition, the participants should be certain that they are willing to subject themselves to the burdensome programmatic requirements and intense regulatory scrutiny in return for minimal regulatory relief. If the program were to eventually be made national in scope, universities would be inequitably burdened with the requirements to write and implement environmental management plans and comply with the minimum performance criteria. These requirements seem especially unnecessary since most institutions already have working hazardous waste management programs under RCRA and chemical hygiene plans under OSHA's lab standard.

Thank you for the opportunity to comment on this proposal. If you need to contact me to discuss my comments, please do so by e-mail: my address is csalisbury@enter.net.

Sincerely,

Cynthia L. Salisbury