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March 10, 2006

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Via Facsimile 202-395-2745

Lisa Jones
Office of Management and Budget
725 17th Street, NW
Washington, DC 20503

*Re: Request for meeting regarding Rulemaking to Streamline Laboratory Waste
Management in Academic and Research Laboratories
RIN: 2050-AG18*

Dear Ms. Jones:

On behalf of the American Council on Education (ACE), the National Association of College and Business Administrators (NACUBO), and the Campus Safety Health & environmental Management Association (CSHEMA) we are seeking a meeting with OMB (Paul Noe) regarding the referenced rulemaking. The requesting organizations represent the vast majority of colleges and universities with laboratories that have been advocating for more streamlined rules for almost twenty years. Please contact the undersigned if you have any questions.

Sincerely,

Barry M. Hartman

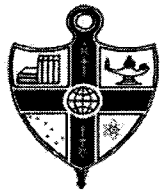
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cc: Sheldon Steinbach
Ann Gross

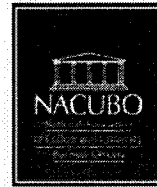
Environmental Excellence in Higher Education

March 7, 2002

Prepared by:



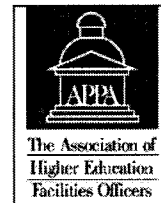
**Campus Safety Health and
Environmental Management
Association**



**National Association of College and
University Business Officers**



American Council on Education



**Association of Higher Education
Facilities Officers**

Environmental Excellence in Higher Education

See Appendix A for Profiles of Associations

The purpose of this white paper is to (a) begin a formal policy dialogue between higher education and the U.S. Environmental Protection Agency (EPA) that will foster a cooperative effort toward environmental excellence on college campuses; and (b) address and resolve significant issues surrounding the application of certain environmental regulations to the activities of colleges and universities.

Higher education is one of the nation's most valuable assets. America's 3,900 colleges and universities range from very small institutions with a few hundred students to complex research universities with 50,000 students. In 2000, institutions of higher education employed almost 3 million people and educated more than 15 million students. Our students are the leaders of tomorrow. Our research discoveries, medical advances and public service meet society's needs, solve difficult problems and continuously improve our lives.

Colleges and universities continue to be stewards of environmental research, education, and innovation. (See Appendix B for examples of environmental leadership in higher education.) We applaud EPA for sponsoring innovative projects such as Lab XL and participating in the Howard Hughes Medical Institute Consensus Practices for Hazardous Waste Management. We also recognize that environmental rules are necessary to protect human health and the environment, and fully accept our responsibility to achieve these goals.

The EPA has historically recognized that environmental rules should be tailored to the type of entity being regulated. The Clean Air Act, Clean Water Act, and the Resource Conservation and Recovery Act (RCRA) contain examples of regulations specifically focused on particular industrial, manufacturing or other business sectors. Unfortunately, the academic sector has not had the benefit of focused regulations. This has resulted in confusion, misunderstanding, and misapplication of environmental regulations.

University campuses are very different from the industrial sectors regulated by EPA. For example, our unique teaching and research laboratories typically work with thousands of chemicals in very small volumes. The industry-oriented RCRA regulations frequently focus on 55-gallon drums or large tanks. As a result, RCRA regulations are often applied inconsistently in higher education by EPA regions, inspectors, and state agencies. In addition, overlapping rules between EPA, OSHA, and other health and safety requirements, create confusion on our campuses particularly when many of our faculty, staff and students work with a specific waste for only one or two semesters.

The fundamental mismatch between the RCRA regulatory structure designed to address large industrial operations and the smaller quantity management issues facing higher education has been discussed and recognized for the last twenty years. (Appendix C chronicles this history.) Limited legislative action was taken in 1994 to specifically authorize the EPA to promulgate regulations to address these concerns. Unfortunately, regulatory changes were never made.

In addition, despite good intentions, interpretive guidance for academia with respect to the application of existing regulations has been of limited value. For example, Region III's *"Twenty Questions for Colleges and University Presidents"* did not devote a single question to the issue of handling laboratory waste, which according to the EPA's own enforcement information, remains the most vexing problem on campuses.

Instead, the public focus of the EPA has been on enforcement initiatives targeting colleges and universities. In July 2000, the EPA issued an Enforcement Alert entitled *"Universities, Colleges Not Receiving Top Marks for Environmental Compliance"*. This created the misimpression that colleges and universities as a sector are not committed to compliance with environmental laws, when in fact the problem is largely the misapplication of EPA rules and directives that are intended for other kinds of industry. In many cases, the disagreements pertain to paperwork and management issues, or related to conditions that do not create any risk to human health or the environment. These issues divert resources from proactive and protective environmental initiatives. Unresolved compliance issues hinder the ability of colleges and universities to undertake environmental leadership opportunities they are uniquely positioned to provide.

We are not suggesting that different or lesser environmental protections should be applied to the university community. Rather, the rules must be tailored to the risk being addressed, and entity being regulated, just as the agency does for other industries. We fully endorse the use of audits and environmental management systems to aid higher education in assuring that its activities are protective of the environment, but these tools can only work to the extent the underlying rules fit the situation. Therefore, greater focus must be placed on the underlying rules.

To address this challenge, a renewed national effort is necessary. EPA and academia need to work together to develop a common understanding of how colleges and universities can assure the EPA and the public that they are meeting or exceeding their obligations. To resolve this problem, the higher education community proposes renewing on a more formal basis, the policy dialogue that began several years ago between the EPA and associations representing institutions of higher education. The dialogue will include an open exchange of information and create avenues for innovative means of assuring compliance:

We recommend that the policy dialogue focus on four action items:

1. Identify regulations that need to be tailored to the higher education community.
2. Create performance-based environmental standards that encourage pollution prevention and protect the environment.
3. Create interpretive guidance for the regulated community and for federal, state and local regulators to enhance consistency and understanding of compliance expectations.
4. Expand compliance assistance to address specific situations on a national basis.

Environmental Excellence in Higher Education

Appendix A: Profile of Higher Education Associations

The **Campus, Safety, Health and Environmental Management Association (CSHEMA)**, a division of the National Safety Council, is dedicated to assisting its membership in advancing safety, health and environmental quality in institutions of higher education. The membership of campus environmental health and safety professionals look to CSHEMA as the definitive resource on best practices for reliable and effective environmental health and safety for colleges, universities, and other educational institutions.

The **National Association of College and University Business Officers (NACUBO)** is a nonprofit professional organization representing chief administrative and financial officers at more than 2,100 colleges and universities across the country. Over two-thirds of all institutions of higher learning in the United States are members of NACUBO. NACUBO's mission is to promote sound management and financial practices at colleges and universities.

The **American Council on Education (ACE)** is the nation's coordinating higher education association. Its approximately 1,800 members include accredited, degree-granting colleges and universities from all sectors of higher education and other education and education-related organizations. ACE maintains both a domestic and an international agenda and seeks to advance the interests and goals of higher and adult education in a changing environment by providing leadership and advocacy on important issues, representing the views of the higher and adult education community to policy makers, and offering services to its members.

APPA, the Association of Higher Education Facilities Officers is an international association dedicated to maintaining, protecting, and promoting the quality of educational facilities. The nearly 4,500 individuals who comprise APPA are facilities professionals from both public and private, two-year and four-year, colleges and universities. APPA promotes excellence in the administration, care, operations, planning, and construction of educational facilities.

Environmental Excellence in Higher Education

Appendix B: Environmental Leadership in Higher Education

Higher Education has been a leader in environmental research, education, protection and innovation.

- The National Wildlife Federation concluded that colleges and universities “are uniquely situated to educate America’s future leaders on environmental issues.” Their 2001 survey found that nearly four in five colleges and universities offer at least one course in environmental studies, and the majority of four-year institutions offer an environmental studies major or minor.
- Academic institutions spend more than \$1.5 billion annually in research in environmental sciences.
- 73 U.S. college and university presidents have signed the 1990 Talloires Declaration, promising to “provide the leadership and support to mobilize internal and external resources so that their institutions respond to...the unprecedented scale and speed of environmental pollution and degradation, and the depletion of natural resources.”
- In New Jersey last year, 56 college presidents signed pledges to reduce their campus’ greenhouse gas emissions. Tufts University has pledged to meet the goal established at the Kyoto Protocol on climate change—a 7% reduction from 1990 levels by 2012.
- 123 colleges and universities are EPA Energy Star Partners, committing to improving the energy efficiency of their buildings.
- To investigate better ways of regulating academic laboratories, three universities and their respective state agencies agreed in 1999 to participate in EPA’s Project XL (eXcellence and Leadership), to allow their labs to replace existing hazardous waste requirements with an Environmental Management Standard.
- As an EPA pilot project, four universities have partnered with EPA Labs21 to construct or retrofit their laboratories for improved energy and environmental performance. Many other institutions have participated in EPA’s Labs21 conferences and outreach.
- Many colleges and universities are implementing pilot, partial or full environmental management systems. 30 schools are members of the nationwide College and University EMS Alliance, sponsored by the Kentucky Pollution Prevention Center. The Environmental Management System at the University of Missouri at Rolla is ISO 14001 Certified.
- 20 colleges and universities have formed the Campus Consortium for Environmental Excellence (C2E2) to develop new ways of managing and regulating the environmental impacts of laboratories and serve as an environmental information forum.

Environmental Excellence in Higher Education

Appendix C: Chronicle of Communications Between EPA and Higher Education

Prudent Practices for the Disposal of Chemical from Laboratories (National Research Council, 1983)

Devised as a companion to a 1981 guide on laboratory safety, this resource aimed to help scientists effectively manage waste. It recognized that laboratories are a minority contributor to national waste, and that there is a fundamental mismatch between regulations and lab practice (page 2).

Report to Congress: Management of Hazardous Waste from Educational Institutions (EPA, 1989)

Fulfilling a legislative mandate, this report notes that institutions, especially laboratories, have difficulty achieving compliance for a variety of reasons. In addition, this report confirms that higher education laboratories are responsible for a minority of waste. The report recommended simplifying the legislative and regulatory system affecting laboratories, but conditioned those assessments with a statement that legislative change was required.

Government, University, Industry Research Roundtable 1991-94 (GUIRR Report, 1994)

This report identified that laboratories have difficulty meeting regulatory expectations because of the ill fit of current regulations and lab practice. In addition, the report identified high-value changes to the legislative and regulatory system, including performance-based standards, changes to definitions of important terms and creation of better compliance assistance.

Laboratory Waste Minimization and Equity Act (US Congress, 1994)

Enacted as part of the EPA appropriation, this law allowed EPA to revise RCRA to include treatment of waste without a permit, accumulation of wastes past 90 days to facilitate disposal and allowing campuses to consolidate waste under a single ID number. None of these allowances have been incorporated in the regulations.

Prudent Practices in the Laboratory (National Research Council, 1995)

This update to the 1981 and 1983 guides again emphasized the poor fit of regulations and practice. The book suggested performance-based regulations, expansion of treatment opportunities, consolidation of generation sites, extended storage time limits for mixed waste, in addition to safety-related practices.

California Laboratory Regulatory Reform Task Force report (1994- 1997)

Convened to address fundamental conflicts between laboratories and state regulations, this task force clarified the state-specific issues. The recommendations of the report included a general relaxation of the application of state RCRA regulations, to which the state largely agreed.

Military Munitions Rule (EPA, 1997)

This EPA rule pertinent to military bases allows transportation of waste between sites without a manifest. EPA extends the rule to cover universities and colleges, but does not solve the separate ID numbers problem.

Laboratory Waste Management Task Force 1992-present (American Chemical Society, 1998 report)

Convened in response to the mismatch between rules and laboratory experience, this group identified areas for improvement, and has seen several of these to fruition over time. Successes include development of printed compliance assistance materials, redefinition of “contiguous property” and a change to mixed-waste storage time limits.

Report on Regulatory Burden to Research (National Institutes of Health, 1998)

NIH sponsored a study to determine the extent to which federal regulations pose a burden to research. The study identified that RCRA and labs do not match. The report suggested that EPA lead the effort to address this concern, including shifting to performance-based regulations, changing definitions of important terms in the regulations, enabling allowances for treatment, decay in storage, etc.

Project XL for University Laboratories (1999-2003)

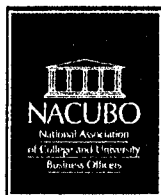
Working with EPA, three schools set out to demonstrate that a few changes to RCRA would go a long way in making lab waste management viable, thus freeing up resources for other projects. During the design phase, the group again identified the lack of performance regulation, the inability to treat waste and the difficulty in applying the existing rules to a laboratory population. The effort is still underway.

Mixed Waste Rule (EPA, 2001)

This EPA rule allowed storage of mixed (hazardous and radioactive) waste longer than limits specified in RCRA, as long as the storage meets Nuclear Regulatory Commission requirements.

2001 Howard Hughes Medical Institute Report on Consensus Best Practices for Managing Hazardous Wastes in Academic Research Institutions

An effort of ten schools, working with state regulators and EPA headquarters, this report identified the challenges of applying proscriptive industrial waste regulations to laboratories. The final report identified practices that would, if applied diligently, increase safety, health and environmental protection in laboratories. EPA acknowledges that the suggestions made in the report can be implemented without legislative change.



**National Association of College
and University Business Officers**

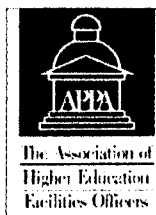


**Campus Safety Health and
Environmental Management
Association**

Management of Hazardous Waste in the Academic Sector

A Proposal for Improving RCRA

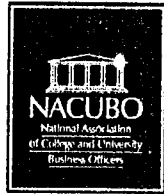
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**Association of Higher Education
Facilities Officers**



American Council on Education



National Association of College
and University Business Officers



Campus Safety Health and
Environmental Management
Association

Management of Hazardous Waste in the Academic Sector

Matt Strauss CSWER

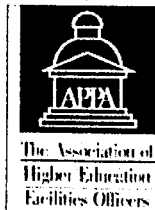
Elizabeth
Director of Solid Waste

Bob Keiser, Kristen, Lillian
Solid Waste

A Proposal for Improving RCRA

Marianne Hrenko - not here
not interested in reg Δ

June 6, 2002



Association of Higher Education
Facilities Officers

IPA
- Intergovernmental
Personnel Act
- Staff person work @
EPA



American Council on Education

Chemical leases

want to see consensus

Δ HHMZ

Sched mtg

E Liz + Matt
after CS

Goals of Our Meeting

- Continue our dialogue with EPA to enhance environmental excellence in the higher education sector
- Outline how RCRA can be improved to more effectively protect the environment in the academic sector
- Develop a plan for proposing and implementing RCRA improvements for the academic sector

Structure of Meeting

- Brief background
- Identification of problem areas
- Presentation of Proposal
- Discussion

A Brief History

- 1983 – National Research Council – mismatch between regulations and laboratory practices in the academic sector
- 1984 – Congress authorizes EPA to make changes to regulations for higher academic institutions
- 1989 – EPA – proposes guidance to clarify regulatory requirements for academic sector laboratories

A Brief History

- 1994 – GUIRR – performance-based standards, consolidation of waste appropriate for laboratories
- 1999 – Project XL begun – three participants
- 1999 – NIH Report on Regulatory Burden to Research
- 2001 – HHMI Consensus Best Practices

Why Does the Academic Sector Differ?

Manufacturing/industrial generators	Academic institutions
Few waste generation points due to concentrated manufacturing operations	Academic campuses have many independent and dispersed points where waste might be generated
Little variability in what is generated from consistent manufacturing process	Academic research and experimentation results in a wide variability in waste streams
Greater quantities of wastes generated from mass manufacturing	Very small quantities of individual waste streams generated by individual students/researchers
Relatively steady waste generation rates from ongoing manufacturing	Academic semester cycle results in variable/sporadic waste generation rates
Few individuals involved in waste generation and management	Many, many students/researchers/faculty involved in waste generation and management
Relatively stable work force directly involved in waste generating activity	Inherently transient student/faculty population involved in waste generating activity

RESULT

- Academic institutions generate less than 1/100^{percent} of total hazardous waste generated annually
- Regulatory provisions designed for industrial process/manufacturing don't work well in academic sector
- Increased costs, confusion and inefficiencies

KEY AREAS IN NEED OF REFORM

Hazardous Waste Determinations

- Where is HW determination made?
Laboratory/studio vs. central accumulation area
- Who makes HW determination?
Researcher vs. EH&S personnel/other qualified person
- Significance: Triggers RCRA compliance obligations

KEY AREAS IN NEED OF REFORM

Identification of HW 'Facility'

- Distorted by application of 'contiguous property' rule
- Single college or university may be separated by several roads
- Intra-campus transfers/consolidation of waste becomes complicated
- Requires multiple 'facility' identification numbers for single university
- Impedes central accumulation and attendant programmatic efficiencies
- Unnecessary for protection of human health and the environment

KEY AREAS IN NEED OF REFORM

Identification of 'Generator' Status Distorted

Academic institutions are “episodic generators”

- Some campuses are SQG/CESQG most months
- LQG at end of semester, lab clean-outs
- Research-generated “P-waste”
(1 kg in any month) extremely variable

KEY AREAS IN NEED OF REFORM

Laboratory - Scale Waste Treatment

- Some academic chemical waste streams are readily amenable to treatment to reduce/eliminate hazards
- Container management standard and LDRs preclude waste treatment and waste minimization

EPA AUTHORITY TO UNDERTAKE RCRA REFORM FOR THE HIGHER EDUCATION SECTOR

1984 – HSWA

1995 – National Technology Transfer and
Advancement Act

2000 – VA H.U.D. and Independent Agencies
Appropriations Bill

NEED FOR COMPREHENSIVE AND CONSISTENT NATIONAL POLICY

- July 2000: “Universities, Colleges Not Receiving Top Marks for Environmental Compliance” [OECA Enforcement Alert]
- Aug 2000: “Survey shows universities learning to comply with environmental laws” [EPA Region 3 Mid-Atlantic Compliance Assistance Announcement]

NEED FOR COMPREHENSIVE AND CONSISTENT NATIONAL POLICY

- 1998: RCRA standards are a bad fit for academic research labs (NIH)
- July 2000: Colleges and Universities must meet same standards as industry (OECA Enforcement Alert)
- Mar 2002: Industry –oriented approach of RCRA makes compliance in academic labs difficult (HHMI)

RECOMMENDED SOLUTION:

**Promulgate an optional
performance-based**

**Academic chemical waste
management standard**

Proposed Performance-Based Academic Chemical Waste Management Standard

■ Scope

- Academic Chemical Waste - chemical waste resulting from teaching, research and related activities at institutions of higher education
- Applicable to SIC Codes 821 and 822
- Creates alternative regime to Part 261-268

Proposed Performance-Based Academic Chemical Waste Management Standard

■ Approach

- Addresses key issues for academic institutions without broader implications for regulated community
- Institutions may choose to adopt this approach, or continue meeting current regulations

Academic Chemical Waste Management Standard Core Principle

- Academic Chemical Waste Management Plan
 - Will include aspects of HHMI consensus best practices and Project XL environmental management plan/minimum performance criteria
 - Institution may designate facilities/academic operations covered by plan

Academic Chemical Waste Management Plan Key Elements

Academic Chemical Waste Management Plan (ACWMP)

- Legally enforceable
- Like SPCC Plans

Academic Chemical Waste Management Standard Elements

- Definition of “campus” as RCRA “site”
- Identify who makes hazardous waste determinations, and when they are made
- Ensure that HW identifiers/handlers are technically qualified/trained

Academic Chemical Waste Management Standard Key Elements

- Campus container management standards
- Labeling of academic wastes
- Campus Emergency Response Plans
- Intracampus transportation procedures

Academic Chemical Waste Management Standard Key Elements

- Procedures for managing “expired” chemicals, as from academic lab clean-outs
- Procedures for managing reagents that become unstable over time
- Procedures for safe, effective and protective bench-top and small-scale (lab-scale) treatment protocols

Academic Chemical Waste Management Standard Key Elements

- Identify pollution prevention/waste minimization strategies
- Plans for timely removal of waste from laboratories and studios in a timeframe consistent with the academic calendar

How the Proposed Rule Works

- ACWMP Is Option to Current Regulation
- Academic Institution Prepares ACWMP
- Plan identifies ACW generator locations covered under plan (under single RCRA ID number).

Conclusions

- Promulgation of the ACWMS will satisfy congressional mandates for
 - Protection of human health and the environment
 - Addressing problems of hazardous waste management at academic institutions
 - Use of performance/consensus standards in regulatory activities

Conclusions

- The flexibility provided academic institutions by the ACWMS will:
 - Enhance pollution prevention and waste minimization by fostering reuse, recycle and treatment of chemical wastes
 - Bring to fruition a twenty year effort to address this issue
 - Address regulatory compliance issues without unnecessary burden and without compromising protection of human health and the environment