New England Laboratories XL Project

An Alternative Model for Managing Hazardous Waste in Laboratories

Local Stakeholder Meeting

Date: September 22, 1998

Time: 1:00 PM to 3:00 PM

Place: Newton Room, New Dining Facility, Boston College

Boston College is continuing to work with the Laboratory Consortium for Environmental Excellence (LCEE) and the Environmental Protection Agency (EPA) towards final development of a Project XL entitled *An Alternative Model for Managing Hazardous Waste in Research Laboratories*. For more information on EPA's eXcellence and Leadership, visit their website at www.epa.gov/Project XL. For more information on the LCEE proposal to EPA, visit their website at http://esf.uvm.edu/labxl.

On August 6, 1998, the draft Final Project Agreement (FPA) was submitted to the EPA. Under the terms of this FPA, Boston College, serving as a pilot institution in this study, is required to maintain communication with local stakeholders and keep them informed of our progress. A discussion of the draft FPA and the proposed Environmental Management System for laboratories will be discussed on September 22, 1998.

Please RSVP to:
Suzanne Howard, Director, Environmental Health and Safety at Boston College
617-552-0308

New England Laboratories XL Project

Local Stakeholder List
Boston College
September 1998

Name	Organization
~~Robert Cappadona~~ Mark Brunelli - yes	Advanced Environmental Technical Services
Lt. Michael Castro NO	Newton Fire Department - LEPC
Environmental Action Center - [illegible]	Boston College Kelly Miller - left message
Louise Bruyn - 520-6713 - called 3 times no answer	Green Decade
Asst. Chief Joseph LaCroix - 552-7278 called - [illegible]	Newton Fire Department
John Madden - 3608 - yes	Boston College - Chemistry Department
Karen Rondeau - yes	Massachusetts Water Resource Authority
called 4 Times no answer Capt. Thomas Scavitto - 343-~~3650~~ 2187 -	Boston Fire Department
Rebecca Tobin - no	Boston College - Senior
Mike Clarke yes	

Mailing Sent to All

BOSTON COLLEGE

OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY

Mr. David Naparstek
Newton Board of Public Health
1294 Centre Street
Newton Center, MA 02159
October 1, 1998

Dear Mr. Naparstek,

In February, 1998, Boston College, along with the University of Massachusetts and the University of Vermont, submitted a draft Project XL to the Environmental Protection Agency (EPA). The Project, entitled *An Alternative Model for Managing Hazardous Waste in Research Laboratories* is supported by the EPA Regional Administrator, Mr. John DeVillars, and EPA Headquarters in Washington DC. We are working towards finalization of the project with two documents, the Final Project Agreement (FPA), and the Federal Rulemaking. We hope to have them finalized for publication in the Federal Register by October 20, 1998, for a 30 day comment period.

Under the terms of this FPA, Boston College is required to maintain communication with local stakeholders and keep them informed of our progress. You have been identified by other local stakeholders and or the EPA during a local stakeholder meeting on September 22, 1998, as a possible interested member of the community. I have enclosed some material for your review and if you would like to hear more about the project, or provide comments on any of the documentation, please contact me at 617-552-0308. Thank you.

Sincerely,

Suzanne Howard
Director
Environmental Health and Safety

P.S. For more information on EPA's eXcellence and Leadership, visit their website at www.epa.gov. For more information on the proposal to EPA, visit the website at http://esf.uvm.edu/labxl.

ST. CLEMENT'S HALL, 140 COMMONWEALTH AVENUE, CHESTNUT HILL, MASSACHUSETTS 02167-3862
617-552-0308 FAX 617-552-1093

BOSTON COLLEGE

OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY

Ms. Ruth Leiberman
Newton City Hall
Department of Public Works
1000 Commonwealth Avenue
Newton, MA 02459
October 1, 1998

Dear Ms. Leiberman,

In February, 1998, Boston College, along with the University of Massachusetts and the University of Vermont, submitted a draft Project XL to the Environmental Protection Agency (EPA). The Project, entitled *An Alternative Model for Managing Hazardous Waste in Research Laboratories* is supported by the EPA Regional Administrator, Mr. John DeVillars, and EPA Headquarters in Washington DC. We are working towards finalization of the project with two documents, the Final Project Agreement (FPA), and the Federal Rulemaking. We hope to have them finalized for publication in the Federal Register by October 20, 1998, for a 30 day comment period.

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Sincerely,

Suzanne Howard
Director
Environmental Health and Safety

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Boston College
Sept. 22, 1998
Local Stakeholder Meeting

Name	Affiliation	Phone / email
Thomas Balf	ML Strategies	348-1838 / tbalf@mlstat.com
Mark Braniff	AETS	508 804-4812 / mark_braniff @ wmx.com
Gina Snyder	USEPA - REGION I	617 565 3452 / snyder.gina@epamail.epa.gov
Karen Rondeau	MWRA	617-241-2347 / krondeau @ mwra.state.ma.us
SHERRI WALKER	US EPA - HQ Office of Reinvention	(202) 260-4295 walker.sherri@epa.gov
John G Madden	BC-Chemistry	617-552-3608 JOHN.MADDEN.1@BC.EDU
Michael Clarke	"	clarke@bc.edu
Kevin Harrison	BC - Geology	617-552-4653 kevin.harrison@bc.edu

copy sent to:
Sherri Walker
Gina Snyder
Tom Balf

InfoEagle Resources

Today's Featured Links

- BC Chronicle, Sept. 17
- Parents' Weekend Schedule
- Hillel - Jewish Students Association
- Convocation Addresses

Key Boston College Links

- A Guide to Boston College
- Registration, Academic & Course Information
- Libraries & Library Resources
- Computing & Communications Resources
- **Topical Lists**
  Arts Organizations | Continuing & Professional Education | International | Jesuit | Jobs, Employment, Career | Research | Summer Programs

World-Wide Information

- Local, National, and World News
- Finding People and Organizations
- Boston Area Information
- Information about the Internet
- Search the Internet

Boston College News

From the Office of Public Affairs

Open Meeting to be Held Tuesday Regarding Laboratory Waste Project

An open meeting will be held on Tuesday, Sept. 22 from 1-3 p.m. in the Lower Campus Dining Hall's Newton Room regarding a proposed new method for handling laboratory waste.

Friday, September 18

Five New Teachers Join Urban Catholic Teacher Corps

Five new teachers and a new resident supervisor have signed on for two-year stints in the Urban Catholic Teacher Corps, a joint program of Boston College and the Boston Archdiocese that offers beginning educators an opportunity to serve in inner-city parochial schools.

Thursday, September 17

BC Set New Fundraising Record in 1997-98

Boston College enjoyed a record fund-raising year in 1997-98, garnering $28.7 million in cash gifts and $62.6 million in pledges, while receiving news of the largest personal bequest in school history.

Thursday, September 17

50-Year Effort to Index Martin Luther's Work is Completed

A 50-year project has drawn to a close with the long-awaited completion of the German Studies Department's Martin Luther *Index Verborum*, an exhaustive index of every German word used by Luther in his writings between 1516 and 1525.

Wednesday, September 16

More Campus News from the "News and Information from Boston College" page and The Boston College Chronicle

Open Meeting to be Held Tuesday Regarding Laboratory Waste Project

(9-18-98) -- An open meeting will be held on Tuesday, Sept. 22 from 1-3 p.m. in the Lower Campus Dining Hall's Newton Room regarding a proposed new method for handling laboratory waste.

Boston College is a member of the Laboratory Consortium for Environmental Excellence, a group of New England colleges and universities that is exploring alternative systems for managing the relatively small amounts of hazardous wastes generated by laboratories. Despite their relatively negligible environmental effects, laboratories are bound by the same regulatory guidelines as large manufacturing and industrial facilities.

The consortium is working to establish guidelines that are better suited to laboratories and will improve environmental performance.

Anyone interested is welcome to attend the meeting.

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New England University Labs

An Alternative System for Regulating Hazardous Waste in Academic Laboratories

Suzanne Howard
Director
Environmental Health and Safety
Boston College

Agenda - 9/22/98

- Introductions
- Presentation
- Discussion of Standard and Minimum Performance Criteria
- Project Status
- Questions/Concerns/Issues

Presentation Agenda - 9/22/98

- Introduction
  - What is EPA's Project XL?
  - Stakeholders
- New England University Lab Proposal
  - The LCEE
  - The Standard
  - Environmental Performance Indicators (EPIs)
  - Pilot Sites
- Current Status
- The Future

US EPA Project XL - *eXcellence and Leadership*

"XL is a national pilot program that tests innovative ways of achieving better and more cost effective public health and environmental protection. Through site specific agreements with project sponsors, EPA is gathering data to help the Agency redesign current approaches to public health and environmental protection."

Project XL Criteria

- Superior Environmental Results
- Cost Savings & Paperwork Reduction
- Stakeholder Support
- Innovation/Multi-Media Pollution Prevention
- Transferability
- Feasibility
- Monitoring, Reporting & Evaluation
- Avoiding Shifting of Risk

Stakeholders

- Local and National Stakeholder involvement is an essential part of the XL program
- Stakeholders will be:
  - Periodically apprised of the status of the project
  - Provided access to information in determining the success of the proposed standard

Local Stakeholders

- Assure that local groups have input on the project
- Address specific concerns of the local community
- Includes:
  - Advanced Environmental Technical Services
  - Boston College faculty, administrators, students
  - Boston Fire Department
  - Green Decade
  - Massachusetts Water Resource Authority
  - Newton Fire Department
  - Local Universities

Local Initiatives

- January 13, 1998, Local Stakeholder Meeting
- April 23, 1998, Article in the Boston College Chronicle
- Access via BC's EH&S Web Page
- Publication of 9/22/98 Meeting on BC's Information Technology Web Page
- Several Meetings with BC Faculty & Administrators

National Stakeholders

- Assure that the proposal reflected state of the art thinking and could be applied to a broad range of institutions
- Includes:
  - American Chemical Society
  - Ecologia, Second Nature, Tellus Institute
  - Howard Hughes Medical Institute
  - National Safety Council (CSHEMA)
  - Various Universities (ie. Stanford, Yale, Princeton, Univ. of Ill., San Diego State)
  - Pfizer Inc.

National Meetings

- New England Winter Safety Conference in 1997 (Boston College) and 1998 (Princeton)
- LCEE National Stakeholder Meetings in November 1997 and March 1998
- Campus Safety, Health and Environmental Management Assoc. Meeting in July 1998
- American Chemical Society Meeting in August 1998

Stakeholder Process Going Forward

- Finalize list of stakeholders and solicit their participation
- Solicit further participation through appropriate communication vehicles
- Host/participate in local meetings
- Continue to inform stakeholders of Lab XL process
- Make environmental performance reports available

Laboratory XL Project Public Performance Reports

Report	Content	Due Date	Availability
Baseline	Provides representative baseline data with respect to Environmental Performance Indicators (EPIs)	Nine months after the effective date of the final rule	Disseminated to identified stakeholders, posted on Web Page, available upon request
First Year	Summary of environmental performance and progress against baseline performance data	15th month after effective date of final rule.	Disseminated to identified stakeholders, posted on Web Page, available upon request
Second Year	Response to agency review/inspection of environmental performance	Expected to occur between 15th and 30th month after effective date	Disseminated to identified stakeholders, posted on Web Page, available upon request.
Second Year	Evaluation of environmental performance to date, including conformance review and corrective action(s) if any, and summary of lessons learned	30th month after effective date of final rule.	Disseminated to identified stakeholders, posted on Web Page, available upon request, open meeting hosted at each XL Project site.
Third Year	Response to agency review/inspection of environmental performance	Expected to occur between 30th and 42th month after effective date	Disseminated to identified stakeholders, posted on Web Page, available upon request.
Final Report	Summary of environmental performance and progress against past performance data	42nd month after effective date of final rule.	Disseminated to identified stakeholders, posted on Web Page, available upon request, open meeting hosted at each XL Project site.

DRAFT

Laboratory Consortium for Environmental Excellence (LCEE)

- First meeting held Feb. 1996
- Incorporated as a non-profit in August 1997
- The LCEE is a solutions oriented group dedicated to identifying, developing, and sharing best environmental practices in labs.

- Members Include:
  - Boston College
  - Georgetown University
  - Harvard University
  - MIT
  - Northeastern University
  - Trinity College
  - Tufts University
  - Univ. Mass-Boston
  - Univ. Mass-Amherst
  - University of Vermont

Why Change is Needed

- Increasing regulations and enforcement
- High penalties for noncompliance
- Otherwise adequately regulated (ie. OSHA's Laboratory Standard)
- Labs unique culture, expertise and products
- Hazardous waste regulations were written for industry
- Overlapping jurisdictions - Federal, State, Local
- Enforcement variations overtime, inspector, region
- Organizational management in a University setting

The Proposal

- Implement flexible, performance based standards for managing hazardous wastes in laboratories
  - Environmental Management Plan (EMP)
- Obtain EPA guidance on treatment in containers

The Standard

- Scope & Application; Definitions
- Hazardous Waste Management ("general duty clause")
- Organizational Responsibilities
- EMP - Definition of General Requirements
- Information & Training for Workers
- App. A - Minimum Performance Criteria for Laboratories under an EMP
- App. B - Benchtop & Small Scale Treatment

Laboratory Environmental Management Standard- Scope

- Supersede specific sections of 40 CFR (RCRA regs) in laboratories
- Shall not supersede other legal requirements
- Organizations with workplaces engaged in the laboratory use of hazardous chemicals may choose to implement this alternative model or comply with existing RCRA requirements and state implementing regulations.

Environmental Management Plan

- Modified form of ISO 14001 style EMS
- Policy signed by senior management
- Pollution prevention plan
- Annual survey of hazardous chemicals of concern
- Procedures for lab decommissioning
- Timely removal of lab wastes
- 19 elements in total

Minimum Performance Standards

(i). Each laboratory waste or its secondary container shall be labeled or tagged **as a laboratory waste** with the chemical name and hazard warning in accordance with the Laboratory Participant's Environmental Management Plan.

(ii) Each laboratory waste or its secondary container shall be dated ~~or otherwise identified~~ when **deemed to be removed by a laboratory worker or when the threshold accumulation requirements defined in (iii) are met.**

(iii) The Laboratory Participants shall keep **quantities** ~~volumes~~ of laboratory wastes to a minimum, but in no case shall a ~~single hazardous~~ laboratory waste accumulate in the laboratory in excess of 55 gallons, or weight equivalent. (Note: Gina, we considered adding acute hazardous waste here but it has the potential to cause labs to violate the criteria. An example of problems if we insert acutely hazardous waste language - if greater than one quart of a P or U material was removed from the laboratory as a laboratory waste, the lab would violate the one quart threshold!)

(iv) ~~A full container of a single~~ Laboratory waste **that is deemed to be removed by a laboratory worker, or required to be removed because of threshold accumulation limits,** shall be received at the consolidation point, ~~less than ninety day~~ accumulation area or permitted storage area, within 20 (twenty) calendar business days.(note Gina - we want either 20 business or 30 calendar days. First, universities work according to business day schedules. Second, imagine a Christmas "break" and other typical university breaks when many labs shut down for a lengthy period of time. It may be a real problem complying with a 20 day period. Please don't allow EPA to micromanage this - give the XL Participants the time to manage it well and safely. Again, please keep in mind that the laboratory wastes are a subset of hazardous chemicals in the laboratories)

(v) Containers of laboratory wastes shall be closed at all times, except when wastes are being added to or removed from the container, or under exceptions specifically outlined in the Laboratory Participant's Environmental Management Plan.

Minimum Performance Standards

(viii) Containers designated for the accumulation of laboratory wastes shall be inspected regularly in conformance with the requirements of the Environmental Management Plan.

(ix) Laboratory waste management shall not result in the release of hazardous constituents into the land, air and water which are prohibited or in excess of regulatory limits.

(x) Emergency notification information and evacuation procedures shall be posted and readily available as required by the ~~Laboratory Participant's~~ EMP.

(xi) Spill response equipment or procedures for emergency response shall be appropriate to the hazards in the laboratory, as defined in the EMP.

(xii) Hazardous chemical spills, exposures and other incidents that trigger an emergency, as defined under this standard, shall be investigated, documented and appropriate actions taken to correct and prevent future incidents.

(xiii) Laboratory wastes shall be evaluated ~~upon receipt~~ ~~at the waste consolidation area~~ to determine whether they can be reused, recycled, put to other beneficial use or treated in tanks and containers under part 262.34(a) or whether they shall be accumulated pursuant to part 262.34. (Note: we wish to get credit for making these assessments through various channels (policies, inspections) - not just at the consolidation point. Moreover, we don't want to have to develop a paper-heavy system that requires documentation that each lab waste was evaluated at the consolidation point for waste min opportunities.)

Environmental Performance Indicators (EPI) for Pilot Project

- Baseline Information to be gathered in the next 6 months
- Ongoing Measurements to include:
  - evaluation of pollution prevention efforts
  - quantity of hazardous waste generated
  - quantity of reused or recycled waste
  - awareness of lab workers
  - assessment of lab conformance to EMP

Pilot Sites

- EMP schools
  - » Boston College
    - – Contact: Suzanne Howard
  - » University of Massachusetts - Boston
    - – Contact: Zehra Schneider Graham
  - » University of Vermont
    - – Contact: Ralph Stuart & Milly Archer
- Treatment school
  - » University of Massachusetts - Amherst
    - – Contact: Jim Fox

Current Status

- Finalize EMS and Minimum Performance Standards
- Finalize the Final Project Agreement
- Ensure Local Stakeholder Involvement
- Finalize EPIs
- Completing Site Specific Rulemaking

The Future

- Sign the FPA this Fall
- Implementation, Monitoring & Reporting
- Four Year Pilot Study
- More schools may enter pilot program after 18 months
- Evaluation:
  - Successful - EPA will enact - can be adopted by others
  - Not Successful - pilot schools back to RCRA in labs

Information Access:

- EPA Web Page at:
  - http://yosemite.epa.gov/xl/xl_home.nsf/all/
  - homepage
- New England University Lab Page at:
  - http://esf.uvm.edu/labxl
- Boston College Environmental Health & Safety Web Page at:
  - http://www.bc.edu/ehs

With Special Thanks To:

- ML Strategies
  - Michael Last
  - Tom Balf
- EPA
  - Anne Kelly
  - Gina Snyder
- Web Page Administrator
  - Ralph Stuart