Sixth Annual State of the Environment Report for the University of Kentucky

Jointly submitted by the
Environmental Health & Safety Division
and the
Committee on Environmental Health and Safety
to
George J. DeBin
Vice President for Fiscal Affairs

on the 28th day of September 2000

by

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EH&S Accomplishments

The items listed below were the Major Business Objectives for the EH&S Division assigned by the Vice President of Fiscal Affairs for FY1999-2000:

1. The basic and advanced Radiation Safety courses for laboratory workers were revised and are now being taught monthly. The new format was well received by faculty and students. New courses were developed for the following ancillary workers—Nursing, UK Police, Medical Center Security, and Physical Plant—and training was completed for all (338) of these.

2. The University Fire Marshal's office prepared and distributed two fire prevention pamphlets, one for residence halls and one for employees. A copy went out to all employees in September via *UK News*. Copies were distributed to resident students in their mailboxes at all residence halls, sororities, and fraternities. (see pocket page)

3. The division made a special effort to use the staff newspaper, *UK News* to communicate safety information to the University community. We had 12 safety articles published in *UK News* this year. The following articles are available on the EH&S web site:

   Using chemicals safely as important at home as at work.
   Know radon risks.
   Environmental health improving on campus.
   Clutter, moving labs, pet-peeves for environmental director.
   Asbestos: What you don't know about it might hurt you.
   EPA regulations require every used battery to be recycled.
   Cleaning accident site calls for caution.
   Appropriate office ergonomics important to health.
   Proper training keeps radiation use as safe as possible on campus.
   Space heater recalled for bad thermostat.
   Poor indoor air quality can cause employee health problems.
   Fire safety checklist for travelers.

4. New policies and procedures were developed to assist gene therapy investigators to insure the safety of research and clinical trials. New procedures were adopted for the Institutional Biosafety Committee, including a regularly scheduled monthly meeting. A new gene therapy application and approval process and a timetable for submission, review and approval of protocols were also adopted. A new web site provides the gene therapy information for researchers (http://www.uky.edu/FiscalAffairs/Environmental/hmm/genetherapy/).

5. A standard format for tracking and reporting life safety project status was adopted. Estimated project completion dates were included for open projects. To date, 151 projects have been completed with a value exceeding $8.8 million in state funds. For a detailed list of projects, see the University Fire Marshal department report.

6. A comprehensive x-ray safety program was developed for medical and academic x-ray equipment. The program, which includes a safety manual, x-ray registration, facility inspections, and safety training, has been approved by the Radiation Safety Committee. The program is now being implemented. A laser safety program was also implemented.

7. The following objectives were completed as part of UK's Institutional Effectiveness Plan:

   Environmental Protection
   - Comply with the state groundwater protection regulations.
   - Improve the process for obtaining air monitoring services for lead and asbestos.
   - Improve environmental quality of the North Farm by remediation of disposal sites.

   Hazardous Materials Management
   - Ensure compliance with CDC and NIH guidelines for gene therapy research.
   - Reduce the amount of hazardous waste shipped offsite by UK.
   - Improve the hazardous materials training programs.

   Occupational Health and Safety
   - Provide safety awareness driver training for UK employees.
   - Evaluate safety conditions of UK facilities and operations.
   - Provide additional safety awareness training for laboratories.

   Radiation Safety
   - Initiate a comprehensive x-ray safety program for medical and academic devices.
   - Expand the laser safety program.
   - Update and streamline the basic, advanced, and annual refresher training programs for radioactive materials.

   University Fire Marshal
   - Improve fire prevention awareness on campus.
   - Improve firestopping of penetrations through fire-rated smoke barrier walls.
   - Improve emergency evacuation planning for the campus.

   Detailed "Reports of Progress" for each department's objective may be found in Appendix I.

Other activities in environmental health and safety:

1. Each EH&S department has a significant training component, and during the past fiscal year, the division provided training for 2,888 faculty, staff, and students.

2. The Employee Safety Handbook was revised and reprinted in December. The major change involved addition of an emergency evacuation plan for the University. This generic plan is applicable to all employees not covered by specific emergency plans.

   The EH&S web pages underwent major revision to follow UK and Fiscal Affairs guidelines. New material added to the web site included addition of biosafety information (infectious agents, recombinant DNA and gene therapy), injury and illness statistics, and a personal protective equipment program.

   In October, the Radiation Safety office published the first issue of a newsletter for users of radioactive materials and radiation-producing devices. This electronic newsletter was distributed to users via e-mail and is posted on the departmental web site. Two issues of the newsletter were distributed this fiscal year.

3. The division had a significant number of personnel changes during the year. **David Hibbard**, CIH, was hired to fill the position vacated by Paul Restivo as director of Occupational Health and Safety, effective February 1. Karen Early resigned as industrial hygienist; **David Acker** was hired to fill that position, effective December 20. Erin Foley resigned as laboratory safety specialist; **Lee Poore** was hired to fill that position, effective April 10.

   Kevin Gaff was hired as hazardous materials specialist, effective January 13. **Peggy Quisenberry** was hired as staff support associate II, effective March 13.

   David Rich was promoted to radiation health technician II, effective August 28.

Key Indicators for EH&S

The numbers and costs below are provided to give an indication of the level of activity within EH&S units when conducting their day to day business.

Environmental Protection

Asbestos/lead paint samples analyzed	588
Asbestos abatement projects	110
Asbestos abatement costs	$502,000
USTs removed/upgraded	21
PCB transformer inspections	47
PCB transformers removed	2
Environmental samples analyzed (air, water, soil, etc.)	984
Environmental remediation costs	$147,446
Asbestos awareness class attendees	179

Hazardous Materials Management

Hazardous waste generators	360
Pounds of waste shipped	142,594
Waste disposal cost	$95,668
Waste containers picked up	5,933
Fluorescent bulbs recycled	53,620
Batteries recycled	31,593
Hazardous waste class attendees	248
Incidents/releases responded to	31
Biohazard and rDNA proposals reviewed	28

Occupational Health and Safety

Research laboratories in the Chemical Hygiene database	1,162
Laboratories inspected	245
Fume hoods tested	880
Indoor air quality investigations	21
Training class attendees:	
Lab safety/chemical hygiene plan	350
" " on-line	91
Hazard communication	40
Respiratory protection	5
Bloodborne pathogens	5
Ergonomics	15
Indoor air quality	30
Ladder safety	20
Vehicle safety	28
New employee orientation (EH&S)	376
SuperVision (EH&S)	197

Radiation Safety

Authorized users	233
Authorized laboratories	348
Radionuclide purchases, cost	$958,250
Radionuclide purchases, Curies	59.2
Radionuclide orders received	2,416
Laboratory inspections/surveys	1,545
Sealed source leak tests	175
Patient therapies:	
Brachytherapy	51
Thyroid	52
Radiation safety class attendees	611
Dosimetry (film badges, etc.)	10,647
Waste disposal, dry solid (cu. ft.)	
Long-lived, radioactive	633
Short-lived, decayed (non-radioactive)	262.5
Waste disposal cost	$109,686
Survey meters calibrated	204

University Fire Marshal

Fire extinguishers inspected	6,015
Fire extinguishers serviced	157
New fire extinguishers purchased	401
Fire extinguisher/fire prevention training attendees	693
Fire alarms*	352
Working fires	8
Plan reviews of new construction/renovation projects	222

* *The total is low due to under reporting of false alarms. Efforts are being made to improve reporting in FY2000-01*

Hazardous Waste
Cost and Quantity Trend Report

Total UK Regulated Waste Disposal

Fiscal Year	Gross weight* (lbs)	Disposal Cost** ($)
1984-85	70,314	12,000
1985-86	57,968	12,000
1986-87	45,053	32,000
1987-88	83,726	141,000
1988-89	110,876	112,000
1989-90	116,808	124,000
1990-91	143,470	221,000
1991-92	272,244	275,000
1992-93	232,882	329,000
1993-94	126,271	298,949
1994-95	150,400	317,803
1995-96	240,336	294,644
1996-97	188,476	317,591
1997-98	181,062	254,932
1998-99	149,054	226,506
1999-00	146,950	95,668

* Includes hazardous, mixed radioactive-hazardous, TSCA, medical and other regulated waste; excludes other radioactive and Hospital biohazard waste.

** Includes all expenses associated with waste disposal.

Hazardous Waste Disposal*

Calendar Year	Gross weight (lbs)
1984	56,560
1985	63,350
1986	57,933
1987	91,459
1988	88,739
1989	82,221
1990	106,616
1991	148,732
1992	197,640
1993	111,531
1994	114,483
1995	175,426
1996	178,105
1997	174,282
1998	124,503
1999	86,724

* Waste regulated under RCRA Subtitle C, the Resource Conservation and Recovery Act. Data taken from the Hazardous Waste Annual Reports for all UK areas.

Radioactive Waste
Cost and Quantity Trend Report

Fiscal Year	Volume (cu. ft.)*	Cost**
1992-93	953	$134,300
1993-94	473	90,200
1994-95	180	8,000
1995-96	120	71,400
1996-97	90	29,500
1997-98	120	46,400
1998-99	315	21,100
1999-00	633	109,700

* Volume of dry solid radioactive waste only.

** Excluding mixed radioactive-hazardous waste.

Source: Annual Kentucky Radioactive Waste Reports filed with our regulatory agency in Frankfort.

Recycling Program Summary

The UK recycling program is operated by the Recycling Office of the Physical Plant Division and depends for its success on the participation and cooperation of the entire UK community.

Trend Report

	1997-98	1998-99	1999-00 Jul-Dec only
Total Solid Waste Discarded, tons	**7,805**	**8,333**	**3,988**
Total Recycled, tons	**1,153**	**1,312**	**626**
Percentage of Solid Waste Recycled	**12.9%**	**13.6%**	**13.6%**

Injury and Illness Trend Report

The data below are presented for all employee injuries reported to Worker's Compensation as related to us by the University's third party administrator. Two years prior data and current year 2000 are shown for comparison. For additional injury and illness statistics, see the Occupational Health and Safety department report.

The incident rates are based on OSHA recordable injuries and illnesses per 100 employees. The current (1997 Bureau of Labor Statistics) incident rate for education services is 2.9, which does not include education services with a hospital or health care facility.

Measure	2000 to date	1999	1998	1997
All employee injuries reported	540	1221	1357	1433
Injuries involving lost work days	60	161	258	250
Number of days lost	1017	2,906	6,043	5,066
Injuries involving restricted work days	73	167	105	90
Number of restricted work days	1701	4,894	7,244	7,470
Fatalities	0	2	0	0
Incident rate *	5.08**	3.23	4.72	4.83

* Incident Rate = OSHA recordable accidents per 100 employees

** Estimate

Major categories of injuries	2000 to date	1999	1998	1997
Cut from needles other medical devices	36	17	54	113
Cut from non medical devices	41	37	34	32
Exposure to blood/body fluids	54	31	45	52
Exposure to airborne viruses	34	22	21	10
Falls	24	13	34	32
Falls from icy surface	32	34	62	32
Strain from lifting	165	114	87	41
Strain from pushing/pulling	154	142	54	54
Struck by object	37	31	33	54

Parts of the body	2000 to date	1999	1998	1997
Back	77	163	193	152
Eyes	25	62	19	20
Finger	125	295	220	213
Hand	46	103	113	93

Major categories of occupational illnesses	2000 to date	1999	1998	1997
Carpal tunnel	5	25	18	19
Musculoskeletal injuries	138	315	182	147
Positive TB test	0	2	3	8
Skin disorders	22	13	21	18

Significant Occurrences

This is a summary report on major incidents, agency actions, and other regulatory activity involving UK, as well as EH&S activities during this fiscal year.

NIOSH Assessment of Pharmacy

On September 20, a team from NIOSH conducted an on-site Health Hazard Evaluation of the Pharmacy Building. The evaluation was requested by UK in response to concerns about indoor air quality. The NIOSH team returned on October 18-19 to conduct industrial hygiene studies. Their final report has not been received.

Gene Therapy Adverse Event

On January 28, a "serious adverse event" occurred during a gene therapy protocol at UK Hospital. It was later determined that the patient's symptoms (chills, joint and chest pains) were probably not related to administration of the gene therapy vector. The patient's pain resolved, and the gene therapy cycle was continued. The event was reported to NIH.

Radiation Safety Inspection

From March 28 through April 4, UK's five radioactive materials licenses were inspected by the state Radioactive Materials Section. Fourteen deficiencies were noted, most in the medical use of radioactive materials. All deficiencies have been corrected.

Mercury in Wastewater

On May 2, the city notified UK that the sewer discharge from Chemistry-Physics Building was in significant noncompliance with the permit limits for mercury; a compliance plan has been approved by the LFUCG, Division of Sanitary Sewers. UK Medical Center continued to be in noncompliance but showed progress towards compliance in the last quarter of the year.

Formaldehyde Exposure

On June 6, Occupational Health and Safety reported to Autopsy and Surgical Pathology that their workers were exposed to formaldehyde (a carcinogen) levels exceeding standards. OHS is working with the units to implement the necessary programs to reduce exposure and comply with the OSHA formaldehyde standard.

Hazardous Waste Inspection

On June 15, UK was inspected by the state Division of Waste Management. Our TSD facility, the Environmental Quality Management Center, was in compliance. Labs were inspected in Chemistry, Pharmacy, and Medical Center. One violation was cited in Pharmacy for improper labeling. Several other issues raised in Pharmacy were resolved upon reinspection on June 19.

Fire Alarm System Inspection

On June 19, the state Division of Code Enforcement inspected UK's proprietary receiving station located at 305 Euclid (UK Police Department). The inspection report dated June 28 noted five deficiencies. EH&S is working with UKPD and PPD to identify solutions to the issues raised. Part of the correction will be completion of the Central Fire Alarm project.

Cost of Enforcement Actions
Since 1990

The figures below include penalties imposed on the University as part of state and federal enforcement actions. They do not include the costs of corrective actions or environmental remediation.

	1990	
US EPA	PCB violations, Lex Campus	$27,250
US EPA	PCB violations, Med Center	$48,250
	1991	
KY Div. of Water	Jet fuel release	$1,330
	1992	
KY Div. of Waste Mgmt.	Hazardous waste violations	$20,000
	1993	
KY Div. of Waste Mgmt.	Hazardous waste violations	$5,000
	1995	
KY Labor Cabinet (KOSH)	Asbestos violation, Admin Building	$500
KY Div. for Air Quality	Incinerator violation, Med Center	$5,000
	1996	
KY Div. for Air Quality	Asbestos violation, Central Htg Plant	$12,500
KY Labor Cabinet (KOSH)	OSHA violations, Central Htg Plant	$18,000
US EPA	PCB violations, Lex Campus	$22,597*
	1997	
KY Div. of Waste Mgmt.	Hazardous waste violations	$25,000
	1998	
KY Labor Cabinet (KOSH)	Asbestos violation, Taylor Ed Building	$5,625
	1999	
KY Div. of Waste Mgmt.	UST violations, Med Center	$1,500
	total	**$192,552**

* Includes a penalty payment of $3,600 and a Supplemental Environmental Project of $18,997 (for removal of a PCB transformer at Gillis Building).

EH&S Certificates of Appreciation

In recognition of their outstanding contribution to safety at the University of Kentucky, the following certificates of appreciation have been awarded.

1996	Herbert Strobel	Animal Sciences
	Thomas Vanaman	Biochemistry
	Robert Toreki	Chemistry
	Claude Cornelison	Auxiliary Services
	Greg Shiddell	Auxiliary Services
	Joseph Mallek	Medical Center Physical Plant Division
	Relon Hampton	Whitesburg Community College
	Jerry Hensley	Whitesburg Community College
	Mike Polashock	Paducah Community College
	Rae Ann Egner	Paducah Community College
	Maintenance Department	Paducah Community College
	David Campbell	Henderson Community College
	Judith Chabot	Ashland Community College
1998	Mary Ferlan	Wellness
	John Summersett	Physical Plant Division
	Ralph Christensen	Allied Health, Clinical Sciences
	Creighton Trahan	Office of the University Veterinarian
	Kenneth Dickey	Laboratory Animal Resources
	Larry Iten	Laboratory Animal Resources
	Susan Overman	Serology and Virology
	Tomi Ross	Hospital Safety Office
	Carl Nathe	Public Relations
1999	Donald Thornton	Parking and Transportation
2000	Bob Brashear	Ag Management Operations
	Ted Jenkins	Chemistry
	Steve Evans	Residence Life
	Tony Ralph	Residence Life
	Marcia Shrout	Residence Life
	Stephen Stauffer	Residence Life
	Melanie Tyner-Wilson	Residence Life
	Loretta Hill	Custodial Services
	James Bryan	Surplus Property
	Brian Butler	Pharmacy
	Norman Goodman	Pathology
	Joseph Mallek	Medical Center Physical Plant Division
	Janet Rodgers	Lab Animal Resources
	Oney Vanlandingham	Center for Applied Energy Resources

Report of the
Environmental Protection Department

ENVIRONMENTAL PROTECTION

Major Events and Projected Projects

FY 99-00

Major Events

- Continued corrective action took place at the second of four waste sites on the North Farms, according to a state-approved plan. Waste containers and contaminated soil were removed from Site #2 (near the rear of Spindletop Farm) and properly disposed, and a complete report submitted to the Kentucky Division of Waste Management (KDWM), LFUCG's Division of Environmental & Emergency Management (DEEM), and the Royal Spring Water Supply Protection Committee. We anticipate a "no further action" letter from the state for that site.

- "Confirmatory sampling" associated with two large concrete underground storage tanks (USTs) at the Central Heating Plant was completed, in accordance with EPA and DEEM directives. The sampling included multiple soil borings and seven groundwater monitoring wells. Closure of the project is expected from KDWM later this year.

- On July 15, it was reported that an underground storage tank at the Woodford County Farm was removed by PPD in violation of the UST regulations. The state was notified and a certified UST contractor was brought in to complete the removal in compliance with regulations.

- All regulated USTs that did not meet current standards were permanently closed, as were selected (unregulated) College of Agriculture tanks located around the state. Twenty-one tanks were removed between November 1999 and February 2000. At several locations, contaminated soil was encountered and had to be excavated. As of the beginning of the current fiscal year, the University has only five regulated USTs remaining in service.

- A Notice of Violation was received in March 2000 from the Kentucky Division for Air Quality (DAQ) for improper open burning on Coldstream Farm. Although the College of Agriculture had obtained approval to burn a large brush pile, the DAQ inspector reported the presence of mattresses, treated wood, fencing, tires, and other improper items in the pile. No penalty has been assessed to date, but the College of Agriculture was required to submit a written program designed to prevent a recurrence of the improper burning.

- In response to a complaint, the DAQ conducted an investigation of the construction site for the new Mechanical Engineering Building. The complaint arose after a buried steam line covered with asbestos insulation had been uncovered. The University responded to the incident with all appropriate measures, but a contractor's employee felt the need to contact DAQ. The DAQ inspector found no evidence of improper procedures and no citations were issued.

- In order to define and clarify the University's air monitoring requirements, a draft specification for asbestos and lead air monitoring was prepared. The specification is designed for use on asbestos or lead abatement projects, and will standardize the way in which these services are provided by various consultants.

- Eight life safety projects were undertaken for UST, asbestos, and PCB removal. The combined value of the projects was approximately $283,600.

- The campus Groundwater Protection Plan underwent a major revision in conjunction with the mandatory 3-year update cycle. The revised plan was submitted to the Kentucky Division of Water.

- A new fact sheet was prepared to provide instructions for surplusing lab and medical equipment. The fact sheet focused on how hazardous materials are to be handled, and was posted on several EHS web pages.

- Additional activities related to the Corrective Action Plan for the new Southeast Community College –Whitesburg Academic/Technical Building site were conducted to further determine the extent of soil and groundwater contamination related to four former USTs, as well as several off-site USTs. In addition, monthly groundwater extraction events were performed to remove contaminated groundwater. The project is expected to continue for many years.

- A new Asbestos Awareness training program was developed, in a joint effort with the Lexington Campus Physical Plant Division's Safety Officer. The new program incorporates specific UK examples and information into a commercial training package, and also includes a news story involving a local person. The new training package is available in VHS, CD-ROM, and online formats.

- An out-of-service PCB electrical transformer was discovered in Barker Hall / Buell Armory. The transformer was registered with EPA and reported to the local fire department, as required by regulations. Subsequently, a contract was let to remove and properly dispose of the equipment.

- A PCB spill occurred at Haggin Hall when a rigging contractor was removing electrical switchgear in preparation for removal of the adjacent PCB electrical transformer. PCB oil leaked from a cracked bushing onto the underlying concrete pad. Following the removal of the transformer, the underlying concrete surface was cleaned and then taken up and properly disposed.

- A large-scale PCB spill occurred at the Student Center when a hose failed, causing PCB-contaminated fluid to spray the immediate vicinity. The hose was part of equipment being used to reclassify the transformer to non-PCB status. The affected area was cleaned up in accordance with EPA guidelines, and confirmatory sampling was performed to document the adequacy of the cleanup. The contractor to whom the failed equipment belonged was held responsible for the financial cost of the cleanup.

- In separate incidents, X-ray equipment was removed from locations in the University Hospital, the Chandler Medical Center, and Lexington Community College without prior testing for the presence of PCBs. In one case, the suspect oil was spilled. Subsequent testing revealed that PCBs were not present in the oil.

- UK experienced continued "significant noncompliance" with the Medical Center's LFUCG Industrial User Permit as a result of elevated concentrations of mercury in the wastewater discharges.

- The University was informed that excessive mercury concentrations were present in the wastewater discharge that serves the Chemistry-Physics Building. A compliance plan and schedule were developed and submitted to LFUCG, after consultation with several internal units. The majority of the plan is expected to be executed during the current fiscal year.

- Improper disturbance and/or removal of known or presumed asbestos-containing materials took place at several locations (listed below). Both contractor and UK personnel were involved. Although the circumstances vary, in each case an investigation was performed and remedial measures including, but not limited to, additional education and awareness, were provided. Air monitoring and other information suggested that exposure to harmful levels of airborne asbestos was not likely.

    - CAER (disturbance of nonfriable glue dots)
    - Barker Hall (disturbance of nonfriable window putty)
    - German House (disturbance and removal of roofing)
    - Scovell Hall (disturbance of plaster and nonfriable flooring)
    - Medical Center (suspect materials found in dumpster)
    - Coldstream Farm (disturbance of ACM during building demolition)
    - Coldstream Farm (attempted sale of buildings - no asbestos testing)

- A new service was provided to Surplus Property. Monthly inspections of the Surplus Property auction materials are now conducted by Environmental Protection personnel to identify suspect asbestos-containing or PCB items.

- A database of all above ground storage tanks (ASTs) owned or operated by UK was compiled and is being updated in the current fiscal year. The database will be used in complying with various spill protection or emergency response regulations.

- Primarily due to the changing regulatory climate, the University Hospital ceased operation of its medical waste incinerator in February 2000. A contract waste disposal company now handles the majority of that waste stream.

<u>Key Indicators/Routine Functions</u>

- Over **106** Service Center projects
- Asbestos abatement project activity (including pre-abatement testing and air monitoring) - approximately **110** projects totaling approximately **$502,000**
- Sampling for asbestos – **511** samples (**$12,489** survey/testing cost)
- Sampling for lead-based paint – **77** samples (**$2,607** testing cost)
- Other environmental sampling (air, water, soil, waste, etc.) – **984** samples
- Monitoring compliance of underground storage tank leak detection methods
- Property visits - demolitions, Real Property acquisitions, selected leased property
- Building "audits" for asbestos condition - **25** locations

- USTs - **21** tanks removed
- PCB transformer removals – **2** transformers removed
- PCB transformer inspections (quarterly) – **47** inspections
- Training (asbestos awareness) – **179** people
- Environmental remediation costs - **$147,446**

Pending Projects (FY 00-01)

- Fayette County Farms - remediation of Site #4 (third of four sites)
  benefit: environmental protection; regulatory compliance

- Emergency Planning – prepare a Spill Prevention Control and Countermeasure Plan for the Lexington campus
  benefit: compliance with regulations; environmental protection

- Compliance – develop a tool to evaluate readiness for an EPA multimedia inspection and inform the administration of EPA's enforcement initiative targeting colleges.
  benefit: regulatory compliance; liability reduction

- Training – create and implement lead-based paint training for M&O employees
  benefit: compliance with regulations; safety; worker awareness

- Wastewater – oversee the implementation of the Lexington Campus' plan to reduce mercury in wastewater discharges, and assess a similar program at the Med Center
  benefit: hazard and liability reduction; regulatory compliance

- PCB transformer removals - EH&S oversight
  benefit: hazard source reduction; removal of regulatory risk

- UST Removals – EH&S assistance and oversight on closure of remaining unregulated USTs and assistance with operation of regulated USTs still in service
  benefit: compliance with regulations; environmental protection; liability reduction

- Accreditation – obtain lead-based paint Risk Assessor accreditation for Environmental Protection Service Center staff
  Benefit: employee development; increased service capabilities

Long-term Projects (end of FY 00-01 and beyond)

- Additional assessment of Fayette County farms (site #3 – fourth of four)
- Asbestos guidebook or reference manual
- Lead abatement specification
- Asbestos Management Plans and/or O&M documents
- Compliance monitoring - air, asbestos, lead, USTs
- Additional asbestos awareness training

Program Improvements (over time)

- UST removals - 112 tanks originally, now reduced to 18
- PCB transformers - 58 units in 1984, now reduced to 5 (5 more in reclassification)
- Asbestos - over 250 buildings surveyed
- Asbestos - asbestos awareness training for maintenance & housekeeping personnel
- Asbestos - improved signage in mechanical rooms (high hazard areas)
- Lead-based paint – All childcare facilities surveyed for lead risks
- Lead-based paint – Pilot sample of employee housing assessed
- Radon - over 250 buildings tested and 10 mitigation systems installed

Report of the
Hazardous Materials Department

Hazardous Materials Management
Annual Report July 1, 1999 – June 30, 2000

WASTE

1. Total containers 5,933 total pounds 181,266.
2. Pickups at other non-campus locations 17 total pounds 12,364

HAZARDOUS WASTE CLASSES

Total 12 classes 248 attendees

HAZARDOUS MATERIALS INCIDENTS

Hazardous Materials Management responded to 31 notable incidents

HAZARDOUS MATERIALS COMPLIANCE INSPECTIONS CONDUCTED BY HMM

1. Main Campus 68
2. Off Campus 10

INSPECTIONS (STATE / FEDERAL)

One DEP inspection on 6/15/00 and follow-up on 6/19/00; Facility in total compliance. One lab in Pharmacy was noted for a labeling violation. Results pending (i.e., Notice of Violation).

BIOHAZARD/ rDNA PROPOSALS

28 reviewed by IBC officer and sent to Committee

PUBLICATIONS

UK News/Safety Spotlight – Article on Recycling Batteries

PERMITS

No significant changes in fiscal year 99-00
One minor permit modification for name and phone number changes.

UNIVERSAL WASTE

A Universal Waste Program has been initiated to manage fluorescent light bulbs, batteries, mercury switches, and unused pesticides as defined by the State and Federal EPA. In fiscal year 99 - 00, HMM managed the following volumes of Universal Wastes:

Fluorescent light bulbs	53,620
Batteries	31,593

WASTE MINIMIZATION

1. Located and contracted with new fluorescent light recycling vendor. As a result of this the service units no longer are required to bring the bulbs to EQMC facility as the vendor goes directly to the various buildings. The new vendor also disposes of the bulbs at significant cost savings over the previous vendor.

2. Began on-site analysis of unknown compounds at EQMC laboratory. This results in better compliance with regulations as well as reducing off site lab costs.

3. Increased effectiveness of battery recycling program by working with campus recycling coordinator to provide additional battery drop off containers to different areas. Increased the number of batteries collected from 18,846 to 31,593, a 40% increase.

4. Began recycling empty glass bottles.

5. Significantly reduced year over year waste disposal costs through increased bulking and treatment activities. Overall program costs were slashed from 226,506 to 95,668, a remarkable 58% reduction.

6. Increased level of chemotherapy waste bulking activity to further reduce the amount of chemo waste generated.

7. Located and contracted with a new vendor to recycle used oil for no charge.

8. Bulking of hazardous waste in common drums to reduce the volume and number of containers shipped for disposal resulted in cost savings of $165,000.

9. Acid/Base neutralization operations removed 5,825 lbs. waste from UK's waste stream. 209 lbs. of oxidizers were treated and removed from the hazardous stream as well.

10. 30% reduction in pounds of RCRA regulated waste reported to state and federal EPA in 1999 compared to 1998.

HAZARDOUS MATERIALS MANAGEMENT ACTIVITIES

1. Arranged for disposal of mixed radioactive waste by finding an alternative vendor over last years, which resulted in significant cost savings through aggressive consolidation of various isotopes.

2. Collaborated on the planning of the 18th Annual College & University Hazardous Waste Conference co-sponsored by the University of Kentucky and University of Louisville.

3. Revised the hazardous waste training class and outline to make it more informative and effective.

4. Provided on site Hazardous Materials First Responder Training to both Medical Center Security and UK Police staff.

5. Provided on-site D.O.T. training to Medical Center dockworkers required to comply with Dept. of Transportation shipping and handling regulations.

6. Passed state inspection by DEP at facility level.

7. Served as a host site for a CDC videoconference on the "select agent rule" regarding extremely infectious material.

INTERNET / WEB PAGE

The HMM Web page has been expanded to offer on-line rDNA forms and information, updated training announcements and the on-line chemical redistribution program. The Chemical Redistribution Program has recycled 538 chemicals since March 1998.

CLEANOUTS / PROJECTS

Chemistry – Dr. Guthrie	~600 chemicals
Pharmacy – Dr. Hussain	500 chemicals

Assisted with a large number of fuel tank removals related to the UST deadline.

BIOHAZARD WASTE

4,356 pounds shipped in fiscal year 99-00

Hazardous Waste Cost and Quantity Trend Report

Total UK Regulated Waste Disposal

Fiscal Year	Gross weight* (lbs)	Disposal Cost** ($)
1984-85	70,314	12,000
1985-86	57,968	12,000
1986-87	45,053	32,000
1987-88	83,726	141,000
1988-89	110,876	112,000
1989-90	116,808	124,000
1990-91	143,470	221,000
1991-92	272,244	275,000
1992-93	232,882	329,000
1993-94	126,271	298,949
1994-95	150,400	317,803
1995-96	240,336	294,644
1996-97	188,476	317,591
1997-98	181,062	254,932
1998-99	149,054	226,506
1999-00	146,950	95,668

*Includes hazardous, mixed radioactive-hazardous, TSCA, medical and other regulated waste; excludes other radioactive and Hospital biohazard waste.

**Includes all expenses associated with waste disposal.

Hazardous Waste Disposal*

Year	Gross weight (lbs)
1984	56,560
1985	63,350
1986	57,933
1987	91,459
1988	88,739
1989	82,221
1990	106,616
1991	148,732
1992	197,640
1993	111,531
1994	114,483
1995	175,426
1996	178,105
1997	174,282
1998	124,503
1999	86,724

* Waste regulated under RCRA Subtitle C, the Resource Conservation and Recovery Act. Data taken from the Hazardous Waste Annual Reports for all UK areas.

Key Indicators for Hazardous Materials Management

The numbers and costs below are provided to give an indication of the level of activity within EH&S units when conducting their day to day business.

Hazardous Materials Management

Hazardous waste generators	360
Pounds of waste shipped	142,594
Waste disposal cost	$95,668
Containers picked up:	
Waste	5,933
Good chemicals distributed for reuse	538
Fluorescent bulbs recycled	53,620
Batteries recycled	31,593
Hazardous waste class attendees	248
Incidents/releases responded to	31
Biohazard and rDNA proposals reviewed	28

HMM Objectives for Fiscal Year 2000-2001

1. Begin redistributing solvents reclaimed from distillation process.

2. Arrange for and assist in training of campus personnel as required by DOT/IATA regulations.

3. Add DOT information to EH&S website.

4. Prepare and evaluate UK waste disposal bid which expires in 2001.

Report of the
Occupational Health and Safety Department

Occupational Health & Safety Team Accomplishments

01JUL99 – 30JUN00

1. Developed and administered two safe driver training programs
   - "Straight Truck and Van Driving Strategies"
   - "Automobile Safe Driving Strategies"

2. Conducted a total of 21 Indoor Air Quality Investigations in response to employee solicitations. These investigations involved 18 different buildings with all issues and concerns being resolved. Customer feedback was positive in regards to this effort.

3. Conducted exposure assessment within Surgical Pathology and Autopsy at UK Hospital in identifying employee exposures to formaldehyde. Developed hazard abatement plan to address compliance program development. This project is in progress and is a collaborative effort involving OH&S, UK Hospital and UK College of Medicine.

4. Developed and conducted numerous special training sessions for different units across the university. The development of these sessions involved a collaborative effort between the OH&S team, faculty and non-OH&S staff. Training sessions included a Lab Ergonomics training class for UK clinical laboratory employees/supervisors, a "Proper Use of Fume Hoods" training class for Dept. of Chemistry staff and faculty, and a Safety/Chemical Hygiene Plan Refresher training course for ASTeCC laboratory employees.

5. Developed a UK Accident Report (Form 6) computerized database for identifying and trending non-OSHA Recordable/Worker's Compensation (WC) injuries and illnesses. Beta testing of the database has been completed and standardized trend reports have been developed for dissemination to university sectors beginning AUG00.

6. Initiated analysis, trending, interpretation with associated distribution of WC injury/illness data to all applicable university units in heightening awareness and defining opportunities for hazard abatement.

7. Implemented an exposure data computerized management system. This system will allow for improved retention, retrieval and comparative analysis of employee exposures to air contaminants and noise.

8. Developed and issued a new fact sheet on Chemical Use by Pregnant Laboratory Workers. This information has been incorporated into the UK Model Chemical

Hygiene Plan and has become a standard element of various OH&S training curriculum.

9. Assisted Combs Building occupants in collaborating and organizing a “Building Safety Committee.”

10. Fume Hood Survey Program continues to function effectively.

11. Plan Reviews - team assisted the University Fire Marshal’s Office in providing OH&S review of UK project plans.

12. Established procedure to ensure same day notification of injuries/illnesses for compliance with 803 KAR 2:180, Section 5 and 9.

13. Coordinated effort on providing EH&S booth display at UK Staff Appreciation Day in improving employee EH&S awareness.

14. Collaborated with College of Engineering in conducting Indoor Air Quality training that included UK PPD HVAC Technicians (4 hours).

15. The OH&S Team, UK Wellness Program and LC Physical Plant Division (PPD) Safety collaborated to form a multi-disciplinary team to develop a pilot program for injury and illness reduction that may be applied University-wide. This effort is in progress with initial focus on work groups within LC PPD.

Key Indicators for Occupational Health and Safety

Research laboratories in the Chemical Hygiene database	1,162
Laboratories inspected	245
Fume hoods tested	880
Indoor Air Quality investigations	21

Training class attendees

Chemical Safety/Chemical Hygiene Plan	350
" " on-line	75
Hazard Communication	40
Respiratory Protection	5
Bloodborne Pathogens	5
Ergonomics	15
Indoor Air Quality	30
Ladder Safety	20
Vehicle Safety	28
New Employee Orientation (EH&S Section)	376
SuperVISION (EH&S Section)	197

Academic Participation by OH&S Team
1999-2000 School Year

Provided lectures, seminars, etc. in UK courses (contact hours)

David Acker
Preventive Medicine and Environmental Health: Practicum in Advanced Industrial Hygiene, PM-663 (3 hours)

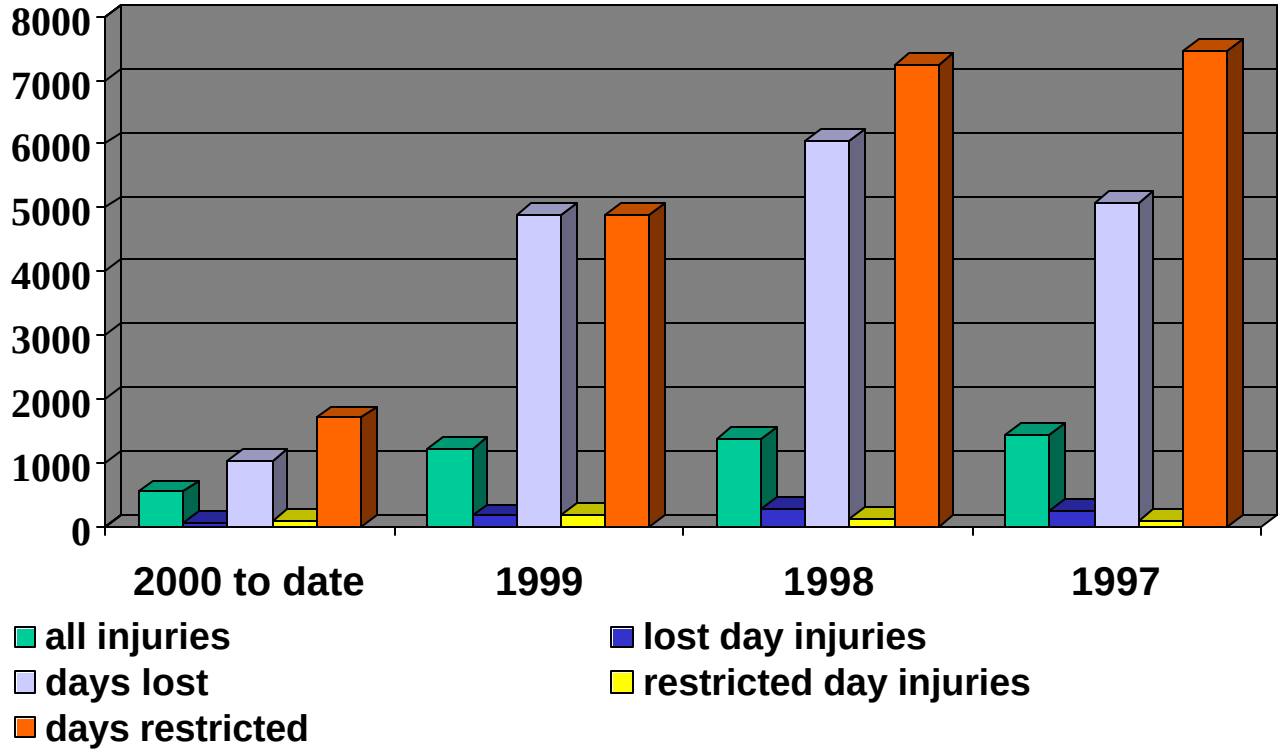
Bob Cadle
Preventive Medicine and Environmental Health: Practicum in Advanced Industrial Hygiene, PM-663 (12 hours)

Taught a one credit hour UK course

Erin Foley, co-instructor
Chemistry: Topics in Chemistry, Chemical Safety, CHE-580

Injury and Illness Trend Report

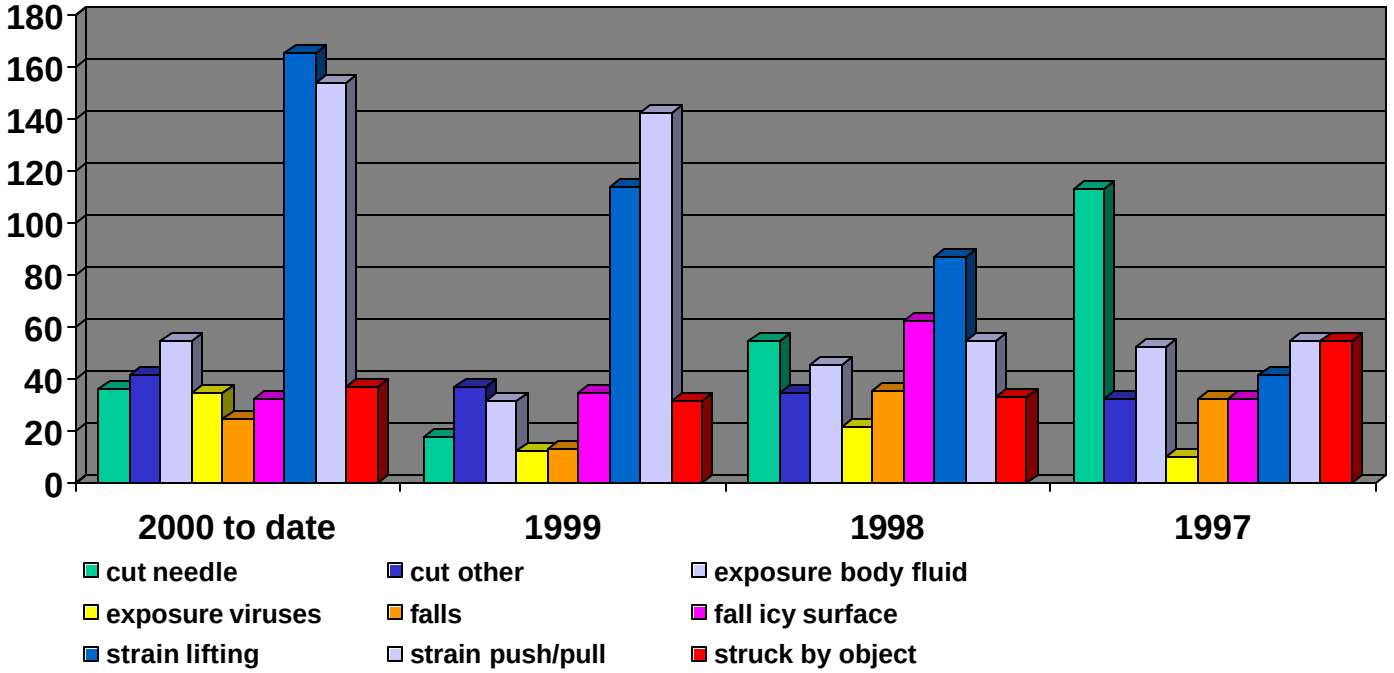
UK Employee Injuries/Illnesses Reported to Worker's Care



Measure	2000 to date	1999	1998	1997
All employee injuries reported	540	1221	1357	1433
Injuries involving lost work days	60	161	258	250
Number of days lost	1017	2,906	6,043	5,066
Injuries involving restricted work days	73	167	105	90
Number of restricted work days	1701	4,894	7,244	7,470

Injury and Illness Trend Report

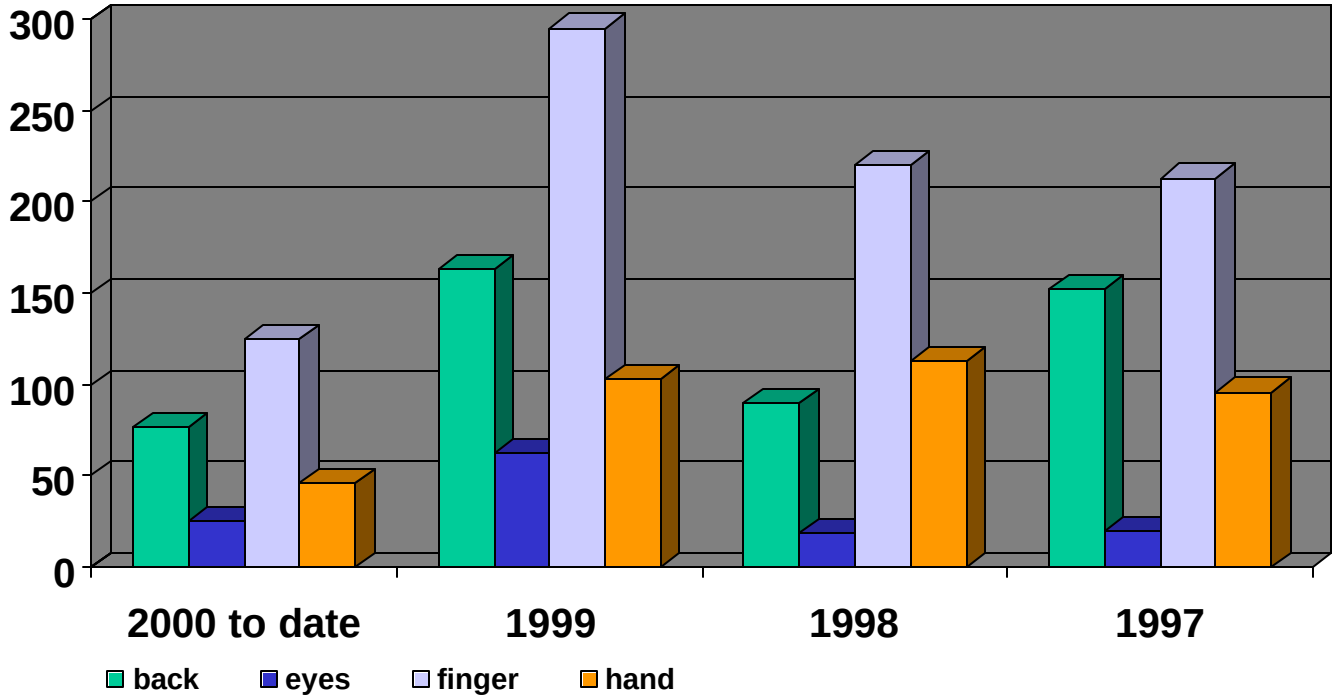
Major Categories of Injuries



Major categories of injuries	2000 to date	1999	1998	1997
Cut from needles/other medical devices	36	17	54	113
Cut non medical devices	41	37	34	32
Exposure to blood/body fluids	54	31	45	52
Exposure to airborne viruses	34	22	21	10
Falls	24	13	34	32
Falls from icy surface	32	34	62	32
Strain from lifting	165	114	87	41
Strain from pushing/pulling	154	142	54	54
Struck by object	37	31	33	54

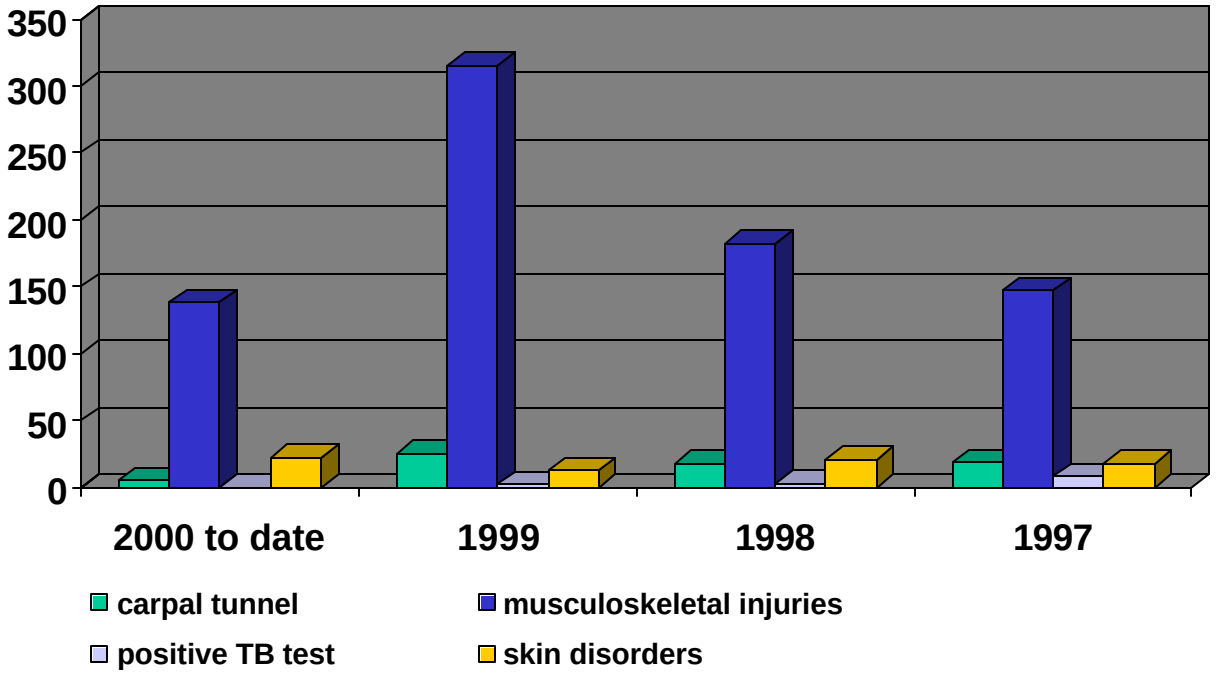
Injury and Illness Trend Report

Major Parts of the Body Involved in Occupational Injuries



Parts of the body	2000 to date	1999	1998	1997
Back	77	163	193	152
Eyes	25	62	19	20
Finger	125	295	220	213
Hand	46	103	113	96

Injury and Illness Trend Report



Major categories of occupational illnesses	2000 to date	1999	1998	1997
Carpal tunnel	5	25	18	19
Musculoskeletal injuries	138	315	182	147
Positive TB test	0	2	3	8
Skin disorders	22	13	21	18

Report of the
Radiation Safety Department

Fiscal Year 1999-2000
Radiation Safety Office Report
for the
University of Kentucky
Environmental Health and Safety Division

Prepared for
Harry Enoch, Director
Environmental Health and Safety

August 14, 2000

by

Bob Wilson, Director
Radiation Safety Office

Radiation Safety Office Accomplishments

The items listed below were Major Business Objectives for the EH&S Division in FY1999-00 assigned by the Vice President of Fiscal Affairs:

1. Three radioactive material license safety programs were completely revised and submitted to the KY Radiation Health Branch on September 10, 1999. A request for additional information is in progress. The result will be a new five-year license period.

2. The radiation safety training program was redesigned and streamlined. Two new standard training courses were developed and initiated, eliminating scheduling and attendance problems.

3. The Radiation Safety Manual was revised and updated. It was filed with the KY Radiation Health Branch on September 10, 1999. Licensed approval is pending (see 1. above).

4. Laser device registration and training was completed.

5. A comprehensive x-ray safety plan, including registration, inspections and training, was developed and approved by the Radiation Safety Committee.

Additional Radiation Safety Office accomplishments for the year

6. Three major radioactive waste clear-outs for final disposal were completed, February, March and April (none in calendar year 1999, an unusual event). In the process, a large number of unused sealed sources were removed from long-term storage and shipped out. A routine waste shipment was made in June. The circumstances bias the 1999-00 waste volume total.

7. A radioactive material shipping regulations training course was conducted.

8. The RSO served on the VA Radiation Safety Committee, the Medical Center Hazardous Materials Management and the Environment of Care Committees. He also served on the human subjects research Radioactive Drug Review Committee and the Institutional Review Board, reviewing over 250 protocols.

9. The Senior Health Physicist attended the national Health Physics Midyear Symposium.

10. One Radiation Health Technician attended the Oak Ridge “Radiation Accident Victim Response” course.

11. The radioactive material package processing system was revised and streamlined, with many positive comments from customers.

12. Customized radiation safety manuals were written for UK Police and Markey Center Nursing and training provided for them.

13. Developed and initiated a radioactive waste pick-up and processing schedule, resulting in improved workflow.

14. Equipped another available vehicle to provide assistance and redundancy with radioactive waste pick-ups and handling.

15. The RSO and Assistant RSO attended and participated in the annual Southeastern University RSO Conference.

16. Developed and initiated a verification and clearing process for waste that has passed through its storage period for release as ordinary waste.

17. The five-year authorization renewal program for UK Authorized Users has been caught up and is now a routine operation.

18. The RSO attended the National Health Physics Society meeting and was made President-Elect of the RSO Section of the Society.

Academic Participation by EH&S Staff
1999-00 Academic Year

1. Gave lectures, seminars, etc. in UK courses. (contact hours)

Bob Wilson

Occupational Health and Safety: Occupational and Environmental Health,
PM 601 Radiation Dose Risk, (1 hour)
Industrial Uses of Radiation, (1 hour)

Fred Rawlings

Radiological Allied Sciences: Fundamentals of Radiation Biology, RAS-540
(1 hour)

2. Taught undergraduate and graduate students as part of EH&S safety courses.

Gerald Schlenker

Laser, Basic and Advanced Radiation Safety courses

Fred Rawlings

Basic and Advanced Radiation Safety courses as backup)

Bob Wilson

Basic and Advanced Radiation Safety Course (as backup)

3. Trained undergraduate and graduate students in safety areas relevant to their curricula (while they were part-time EH&S employees).

Radiation Safety—5 students

Key Indicators for Radiation Safety

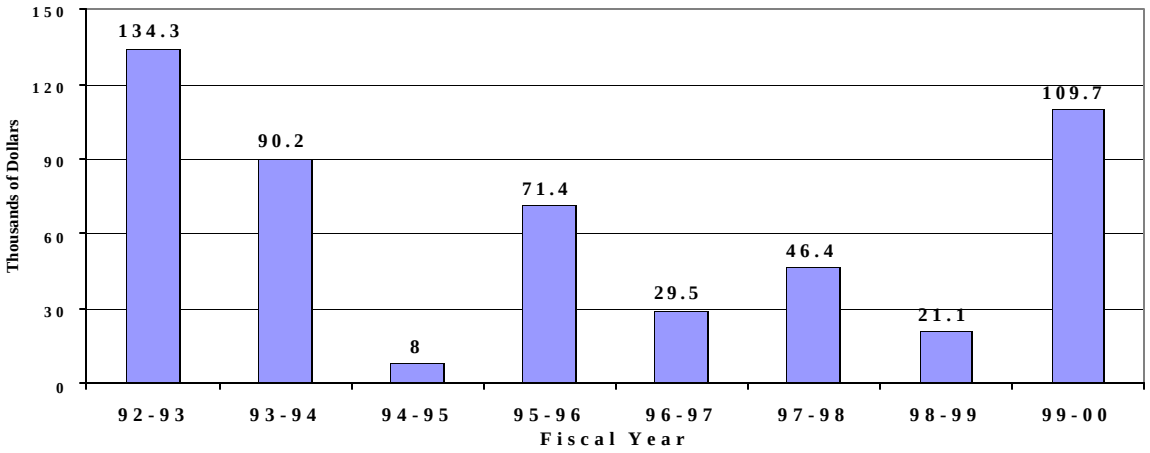
The numbers and costs below are provided to give an indication of the level of activity within EH&S units when conducting their day-to-day business.

Radiation Safety

Authorized users		233
Authorized laboratories		348
Radionuclide purchases, cost		$958,250
Radionuclide purchases, Curies		59.2
Radionuclide orders received		2,416
(Orders dropped last year due to changes in Nuclear Medicine procedures)		
Laboratory inspections/surveys		1,545
Sealed source leak tests		175
Patient therapies		103
Brachytherapy	51	
Thyroid	52	
Radiation safety class attendees		273
Dosimetry (badges, etc.)		10,647
Monthly	615	
Quarterly	865	
Waste disposal, dry solid (cu. ft.)		
Long-lived, radioactive		633
Short-lived, decayed (non-radioactive)		262.5
Waste disposal cost		$109,686
Survey meters calibrated		204

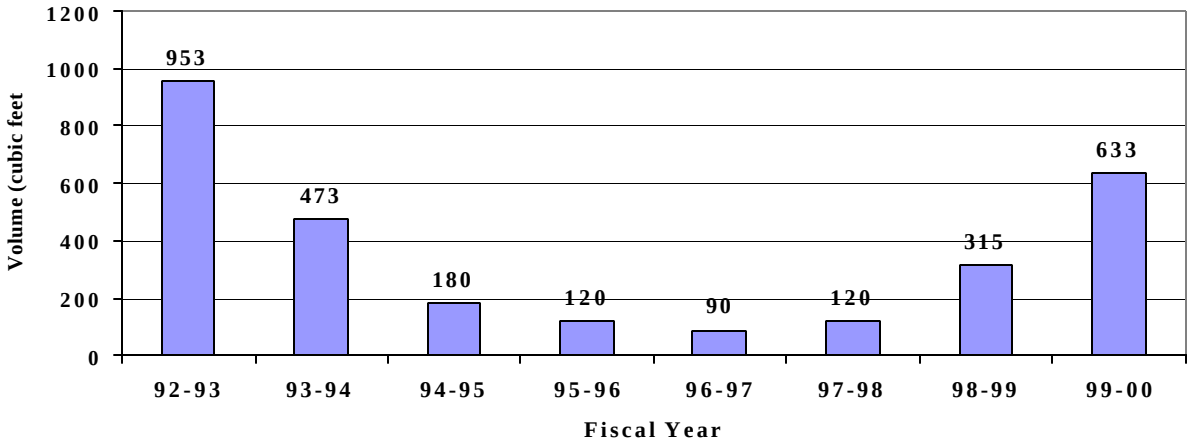
Radioactive Waste
Cost and Quantity Trend Report

Cost for Disposal of Radioactive Waste



Excluding mixed radioactive-hazardous waste.

Volume of Radioactive Waste



Volume of dry, solid radioactive waste only, shipped.

The Annual Kentucky radioactive waste report was filed with our regulatory agency in Frankfort.

Significant Occurrences

This is a summary report on major incidents, agency actions, and other regulatory activity involving UK this fiscal year.

Radioactive Material License Inspections

Regulatory inspections were conducted by the Kentucky Cabinet for Health services, Radioactive Materials Section on March 28 – 31 and April 4. The inspections included those licensed activities conducted under UK Broad Academic, Broad Medical and Teletherapy/Gamma Knife licenses. Two citations and five recommendations were issued for the Broad Academic activities. Nine citations and nine recommendations were issued for the Broad Medical activities. Three citations were issued for the Teletherapy/Gamma Knife activities. Corrections were promptly made and the required timely response made to the Agency. The corrective actions were accepted, and all licensed activities were returned to full compliance. Plans and actions continue in the form of a radiation-producing (x-ray) machine safety program and an enhanced oversight program for medical Center activities.

Incidents:

a. Sept. 13, Dr. Porter, Pharmacy, 423. Approximately 10 microcuries of C-14 dry waste was apparently removed from the lab by the Systems Management staff. The waste was in a posted box, but the lid was apparently left off. A search of appropriate dumpsters was made, but the material was not found. The Systems Management training program has been enhanced and better communications with the contractor established. The loss did not require reporting to Human Services.

b. Oct. 13, Dr. Roszman, Dept. of Microbiology, MC, MS-414. A 5-gallon liquid radioactive waste carboy fell over, spilling about 50 ml of H-3 waste. The lab staff reacted promptly. Jerry Schlenker responded, helped with the cleanup and performed the final survey to document adequate decontamination. There were no personnel exposures.

c. Oct. 20, Dr. Waechter, Dept. of Biochemistry, MC. David Rich, a Radiation Safety staff member, was processing a bag of radioactive dry waste from Dr. Waechter's lab when he suffered a puncture wound from glass sharps. Mr. Rawlings conferred with Dr. Waechter. Mr. Rich reported the incident through channels and received a tetanus shot. He suffered no adverse reactions, and urinalysis results showed no detectable uptake.

d. Nov. 19, Radiation Safety Office. A 250 microcurie C-14 package for Dr. Davidson was lost from the Radiation Safety Office lab. Extensive follow-up, including searches of the premises, contact with all AUs receiving packages that day, lab visits, etc., failed to find the package or discover any obvious cause for the loss. However, the package receipt, holding and disbursement system is being changed to enhance process and storage security.

e. January 11, Dr. Conrad, Nuclear Medicine, 217 Markey Cancer Center. Martha Saylor, Chief Nuclear Medicine Tech., and Dr. Shih were administering a 140 mCi I-131 therapy dose via an external stomach tube. The system tubing parted, getting I-131on Ms. Saylor's gloved hands and lab coat. At the same time, the patient coughed through his trach opening, contaminating Ms. Saylor's hair. Prompt clothes change and washing was done, but Ms. Saylor was significantly contaminated on the fingertips of both hands. Bioassays and skin dose calculations indicate fingertip skin doses of 95 rem and a thyroid dose of 10 mrem, with a committed effective dose equivalent of 10 mrem. No adverse effects are anticipated for Ms. Saylor. Nuclear Medicine has taken steps to ensure that the particular tube administration method will not be repeated.

f. February 02, 2000, Dr. Kaetzel, Dept. of Pharmacology, Room MS 363 – Dr. Kaetzel reported the apparent loss of a 0.5 mCi order of P-32. Someone thought the box was empty and put it in the trash on Feb. 01. A check found that the trash was picked up on the evening of Feb. 01. Dr. Kaetzel shut down the lab for the day and held a staff meeting on security procedures on Feb. 03. He has had no problems or citations over the past year. There is no conceivable route of exposure to any individual. The material will rapidly reduce through natural decay to an essentially nonradioactive state (less than 0.5 uCi in 140 days).

Other

g. Committee Responsibilities, KMSF Facilities: Dr. Simmons and Mr. Wilson investigated the Committee's responsibilities for KMSF-owned and/or operated radiation facilities (currently Maysville and Berea radiation medicine centers). The conclusion was that such operations were meant to be, and are, responsible to the UK Radiation Safety Committee. Dr. Ibbott and Mr. Wilson will conduct tours of the current facilities soon to verify that a full radiation safety program is in place. The Radiation Safety Office will review personnel dosimetry results.

h. Misadministrations: Two prostate I-125 seed therapy misadministrations occurred in June. In removing seeds found in the bladder, one seed in each patient was damaged. There was apparently no release of I-125 into the patients, and there was no adverse radiological effect. The required reports have been filed with the Kentucky agency.

i. Maysville Cancer Treatment Center – Effective Nov. 1, UK added a functioning cancer treatment center in Maysville, KY. Details on the radiation safety responsibility are being sought.

Report of the
University Fire Marshal

MEMORANDUM

TO: Harry Enoch
Environmental Health & Safety Director

FROM: Garry Beach
University Fire Marshal

DATE: July 27, 2000

RE: Annual Report
Fiscal Year 99-00

The following is a copy of the activity sheet listing some of the major activities of my office:

Fire Marshal's Office
Annual Report Activities—1999-2000

Training—Fire extinguishers/Fire Prevention
>Greek Chapters' house mothers—9 people
>Hall Directors—August 9—40 people
>Resident Advisors—August 17—170 people
>Commons Cafeteria Fire Prevention Table—September 21st.100 people
>Blazer Cafeteria Fire Prevention Table—September 22nd-175 people
>CHE 580—8 people
>Delta Gamma Sorority—October 25, 1999---40 people
>Alpha Omicron Pi Sorority—November 8, 1999—80 people
>Kentucky Clinic Fire Response Guides---December 15th—5 people
>UK Police—March 9, 2000—9 people
March 13, 2000—8 people
March 16, 2000—16 people
March 20, 2000—12 people
>Hazardous Materials Management—March 21, 2000—6 people
>Patterson Office Tower—Dan Abbott (custodial services)—discussed fire prevention and tornado procedures—15 people.

Fire/Life Safety Inspections
>Sorority Inspections—August 2-6
>Lambda Chi Alpha Fraternity--August 2nd: closed
>Fraternity Inspections—August 9-13
>Campus Inspection with State Fire Marshal
>January 26th: Sigma Chi fraternity closed
>Pi Beta Phi—409 Columbia (per request-owns property and house)
>Fraternity/Sorority cursory inspections—February

Professional Training
>CPR—July 23—Garry and Robert
>Principles of Fire Protection Engineering—August 16-20--NFPA/Nashville, Tenn.—Greg
>BOCA Convention—September 13-17—St. Louis—Garry
>"Meet the Personal Computer" training—Robert; completed 8/99
>"FileMaker Pro 4.0" computer training—Greg, Robert, Garry—completed 9/99
>Code Administrators Association of KY Fall Conference—10/18, 19, 20/99
>UK Supervision—11/15-19/99--Garry
>CAAK Seminar—May 8-10,00--Garry

Emergency Procedures (Review/Approval)
>DLAR—Medical Center
>Medical Science Wing—Medical Center
>Implemented program for placing emergency evacuation plans in all buildings. Plan has diagram of floor indication the exits and lists emergency response procedures.
>Worked with Pat Whitlow, Associate Director of Office of Residence Life, in developing a weather alert policy and suggested safety measures to take during a storm.
>Revised evacuation plans for Keeneland, Holmes, Blazer, and German House

Special Projects
>Conducted training fire drill for HD's; and a separate class for RA"s. Involved blocking an exit and filling a corridor with non-toxic smoke. Fire department demonstrated a "thermal imaging" camera. (total 210 people).
>Assisted State in finalizing acceptance tests on SAE Fraternity House.
>Commons Cafeteria: fire prevention educational table for students—September 21st.
>Blazer Cafeteria: fire prevention education table for students—September22nd
>Implemented program to smoke test all cafeteria kitchen stove exhaust systems.
>September 27th: A fire prevention publication developed and issued to faculty, staff, and students.
>January 28, 2000: Sigma Chi Fraternity, 705 Woodland Avenue; closed for the remainder of the spring semester for flagrant fire/life safety violations.
>Wrote article on "Fire Safety in Summer Travel": appeared in May issue of UK NEWS
>Pi Kappa Alpha fraternity closed May 11th for fire code violations

>May 12th, UK employee appreciation day. EH&S sponsored a table and gave a free fire extinguisher to an employee. Germayne Stepp, PPD electric shop, won the unit.

Fires on Campus

>Commonwealth Stadium—transformer fire inside construction site: unit belonged to PPD—July 21, 1999; $30,000
>Annex 5—small fire in lab. Caused when a student started the fire by placing a hot sterilizing rod into an ethanol solution. Minor damage.
>October 14, 1999—Cooperstown Building D. Oven fire. Fire department had to break down the down to enter the room. No physical damage or injuries. Minor smoke damage.
>Hospital Incinerator: January 14th; small fire extinguished with fire extinguishers. No physical damage. Operation procedures were changed. Operator will be retrained.
>Student Center Kitchen—January 25, 2000—grease fire extinguished with a portable fire extinguisher: no physical damage
>Sigma Pi Fraternity—364 Aylesford—fire started by space heater--$100,000 damage: No injuries: Note-the University does not own this building.
>Kinkead Hall—3rd floor, arson: February 12, 2000. $50,000.
>Jewell Hall—March 2, 2000—cigarette thrown into trash can—no damage (potential arson)
>Blanding Tower—March 29, 2000—arson/unknown person burned a campaign poster that was on the bulletin board. No damage.
>Reynolds #1-- 4-13-00, fire in portable dumpster caused by spontaneous combustion of oily rags. No physical damage to building/water damage to floor ($1500/2000).
>Holmes Hall—arson: paper towels set on fire in bathroom. No physical damage. Student was arrested and charged with 1st degree arson.

Major Improvements

>Developed a generic evacuation plan that will eventually be posted in each building. This generic plan will replace an existing plan that had become cumbersome to read.
>Reviewed and tested 8 new wet chemical suppression systems for Auxiliary Services. The tests included a smoke test for each hood receiving the new system. This type test was the first tests ever done on the hoods.

New Programs

>Unit price contracts with Capital Projects for Life Safety Projects
>November 4, 1999 Assisted Medical Center Safety Committee in conducting a total evacuation of the Medical Science Wing in the Medical Center.
>Corridor Utilization Policy—to be fully developed in 2000-2001.

KEY INDICATORS

Fire extinguishers inspected	6015
Fire extinguishers serviced	157
New fire extinguishers purchased	401
Fire extinguishers/fire prevention training attendees	693
Fire alarms*	352
Working fires	8
Plan reviews of new construction/renovation projects	222

*Alarm reports received are believed to be under reported. Efforts are being made to recognize 100% reporting for fiscal year 00-01.

GENERAL DISCUSSION OF ACTIVITIES

Training: A residence hall fire/life training film was developed during fiscal year 98-99. This film is used in residence life training for the hall directors and residence advisors. What is not indicated is that for fiscal year 99-00, this training tape was made available to all students through the University's closed circuit television that's available in all student rooms. We have received verbal confirmation that some students did see the tape through this media but an actual count is not obtainable.

Fire/Life Safety Inspections: What is not reflected in the activities sheet is the building audit program that was begun in 1997. The purpose of this program is to conduct an in-depth inspection of each University building; develop a list of major deficiencies and request funding to correct the deficiencies; and to work with individual departments to get those deficiencies corrected that are the department's responsibility to correct. As a result of this program, major exit deficiencies in several buildings have been corrected. Minor corrections include adding a closer to an individual storage room door. An example of departmental correction would include the elimination of electrical extension cords. Excluding the residence halls and Greek chapters that have on-going inspections, eighty (80) buildings have been audited. The last audit is scheduled for December of 2001. Currently, there are five life safety projects under construction. Additional funding will be needed for future projects.

Emergency procedures: Funding that had been designated for the developing and posting emergency procedures has had to be redirected toward other life safety programs. Currently, we are working with individual departments for them to identify funds to develop and post emergency procedures for their particular building.

Fires on campus: The University continues to be fortunate in that no injuries have occurred as a result of a fire nor has a fire caused major structural damage. Sigma Pi Fraternity experienced a fire with major structural but their house is individually owned. The expense of the fire in Kinkead Hall mainly occurred from cleanup and replacement of equipment.

Major improvements: Testing exhaust hoods that serves major cooking appliance in cafeterias proved to be very beneficial. The noted deficiencies were corrected resulting in better ventilation for cooking vapors.

New programs: As indicated by the Key Factor numbers, plan review activity increased tremendously. This came as a result of the creation of “units price” contracts through the Capital Projects Division. These are smaller capital projects (less than $100,000) that in the past would have been required to be reviewed for code compliance by the State. These projects now are reviewed by the University Fire Marshal’s office.

Life Safety Project Summary

August 2000

Completed Projects

	Building	Description	Cost
	List 1 (1995 bond interest)		
1.	305 Euclid	Approved exit stairway	$20,329
2.	Ag North	Dock/lab separation	23,011
3.	Anderson Tower	Emergency lighting	8,356
4.	Bowman Hall	Corridors/approved exits	75,857
5.	Breckinridge Hall	Enclose open stairwell	22,861
6.	Reynolds #3	Approved exit and steps	1,704
7.	Service Bldg.	Approved shop doors	45,000
8.	Service Bldg.	Stairway doors, self-latching hardware	27,236
9.	Service Bldg.	Approved exit	66,150
10.	Terrell Bldg.	Two approved exit stairways	51,954
11.	Ag South	Exit separation	22,402
12.	Dimmock Bldg.	Sprinkler system	178,819
13.	Memorial Coliseum	Emergency lighting/sprinkler system	120,565
14.	252 E. Maxwell	Electrical upgrade/smoke detectors	10,439
15.	Lex Campus	Fume hood maintenance	88,000
16.	Taylor Ed	Emergency lighting	65,000
		Subtotal	$827,683
	List 2 (1994-96 biennium)		
17.	Med Center	Acid waste risers	$25,000
18.	Med Center	Asbestos abatement, mech. rooms; tile	515,000
19.	Lex Campus	Asbestos abatement, steam manholes	15,000
20.	Ag North	Asbestos abatement, mech. room	133,238
21.	Lex Campus	Asbestos abatement, small projects	99,000
22.	Lex Campus	Asbestos testing	95,246
23.	Central Heating Plant	Emergency generator	50,151
24.	Reynolds #1	Emergency generator, emergency lighting	51,298
25.	Reynolds #2	Emergency lighting	7,137
26.	Reynolds #3	Emergency lighting	8,860
27.	Bradley Hall	Emergency lighting	29,199
28.	Breckinridge Hall	Emergency lighting	42,426
29.	Kinkead Hall	Emergency lighting	10,015
30.	Breckinridge-Bradley-Kinkead	Emergency generator	14,400
31.	Ag North	Exit lights	10,011
32.	Erikson Hall	Fire alarm control panel	727
33.	Erikson Hall	Smoke detection system	37,891
34.	Research #3	Smoke detection system	62,277
35.	Parking #2	Sprinkler system	157,811

36.	Lex Campus	Firemans service pool	199,794
37.	Service Bldg.	Firemans service	
38.	Anderson Tower	Firemans service	
39.	Ag North	Firemans service	
40.	Ag South	Firemans service	
41.	Dickey Hall	Firemans service	
42.	Service Bldg.	Emergency generator/emergency lighting	58,920
43.	Ag North	PCB abatement (East)	42,000
44.	Ag North	PCB abatement (West)	26,215
45.	T.H. Morgan	PCB abatement	36,260
46.	Bowman Hall	PCB abatement	36,244
47.	Law	PCB abatement	34,544
48.	Taylor Ed	PCB abatement	96,997
49.	Med Center	PCB abatement (MS and DS)	216,866
50.	Dickey Hall	PCB abatement	28,913
51.	Bradley Hall	Approved exits	130,198
52.	Service Bldg.	Sprinkler system	142,236
53.	Kinkead Hall	Enclose open stairwells	4,903
54.	Student Center	Asbestos abatement	139,835
		Subtotal	$2,558,612
	List 3 (1996-98 biennium)		
55.	Ag South	Lab ceilings	$168,038
56.	305 Euclid	Enclose open stairwell	20,860
57.	Parking #2	Fire alarm system	12,358
58.	Alpha Tau Omega	Emergency lighting/stairwell doors, magnetic closures	7, 414
59.	Chemistry-Physics	Ventilation, Rm. 30	40,000
60.	Chemistry-Physics	Separate shop, Rm. 72	16,262
61.	Chemistry-Physics	Ventilation, Rm. 72	23,927
62.	Chemistry-Physics	Ventilation, Rm. 71	24,373
63.	Chemistry-Physics	Electrical upgrade, Rm. 114	22,343
64.	Tobacco & Health	Fire alarm system	11,886
65.	Insectary	Fire alarm system	12,105
66.	Commonwealth Stadium	Fire alarm control panel	13,334
67.	Med Center	Upgrade central sterilizer facility, D-83	215,582
68.	Singletary Center	Fire alarm control panel	20,709v
69.	Memorial Coliseum	Sprinkler system	101,533
70.	Med Center	Acid waste risers	87,697
71.	Chemistry-Physics	Fire alarm system, extend a/v devices	40,086
72.	Chemistry-Physics	Fume hoods, teaching labs	2,130,000
73.	Barker Hall	Approved exit stairway	329,349
74.	Pence Hall	Approved exit stairway	299,919
75.	Reynolds #1	Approved exit corridors	75,000
76.	Chemistry-Physics	Neutron detection, Rm. 63	19,491
77.	Administration Bldg.	Smoke detectors/door closures/	80,000

		improved stairs and rails	
		Subtotal	$3,772,266
	Pool projects		
78.	T.H. Morgan	Sprinkler system, flammable-storage room	$600
79.	Seaton Center	Exit lights, Rms. 126, 130	2,550
80.	Taylor Ed	Exit doors, panic hardware	4,270
81.	Poultry Research	Exit lights	1,725
82.	Law	Door closures, exit signs	1,160
83.	Anderson Tower	Door closures, labs	6,200
84.	Ag North	Ventilation, flammable-storage room	420
85.	Business & Economics	Door closures, Rm. 400	160
86.	Insectary	Emergency lighting, Rm. 10	385
87.	Ag South	Door closures, labs	1,500
88.	Business & Economics	Corridor doors, lever type hardware	2,300
89.	Ag Engineering	Door closures, mech. room	185
90.	Alpha Xi Delta	Connect to Silent Knight system	1,000
91.	Alpha Gamma Rho	Connect to Silent Knight system	1,000
92.	Civil Engineering	Approved stairwell gate	400
93.	Ag Engineering	Roof guardrails	490
94.	Tobacco & Health	Flam. storage room door, lever type hardware	400
95.	T.H. Morgan	Door closures, storage rooms	250
96.	Memorial Coliseum	Enclose open stairwell	2,000
97.	Whitehall	Exit sign, emergency lighting, Rm. 29	1,750
98.	Centrifuge Bldg.	Emergency lighting, Rm. 57	490
99.	Pence Hall	Electrical upgrade/emergency lighting	14,265
100.	Tobacco & Health	Sprinkler system	11,928
101.	Business & Economics	Fire alarm system, extend a/v devices	35,640
102.	Ag South	Door closures, mezzanine storage areas	12,300
103.	Ligon House	Smoke detection system	11,693
104.	Mines & Minerals	Sprinkler system	6,112
105.	Chemistry-Physics	Door closures/wire glass, labs	20,359
106.	Taylor Ed	Exit doors, view panels	4,238
107.	T.H. Morgan	Smoke detectors, basement	4,536
108.	T.H. Morgan	Fire alarm system, extend a/v devices	550
109.	252 E. Maxwell	Exit door and panic hardware	1,500
110.	Kastle Hall	Enclose open stairwell/exit doors, panic hardware	13,427
111.	Whalen Bldg.	Exit doors, panic hardware	4,826
112.	Tobacco & Health	Sprinkler system, dock	1,600
113.	Spindletop Hall	Exit signs and emergency lighting, basement	25,000
114.	Ag Engineering	Magnetic door closures	6,157
115.	Journalism	Emergency lighting	3,260
116.	Chemistry-Physics	Emergency lighting, labs	3,970

117.	Ag North	Emergency lighting, labs	16,000
118.	Ag South	Emergency lighting, labs	5,830
119.	T.H. Morgan	Emergency lighting, labs	11,000
120.	Taylor Ed	Entrance steps	1,204
121.	ASTeCC	Fire Department connection ID	500
122.	Ag South	Stairwell doors, lever type hardware	4,620
123.	Ag South	Exit door swing	3,000
124.	Whitehall	Stairwell doors, lever type hardware	2,000
125.	305 Euclid	Emergency generator	45,000
126.	Chemistry-Physics	Magnetic door closures, Rms. 33, 333	3,900
127.	Ag South	View panels, labs	4,950
128.	Patterson Office Tower	Fire alarm system reprogramming	4,000
129.	South Campus	Emergency warning system (siren)	21,521
		Subtotal	$334,121
	List 4 (1998-2000 biennium)		
130.	Med Center	Ventilation/rated door and hardware, flammable-storage room, Crematory	$30,534
131.	Nursing	Ventilation, photo lab	9,431
132.	Med Center	UST upgrade	75,000
133.	Med Center	Mechanical guarding	7,772
134.	CAER	Asbestos abatement	155,270
		Subtotal	$278,007
	Auxiliary Services		
135.	Donovan Hall	Sprinkler system	$340,000
136.	Haggin Hall	Sprinkler and fire alarm system	400,000
137.	Boyd Hall	Smoke detectors	64,000
138.	Student Center	Exit doors panic hardware	8,000
139.	Student Center	Emergency lighting	15,000
140.	Student Center	Handicap door openers, restrooms	18,000
		Subtotal	$845,000
	Medical Center		
141.	Pharmacy	Sterilizer exhaust hood-522	$10,790
142.	Med Science	Air intake modification MN463	7,325
143.	Wenner-Gren	Handicap ramp	11,800
144.	Med Center	Generator tank compliance	29,975
145.	Pharmacy	Replace 2 variable frequency drive units	12,000
146.	Rose Street Bridge	Interior lighting upgrade	4,000
147.	Med Science	Acid waste riser D16	40,000
148.	MRISC	Fumehood upgrade - basement	4,000
149.	Med Center	Emergency egress lock MS439	2,172
150.	COM Office Bldg.	ADA entrance	5,885
151.	Dental Wing	ADA restrooms	61,400
		Subtotal	$189,347
		Total	$8,805,036

Open Projects

P, pool project
LT, active long-term project
NA, not available

Building	Description	Cost	Proj. Compl. Date	Area
List 2				
Med Center	Asbestos abatement	$485,000	P	CPMD
Anderson Tower	PCB abatement	14,082	LT	PPD
Student Center	PCB abatement	42,000	LT	PPD
Memorial Coliseum – East	PCB abatement	36,000	LT	PPD
Memorial Coliseum – West	PCB abatement	36,000	LT	PPD
Seaton Center	PCB abatement	43,000	LT	PPD
List 3				
Lex Campus	Central fire alarm system	$690,000	06/01	CPMD
Scovell Hall	Approved exit	85,000	08/00	PPD
Anderson Tower	Fume hood upgrade	2,258,955	11/00	CPMD
List 4				
Mathews Bldg.	Approved exit stairway	$240,000	06/01	CPMD
Singletary	Emergency lighting/exit signs	55,000	03/01	PPD
Metal Arts	Ventilation	32,583	08/00	PPD
Lex Campus	Safety shower/eyewash	174,000	02/01	CPMD
Med Center	Safety shower/eyewash	325,000	02/01	CPMD
Shively	Sprinkler system	100,000	12/00	CPMD
McVey Hall	Ventilation	395,000	01/01	CPMD
Agriculture	UST upgrade	241,500	12/00	CPMD
Tobacco & Health	UST upgrade	7,250	09/00	PPD
Nutter	UST upgrade	6,500	09/00	PPD
Reynolds #2	Approved exit stairway	75,000	05/01	PPD
Med Center	Acid waste piping	111,000	01/01	MC PPD
Med Center	PCB abatement	500,000	12/00	CPMD
Med Center	Fiberglass, duct cleaning	205,000	09/00	CPMD
Med Center	Mercury abatement	150,000	12/03	MC Chanc.
Pharmacy Bldg.	Fiberglass, duct cleaning	200,000	09/00	CPMD
List 4 – to be established				
Shively	Emergency lighting/exit signs	$12,000	NA	PPD
E.S. Goodbarn	Fire alarm control panel	15,000	NA	PPD
Tobacco & Health	PCB abatement	23,000	NA	PPD

Appendix I

Institutional Effectiveness Plan
Reports of Progress
FY1999-2000

UK Institutional Effectiveness Plan -- Report of Progress

Annual Plan 1999-2000

Institution Goal: *The University will provide a safe and healthful campus environment for students, employees, patients, and visitors.*

Dept: Occupational Health and Safety **Unit:** Environmental Health and Safety **Area:** Central Administration

Dept. Mission: *To provide professional services to the University community designed to improve health and safety and comply with OSHA regulations.*

Objectives: (optional strategy code)	Assessment Methods and Criteria:	Results of Assessment:	Use of Results to Improve:
1. Provide safety awareness driver training for UK employees.	1. Identify target audience for training based on historical and potential high fleet losses.	Driver Education Program developed. Target audience identified utilizing Auto Loss Run Data provided by UK's automobile liability insurer. UK Stores and UK Vending employees were trained May 2000	Results to reduce motor vehicle accidents sustained by UK employees. Reduction of UK motor vehicle insurance claims with associated operating funds savings.
2. Evaluate safety conditions of UK facilities and operations.	1. Conduct safety audits of selected facilities and designated operations. *Multi-year project*. 2. Identify additional audit targets based on evaluation of the OSHA injury log.	As part of the EH&S Facility Audit Program OH&S continues to conduct audits of three facilities per month. Additionally, OH&S continues to evaluate safety conditions of designated operations via OH&S inspection activity and customer solicitations. Evaluation of OSHA 200 Log determined 47% of 1999 OSHA Recordables attributed to musculoskeletal disorders (MSD's). OH&S has collaborated with UK's Wellness Program in the formation of a cross functional team under the auspices of the General Safety Committee to address MSD issues at the university.	Effort contributes to development and enhancement of safety requirements for laboratories. Determines areas in need of eyewash/safety shower and fume hood maintenance or upgrades. Further identifies those areas with compliance deficiencies requiring abatement. Ongoing analysis of the OSHA 200 Log as well as other injury/illness data to be utilized in determining additional focus areas for providing OH&S assistance and outreach to customers.
3. Provide additional safety awareness training for laboratories.	1. Identify focus areas via analysis of lab inspection findings and customer solicitations. 2. Develop training classes on ergonomics and use of fume hoods and a class for lab supervisors. 3. Conduct a safe work practices refresher course for lab workers.	Developed and conducted Lab Ergonomics training class for UK clinical laboratory employees/supervisors located at the VA Hospital Developed and conducted "Proper Use of Fume Hoods" training class for Dept. of Chemistry staff and faculty Conducted Laboratory Safety/Chemical Hygiene Plan Refresher training course for ASTeCC laboratory employees 10/6/99	Results to heighten awareness of traditional and non-traditional hazards encountered in laboratory settings. Training classes to be utilized as base formats for development of formalized training modules to be made available to all applicable UK customers.

UK Institutional Effectiveness Plan -- Report of Progress

Annual Plan 1999-2000

Institution Goal: *The University will provide a safe and healthful campus environment for students, employees, patients, and visitors.*

Dept: University Fire Marshal **Unit:** Environmental Health and Safety **Area:** Central Administration

Dept. Mission: *To provide fire prevention and life safety services to the University community.*

Objectives: (optional strategy code)	Assessment Methods and Criteria:	Results of Assessment:	Use of Results to Improve:
1. Improve fire prevention awareness on campus.	1. Develop a fire prevention pamphlet or newsletter for employees and students. 2. Distribute copies to all employees and to all students living in residence halls.	1. A questionnaire to evaluate the Newsletter was sent to all Hall Directors. Twelve responses were returned. 2. Copies were distributed to students via booths set up in two cafeterias. Copies sent to employees via mail.	1. Were indicated to be effective. Individual newsletters on specific subjects might be more effective. 2. No specific response from employees other than it was "informative" and was a good job to have done the newsletter.
2. Improve firestopping of penetrations through fire rated walls and smoke barrier walls.	1. Provide training for all UK construction personnel on proper methods of firestopping wall penetrations. 2. Conduct spot inspections of installations to determine the quality of firestopping.	1. Training was provided to all concerned parties. 2. Quality of firestopping has improved.	Additional training has been provided to ensure new employees of departments involve will do quality work. Overall objective is to maintain the integrity of the firestopping results in better protection from the spread of smoke and unburned gasses.
3. Improve emergency evacuation planning for the campus.	1. Develop emergency evacuation plans for each University building, including generic information on what to do if a fire is discovered or when the fire alarm sounds. 2. Building plans will be posted in conjunction with the fire/life safety audits (in progress). *This is a multi-year project.*	Generic information has been developed. However, funds designated for the program was diverted to other serious life safety issues. Posting of these plans with life safety funding is on hold.	To compensate for the loss of life safety funding, efforts are being made to encourage individual colleges or departments to assume the cost. Also, attempts are being made to include the cost of this plan into budgets for new construction projects.

UK Institutional Effectiveness Plan -- Report of Progress

Annual Plan 1999-2000

Institution Goal: *The University will provide a safe and healthful campus environment for students, employees, patients, and visitors.*

Dept: Radiation Safety **Unit:** Environmental Health and Safety **Area:** Central Administration

Dept. Mission: *To protect the University community from unnecessary radiation exposure and ensure compliance with regulations and standards of good practice.*

Objectives: (optional strategy code)	Assessment Methods and Criteria:	Results of Assessment:	Use of Results to Improve:
1. Initiate a comprehensive x-ray safety program for medical and academic devices.	1. Prepare a safety program for Radiation Safety Committee review and approval. 2. Prepare an x-ray safety manual to serve as a safety and training guide.	1. In process. Manual more accurate and user friendly. Registration process more streamlined and appropriate. 2. Web page in place, researchers have easy access to pertinent information and registration forms.	1. Improve campus with CDC/NIH Guidelines, also improve tracking of registered users. 2. Researchers' knowledge of and compliance with all applicable regulations relating to infectious agents, including registration process.
2. Expand the laser safety program.	1. Register the known laser users and continue to register all new devices. 2. Revise the laser safety manual and prepare a training course.	1. More containers being diverted from waste stream and provided to researchers and other users. 2. Reduces amount of waste being shipped to offsite locations/results in cost savings.	1. Reduces the pounds of hazardous waste disposed of offsite and results in cost savings. 2. Improves compliance with permit & federal regulations requiring us to minimize amount of waste produced.
3. Update and streamline the basic, advanced, and annual refresher training programs for radioactive materials.	1. Prepare revised training programs for basic and advanced users and a refresher training program for ancillary users. 2. Obtain approvals for these training programs, where necessary, from the Radiation Safety Committee and the Kentucky Cabinet for Health Services.	8. Training updated to relate more information and convey message of training more clearly. 9. Nightwatchmen trained to understand their responsibilities and limitations in handling of chemical spills and emergencies.	• Improve understanding of waste regulations by campus users which will lead to increased compliance by satellite accumulation areas. • Nighwatchmen can now perform their job in a safer manner. Also brings UK into compliance with training requirements and reduces response time to emergencies.

UK Institutional Effectiveness Plan -- Report of Progress

Annual Plan 1999-2000

Institution Goal: *The University will provide a safe and healthful campus environment for students, employees, patients, and visitors.*

Dept: Environmental Protection **Unit:** Environmental Health and Safety **Area:** Central Administration

Dept. Mission: *To provide technical services to the University community designed to protect the environment and comply with environmental regulations.*

Objectives: (optional strategy code)	Assessment Methods and Criteria:	Results of Assessment:	Use of Results to Improve:
1. Comply with the state groundwater protection regulations.	1. Revise the UK Groundwater Protection Plan according to new requirements of the Kentucky Division of Water (March 2000). 2. Address all KDOW comments on our plan.	1. Plan revised and submitted to KDOW by 3/31/00, in accordance with regulations. 2. No comments received as of 6/30/00.	1. New procedures identified will be implemented. 2. Groundwater protection will improve.
2. Improve the process for obtaining air monitoring services for lead and asbestos.	1. Prepare new specifications for lead and asbestos monitoring (November 1999). 2. Have the new specifications reviewed by two industrial hygienists.	1. Draft specification prepared. 2. Draft specification in review as of August 1, 2000.	1. Air monitoring protocols will become standardized. 2. Contractors will be informed.
3. Improve environmental quality of the North Farm by remediation of disposal sites.	1. Complete fieldwork on site #2 and submit closure report to the state. 2. Initiate fieldwork on site #3.	1. Fieldwork completed and report submitted. 2. Work at Site #3 tentatively scheduled for Summer 2000.	1. Potential environmental threats will be identified and removed. 2. Regulatory compliance will be improved.

UK Institutional Effectiveness Plan -- Report of Progress

Annual Plan 1999-2000

Institution Goal: *The University will provide a safe and healthful campus environment for students, employees, patients, and visitors.*

Dept: Hazardous Materials Management **Unit:** Environmental Health and Safety **Area:** Central Admin.

Dept. Mission: *To provide professional services to the University community for the procurement, handling, and proper disposal of hazardous materials while maintaining regulatory compliance.*

Objectives: (optional strategy code)	Assessment Methods and Criteria:	Results of Assessment:	Use of Results to Improve:
1. Ensure compliance with biosafety guidelines established by CDC and NIH for research with rDNA, gene therapy, and infectious agents.	1. Update the UK biosafety manual and revise the registration process for gene therapy. 2. Develop a gene therapy web page that provides technical information for researchers and facilitates registration of gene therapy protocols.	1. The x-ray safety program has been reviewed and approved by the Radiation Safety Committee. 2. The x-ray safety manual has been reviewed and approved by the Radiation Safety Committee. The x-ray program is initiated.	Safety and compliance x-ray matters can be systematically brought to Authorized Users and workers to ensure safe working conditions.
2. Reduce the amount of hazardous waste shipped offsite by UK.	1. Expand the waste container recycling and redistribution program. 2. Expand waste bulking and onsite treatment processes.	1. All known laser users and their equipment have been registered. 2. The laser safety manual and training course have been revised.	Registration creates a new base from which new users and operators can be identified. Laser safety training is improved, as well as contact and communications with operators.
3. Improve the hazardous materials training programs.	1. Update the hazardous waste training class materials. 2. Train UK night watchmen in emergency response (to awareness level).	1. New training programs for new radiation workers and new PIs are completed and in use. 2. The Radiation Safety Committee and KY Cabinet approved the new programs prior to initiation.	The new programs have improved scheduling and attendance. A course critique form provides input for continual improvement.

Report of the
Committee on Environmental Health and Safety

Annual Report of the
Committee on Environmental Health and Safety
FY1999-00

The following is a summary of the three committee meetings held this fiscal year.

September 14, 1999

Annual Report

Mark Meier, chair of the EH&S Committee, explained that the EH&S division and the EH&S Committee are required to present an annual report to Vice President George DeBin, Fiscal Affairs. Committee members received a draft copy of the *Fifth Annual State of the Environment Report for the University of Kentucky* by e-mail prior to this meeting for their review. Mark Meier reported for the EH&S Committee and representatives for the subcommittees gave a brief overview of their committees' activities over the past fiscal. In addition, representatives from the EH&S division gave an overview of the various departments. Following a brief discussion, the report was approved by the committee for submission to George DeBin and posting on the web.

Future Meetings

Members were encouraged to identify concerns that should be discussed in upcoming meetings. At the next meeting, members will look at the issue of mandatory safety training as recommended by the Chemical Safety Committee. EH&S will look at the aspects of implementation and accountability.

December 14, 1999

Pedestrian Safety

A list of pedestrian safety issues was distributed and discussed by the committee in some detail (see list below). Chief Langston stated that only 1-2 pedestrian accidents involving bicycles are reported per year to UKPD, with 2 being a high. Due to the volume of pedestrian traffic, the closing of Rose Street was discussed at length. The closing of Rose would pose a problem for emergency vehicle access to the Hospital and other UK sites. Travis Manley, Accident Analyst, stated that Limestone was more of a problem than Rose Street; greater speed was cited as the reason. Emphasis was placed on UK planning to discourage additional vehicle traffic in the Rose and Limestone Street areas where pedestrian traffic is substantial. Warren Denny stated that the realignment of Nicholasville & Limestone due to construction of Allied Health & Gill Heart Institute would decrease traffic on Rose. Also, there are plans on possibly dead-ending Huguelet Drive to discourage even more traffic. Warren Denny expressed concern regarding the city's proposal to bring the Newtown Pike extension into Limestone through Broadway and Scott Streets. This would increase vehicle traffic in an area where there are already pedestrian safety issues. Bicycle safety in conjunction with pedestrian safety was discussed. Warren Denny stated that UK has constructed bike lanes to encourage bicyclists to follow paths vehicles use and storage racks have been placed on the periphery of central campus to prevent bicycles on pedestrian walkways. Don Thornton informed the committee that there is an existing committee dealing with bicycle safety issues: the Bicycle Committee. Warren Denny and Don Thornton are

applying for a grant to develop a bicycle plan for the university. Chief Langston emphasized that increased enforcement will not solve all the pedestrian safety problems; she suggested that there should also be an emphasis on educating students. Don Thornton stated that several articles in the Kernel and participation in student orientations are being utilized to increase students' awareness. Mr. Thornton commented that it isn't just the lack of education, but also the choice to utilize it that poses the problem. Other central campus issues such as vendor deliveries, transport of hazardous materials and service vehicle parking in pedestrian areas were discussed.

Pedestrian Safety Issues

1. bicycle riders: speeding, going wrong direction in bike lanes, and riding in prohibited areas (enforcement issue?)

2. greenhouses near Ag South; underpass on Tobacco Rd near Parking Structure #1: poor lighting

3. wheelchair ramp on south side of Cooper Dr: does not have a level landing zone (ADA issue?)

4. narrow strip used by pedestrians on north side of Cooper Dr in front of the practice facility: is unpaved; is used by motorists trying to get around cars turning left into KET

5. Cooper Dr near LCC: there is a sidewalk perpendicular to the street on both sides that encourages crossing where there is no light

6. Limestone crossing at Service Bldg: buses stopping here often run the red light (enforcement issue?)

7. Limestone crossing at Service Bldg: vehicles turning onto Lime from Upper often run the red light (enforcement issue?)

8. Farm Rd intersections at University Dr and Nicholasville Rd: vehicles on Farm Rd crossing multiple lanes of traffic have caused many accidents

9. Limestone crossing at Holmes Hall/McDonalds: parking spaces on the east side of Lime block visibility for those who chose to cross there

10. Limestone crossing at Kentucky Clinic: large numbers of employees cross Lime between the lights at Virginia Ave and Leader Ave

11. tractor-trailer trucks on inner campus: large trucks must negotiate narrow streets and crowded parking lots to make deliveries to inner campus

12. vehicles on sidewalks, grass, and other pedestrian areas: vendors, contractors, and UK vehicles drive and park off the street in pedestrian areas

13. transport of hazardous materials on campus (e.g., liquid nitrogen)

The committee recommended the following:

1. Refer all bicycle safety issues to the Bicycle Committee.

2. Recommend submitting to the city a letter opposing the Newtown Pike/Limestone project.

3. Recommend formation of a new committee with representatives from UK, city & state government to look at pedestrian issues from a planning perspective. Suggested representatives from the following: UK departments (PPD, Parking, Architect, Disability, Injury Prevention, and Environmental Health & Safety), city (traffic engineers) and state (KY DOT).

Workplace Violence

John Summersett distributed a draft of the PPD Workplace Violence policy. Chief Rebecca Langston informed the committee of the joint effort by Human Resources and the UK Police department to develop a unified UK policy. Chief Langston encouraged departments to utilize the unified UK policy as a foundation for their own internal policy. The contact individual in Chief Langston's area is Crime Specialist, Stephanie Bastin (7-5189).

March 21, 2000

Annual Safety Awards

Woody Bottom presented the annual safety certificates of appreciation to the following individuals:

Bob Brashear	Stephen Stauffer	Loretta Hill
Ted Jenkins	Melanie Tyner-Wilson	James Bryan
Steve Evans	Brian Butler	Oney Vanlandingham
Tony Ralph	Norman Goodman	Janet Rodgers
Marcia Shrout	Joseph Mallek	

Pedestrian Safety

At the last meeting, the EH&S Committee recommended establishing a new university committee to address pedestrian safety issues. George DeBin's memo referring pedestrian safety issues back to the EH&S Committee was discussed and a recommendation assigning pedestrian safety issues to the General Safety Committee was approved. It was recommended at the last meeting that the University submit a letter to the city opposing the Newtown Pike/Limestone project. George DeBin's memo to Mayor Pam Miller regarding the Newtown Pike Extension was distributed.

Mandatory Training

Environmental Health & Safety is compiling data on compliance with mandatory training requirements. A pilot assessment of College of Pharmacy has been completed in two areas: laboratory safety and hazardous materials training. The assessment will be expanded into other areas and units.

IAQ Policy Revisited

Environmental Health & Safety will assess how well information regarding the Indoor Air Quality Initiative (approved by the EH&S Committee and sent to Vice-President George DeBin in January 1998) was disseminated and how it is being implemented. A report will be given at a later meeting, which will include new recommendations for IAQ.

Reports of the Subcommittees

Annual Report of the Chemical Safety Committee
FY1999-2000

The Committee met its responsibilities primarily in recommending policies and educational programs, reviewing injury/illness incident reports, and acting as a forum to share and disseminate information pertaining to chemical safety.

Below are summaries of the meetings held.

September 8, 1999

Boyd Haley welcomed new members Michael Barrett – Argronomy, and Frank Kendrick – Dentistry.

The Environmental Health and Safety Division (EH&S) had observed labs that had designated nonchemical areas within the lab for eating and drinking. Erin Foley explained that the UK Chemical Hygiene Plan prohibited eating or drinking in areas where hazardous chemicals are used. There was lengthy discussion about the problem of a lack of sufficient space in existing laboratory buildings for eating and/or drinking. Based on recommendations by Committee members, Erin would prepare a motion to address this issue for further discussion at the December committee meeting.

John Summersett raised the issue to the Committee on how departments are addressing the cost of Personal Protective Equipment (PPE) for employees. He specifically inquired as to how other departments or units handle the cost of prescription safety glasses. OSHA requires employers to pay for PPE with the exception of PPE that is very personal in nature and usable off the job, e.g., prescription safety eyewear and steel-toed shoes. The Committee was of the opinion that departments should not be responsible for the cost of prescription safety glasses. Consensus of the Committee was that protective safety eyewear should be worn over prescription glasses.

Mercury levels in UK Medical Center's wastewater still periodically violates the discharge permit limit set by the Lexington-Fayette Urban County Government. The limit would be lowered in January 2000. Members of the Committee inquired as to why wastewater from specific buildings had not been tested to determine mercury generation sources. Specific buildings/areas referenced were the Chemistry/Physics building, the dental school, engineering buildings, and other relevant science buildings. The Committee determined that Woody Bottom would be solicited to provide further information and insight into this issue.

A representative for the UK Office of Legal Counsel stated in a recent meeting that Environmental Health and Safety training should be made mandatory. It appeared that the only training requirement being fully met was that involving Radiation Safety Training. It was discussed that this was perhaps due to the fact that a radioisotope user's authorization could be revoked if all workers have not attended the required Radiation Safety Training. A vote was taken on whether Environmental Health and Safety training should be mandatory. The majority of the Committee was in favor of the training being required. The issue of how to enforce the requirement would reside with administrators.

December 10, 1999

EH&S reviewed the motion from the last committee meeting pertaining to eating/drinking areas in laboratories. EH&S had a concern that the motion could be misinterpreted as an endorsement to allow eating and drinking within laboratories. The motion was withdrawn and the Committee adopted a stance to encourage department administration to provide eating and drinking spaces outside of laboratories. The Committee was in agreement and encouraged current policy to remain the same. Occupational Health and Safety (OH&S) would continue to consult on a case by case basis. New labs must have separate break/work areas.

EH&S recently discovered chemical laboratories that do not have required safety equipment, e.g., fume hoods, emergency eyewashes and showers. Erin Foley stated that EH&S is finding offices that have been converted to labs. The Committee generally agreed that chemical labs are required to have specific safety equipment. The Committee recommended that EH&S forward a memo to department/unit administrators as a reminder that chemical labs must have appropriate safety equipment.

Committee members questioned the need for an emergency safety shower within the lab. Erin Foley explained that the requirement is part of the UK Design Guideline for emergency eyewashes and safety showers. The guideline states that emergency safety showers shall be located in an immediately accessible area within the laboratory unit or other work areas where the user shall not have to pass through a corridor door to reach the emergency safety shower. Erin explained the regulatory requirement that emergency safety showers must be capable of being reached within 10 seconds travel. There was discussion about limited space in laboratories for installing emergency safety showers. The Committee would like to invite a member of the Design Guideline Committee to the next Chemical Safety Committee meeting to further discuss this issue.

Some members of the Committee expressed concern that the laboratory renovation review process is not working properly. The Committee would like to pursue improving the process for renovation review and specification establishment.

Erin Foley explained that the Chemical Hygiene Plan does not address chemical use by pregnant laboratory workers. The Radiation Safety Committee has adopted a guideline for radioactive material use by pregnant workers. Bob Wilson, Radiation Safety Officer, summarized this policy and gave background information. The UK fetal dose policy incorporates safety information and radiation dose guidelines for ensuring safe radiation limits for the embryo/fetus of occupationally exposed employees. Counseling is provided for pregnant workers. A draft document addressing chemical use by pregnant laboratory workers was presented to the Committee for feedback.

The Committee was solicited to review the UK Chemical Hygiene Plan and provide feedback to Erin Foley as part of the Plan's annual review.

Larry Robertson informed the Committee that he would be bringing a pedestrian safety issue to the Environmental Health and Safety Committee meeting. The issue pertains to an illegal fence on Cooper Drive by the football practice field that is preventing right-of-way for LCC and KET pedestrians

March 20, 2000

The Committee welcomed David Hibbard – OH&S as a new ex officio member.

Recent EH&S laboratory inspection activity had determined that PI's and others responsible for hazardous waste in their respective areas were not receiving mandatory Hazardous Waste (HW) training. Discussion focused on who would be most practical and effective to serve in the hazardous waste oversight role. The intent was to have one person assigned per area or department for this function. This would limit training to all lab personnel but would satisfy current hazardous waste regulations. There was some dissension among various Committee members on this approach in that the UK HW Manual requires all personnel to receive HW Training if they are to handle hazardous waste. The consensus of the Committee was to propose that each department chair appoint a Chemical Safety Officer (CSO) to ensure proper storage, signage and disposal of chemicals in each research laboratory. CSO should at minimum conduct an annual inspection and report to chair about safety compliance. Training would be required of each CSO. OH&S was to draft a proposal to be presented to the Committee for approval. After approval, the proposal was to be forwarded to the EH&S Committee for consideration.

The ongoing issue of lab installation (primarily "Wet Labs") in areas not previously designated for lab use was discussed. David Hibbard solicited Committee members to review Lab Design Guidelines (remodeling and new construction) and give input to be considered in the development of a guidance document for conversion of non-lab spaces to laboratories. EH&S was concurrently working on this effort. All Committee members were to review all established Lab Design Guidelines and provide input to David Hibbard.

The issue of inadequate space for the location of emergency safety showers was revisited. The Committee needed to determine OSHA standards on emergency showers and eyewash areas. It is stated in the UK Design Guideline that eyewashes and emergency safety showers must be located in an immediately accessible area. David Hibbard would issue a response to the Committee clarifying OSHA and UK requirements for eyewash/emergency safety shower installation and location.

The Committee revisited the issue of UK Medical Center's outfall mercury discharge levels. David Hibbard provided the Committee with a document from Woody Bottom detailing current and historical mercury discharge levels from UK Medical Center. The document also referenced that testing had also been conducted at approximately 28 campus buildings. There was renewed discussion on campus building mercury generation sources. John Lowry shared that Hazardous Materials Management was picking up potential mercury contaminated rinsate from dental operations. The hospital incinerator was scheduled to be taken out-of-service at a date to be determined. Hazardous waste would then be

shipped off-site for disposal. It was anticipated that this would reduce mercury discharge levels whereas discharge of incinerator scrubber water would be discontinued.

A draft guideline of "Chemical Use by Pregnant Laboratory Workers" was presented. David Hibbard would forward the document to all Committee members for feedback. Final draft was to be forwarded to legal for evaluation. End-state was to have document located in each chemical laboratory.

June 6, 2000

David Hibbard led the discussion in revisiting the issue of mandatory HW training. David shared with the Committee excerpts from the UK Chemical Hygiene Plan, Hazardous Waste Manual and Radiation Safety Manual. The information detailed UK faculty and staff responsibilities as pertained to health and safety and hazardous waste management. After further discussion, the Committee reversed its approach from the previous meeting. Consensus of the Committee was that emphasis be placed on ensuring new hires receive all required training. Discussion focused on potential means to ensure new employees are made aware and held accountable for completing all required training. Consensus of the Committee was for EH&S to explore establishing a condition of employment wherein new employees must complete all required training within a specific time frame.

As a follow-up to the requirements of required safety equipment for chemical laboratories, David Hibbard provided the Committee with information addressing emergency eyewash and safety shower equipment installation/space requirements. The UK Design Guidelines & Technical Standards Committee was in the process of updating the Technical and Performance Standard: Emergency Eyewash and Shower Equipment. The section below was to be updated with the underlined verbiage inserted into this standard:

> In new construction, emergency ~~Emergency~~ eyewash and shower equipment must be installed in every lab that is provided with a fume hood. Laboratories sharing a common suite or area not separated by closed doors may find one emergency shower is sufficient, but each lab unit must be equipped with an approved eyewash. In certain retrofit or renovation situations it may not be practical (due to space or other limitations) to install a safety shower in each laboratory. In these instances, shower units may be placed nearby in the corridors.

The "Chemical Use by Pregnant Laboratory Workers" document was approved by the Committee with minor changes. It would be disseminated at new employee orientation, on the EH&S Division Web Page, and inserted into the UK Chemical Hygiene Plan. David Hibbard would forward the document to legal for review. Document would then be disseminated via various means.

Meeting frequency of the Chemical Safety Committee was discussed. Amendment to by-laws would be brought to next meeting in September.

Chemical Safety Committee Members

1999-2000

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Annual Report of the General Safety Committee
FY 1999-2000

The committee met its responsibilities primarily in recommending policies and educational programs, reviewing injury/illness data and health/safety issues, and acting as a forum to share and disseminate occupational health and safety information.

Below are summaries of the meetings held.

September 9, 1999

John Summersett provided the Education Sub-committee report. The sub-committee was active in developing a UK Asbestos Awareness video/CD and an interactive learning program on Bloodborne Pathogens (BBP) Awareness. The Asbestos Awareness video/CD had been previewed by various university sectors and was approved by the committee for distribution. This program enhances UK's compliance with OSHA's Asbestos Standard. The BBP interactive learning program was still in the final stages of development with John Summersett and Karen Early collaborating on this project.

Bob Cadle reported on one staff change within the OH&S Department. Karen Early had accepted a position with the College of Medicine, Preventive Medicine and Environmental Health Department.

Bob also reported that the Student Government Association safety walk is scheduled for October with GSC participation. The walk is to identify general security and safety issues on campus.

John Summersett raised the issue to the committee on how departments are addressing the cost of Personal Protective Equipment (PPE) for employees. This issue focused primarily on situations where employees are required to wear safety glasses and are in need of prescription lenses. Further explanation was given as to when and what type of PPE OHSA requires employers to pay for. Consensus of the committee was that university departments should not be mandated to cover the cost of prescription safety glasses. One possible alternative would be for employees to wear appropriate safety glasses over non-safety prescription eyewear.

UK's potential liability regarding unsafe acts conducted by contractors during construction activities was discussed. Various members commented that contractors are responsible for the safety of their employees. Furthermore, UK staff are required to ensure the safety of UK employees, students and visitors when hazards are created as a result of construction activities. Ken Clevidence stated UK would become culpable under OSHA's multi-employer worksite standard if the university began oversight of contractor safety on construction sites. John Summersett suggested additional efforts should be made to heighten awareness among UK employees, students and visitors regarding hazards in and adjacent to construction sites. Rebecca Langston offered the idea of soliciting the Kernel in allowing a column be established devoted to addressing safety concerns to include construction safety. OH&S was to explore this idea.

March 21, 2000

The education sub-committee reported that the interactive bloodborne pathogen awareness training program would be available next month. The program will be accessible university wide via the Web.

The asbestos awareness program has been completed and has been combined with UK-specific information. The program is currently in the process of being made available on the Web.

A lead awareness training program is under development to include identifying target audiences.

David Acker presented to the committee an overview of OSHA's Proposed Ergonomic Standard with associated potential impact on UK. He will continue to monitor the legislative progress of the proposed standard and provide updates to the committee as warranted.

OH&S had initiated analyzing, trending and interpreting UK injury/illness data. Bob Cadle presented charts depicting UK injury/illness rates and other associated quantifiers. Feedback was solicited from the committee on chart format and data interpretation. Consensus of the committee was to have cumulative quarterly reports of this data be a standing agenda item for each meeting. In heightening employee awareness to safety and accident prevention, OH&S will initiate issuing sector/department data in this format to all respective UK sectors experiencing injuries/illnesses reported to Worker's Care.

David Hibbard reviewed those areas with established Unit Safety Committees and stressed the potential synergy that can be developed in having a Unit Safety Committee. He urged members to explore within their respective sectors the opportunity of establishing like committees where they do not currently exist.

June 3, 1999

The Fire Marshal reported that all Life Safety Funds have been depleted. Projects at Scovell Hall, Administration Building, Spindletop and Singletary Center are near completion. These projects have expended the current Life Safety Funds.

Ken Clevidence discussed the content of a memorandum he had received from Harry Enoch that served as a clarification of UK policy regarding responsibilities for safety on construction sites. The memorandum delineates UK and contractor responsibilities and further explains UK's responsibilities under OSHA's multi-employer worksite standard. Ken stated this information had been shared with the appropriate Procurement & Construction staff.

Bob Cadle presented the quarterly report on UK Injury/Illness data. Charts reflected types of injuries/illnesses occurring within Lexington Campus (LC), UK Medical Center and UK Hospital. Additional information shared depicted the combined major types of accidents that were occurring at UK as a whole. The data reflected that ergonomic injuries/illnesses were the predominant type of injury/illness occurring. Further analysis determined that the majority of these incidents had occurred

within UK Hospital and LC PPD. UK Hospital had contracted with a consultant in developing a program to evaluate ergonomic injuries/illnesses. David Hibbard informed the committee on the activities of a cross-functional team made up of members from OH&S, Wellness and LC PPD. The team is to further evaluate injuries/illnesses within specific sectors of LC PPD in developing an injury prevention program with additional application across the university. The team is in the planning stages with updates on its progress to become a standing agenda item.

David Hibbard shared a list of pedestrian safety issues with the committee. This list had been forwarded to Dr. Collins from the EH&S Committee. These issues were discussed in detail at the December 14, 1999, EH&S Committee Meeting. The VP of Fiscal Affairs had suggested that the General Safety Committee address these safety issues. The committee discussed various resolution options and acknowledged that there is a UK Bicycle Committee that is dealing with bicycle safety issues. Travis Manley (UK Police) commented on a study that had been performed at the university depicting the types of pedestrian incidents and associated causes. At first glance it appeared that statistics showed incidents were as a result of human error. To provide further committee insight into these issues, Travis Manley was solicited to have this study presented at the next committee meeting. The committee will then formulate a strategy to address the causes related to these incidents.

General Safety Committee Members
1999-2000

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Annual Report of the Institutional Biosafety Committee
FY1999-2000

In the past reporting year, July 1, 1999-June 30, 2000, the IBC reviewed applications for investigations involving recombinant DNA, and infectious agents. The following actions were taken:

- 28 total infectious agent and recombinant DNA applications were approved.

In addition to these actions, the following major goals were set by the IBC at the onset of the reporting period:

- to expand and restructure the existing IBC membership format,
- to begin the process of reducing the three registration forms into one,
- to streamline the process by which investigators obtain approval for their investigations, and
- to minimize the duration of the review process.

Annual Report of the Radiation Safety Committee
FY 1999-2000

August 11, 1999 meeting

Chairman Simmons led a discussion of the draft Committee By-Laws and asked for suggestions or comments. The By-Laws is close to finalization. Comments and/or revisions for the By-Laws submitted by included such areas of changes as:

- phrasing certain items in documentation more accurately
- use of specific terms
- terminology correctness
- subcommittee personnel (campus vs. medical center)
- authoritative powers bestowed upon individuals in committees
- unnecessary items in By-Laws that can be deleted

Changes to amend the By-Laws were approved.

Discussion was held on suggestions for changes in the Radiation Safety Manual. Flexibility in wording was discussed and other areas of discussion:

- New training program for radiation users that will be instituted
- Prenatal radiation worker information

Dr. Simmons ask that the proposed prenatal radiation worker policy be reworded before it is adopted. Other areas of the manual are to be approved with Radiation Safety Director, Bob Wilson's correction made.

November 03, 1999 meeting

The August meeting minutes were corrected to recognize Fred Rawlings as the acting RSO, and therefore an ex officio member due to the RSO's absence.

Three Hospital Policies and Procedures were reviewed:

a. Patient Holding During X-ray Procedures: Both the Housestaff and Nursing Dept. statements were approved with the rewording of the fourth sentence in the first paragraph to: *UK policy requires…..*

b. Memo, Working in Diagnostic Radiology While Pregnant: It was suggested, after some discussion, that the third paragraph should be deleted. Mr. Wilson is to work with the Dept. on the memo and the underlying Policy DR 02-10.

c. Vendor Safety – The document was accepted as written.

A copy of the Committee Bylaws approved at the August meeting was provided to the membership.

Written Quarterly and ALARA Reports were provided to the Members. Mr. Rawlings handed out and presented details on survey citation trends. There was discussion on the citation statistics and training for new Technicians. Mr. Wilson provided a report on supplementary events. Chairman Simmons will get details on the safety responsibilities for the Berea and Maysville cancer centers.

February 09, 2000 meeting

The previous mail ballot authorizations of Dr. Malik and Dr. Zinda in Radiation Medicine were confirmed. Dr. Ryo, formally approved as a Nuclear Medicine Authorized User, was reinstated.

Dr. Simmons characterized the Radiation Producing Device program presented as meeting the broad principles of radiation protection. Although the manual references Kentucky regulations, several comments were directed to adding specifics. These included patient holding in diagnostic radiology, veterinary use, dental use and oversight of electron microscopes. The committee approved the Program and Manual, pending Mr. Wilson's revisions to include the specified changes.

Radiation-Producing Device training, and especially medical fluoroscopy by non-radiologists, was discussed. Dr. Simmons formed an ad-hoc committee of himself, Mr. Wilson and Dr. Ibbott to further discuss training guidelines in this area.

Mr. Rawlings presented a report on survey citation trends. The members discussed the details of different non-compliance items in the quarterly report. The quarterly report on operations by the Radiation Safety Office and ALARA statistics was presented and reviewed, including incidents, training activities and radioactive waste news.

Dr. Simmons and Mr. Wilson had investigated the Committee's responsibilities for KMSF-owned and/or operated radiation facilities (currently Maysville and Berea radiation medicine centers). Their conclusion was that such operations were meant to be, and are, responsible to the UK Radiation Safety Committee. Dr. Ibbott and Mr. Wilson will conduct tours of the current facilities soon to verify that a full radiation safety program is in place. The Radiation Safety Office will review personnel dosimetry results.

May 10, 2000 meeting

Mr. Wilson presented final revisions to the Radiation-Producing Device Safety Manual. With discussion on the use of lead aprons and gloves, some changes in the patient holding procedure were made. The Manual was then accepted.

Dr. Ibbott will be available to participate in a tour of the Berea and Maysville facilities with Mr. Wilson in a few weeks.

The ALARA and Trends Reports were presented and reviewed. The NRC has done some follow-up correspondence with the KY Radiation Control Branch on the January I-131 skin contamination incident in Nuclear Medicine. All questions have been answered. The license amendment application to enable the receipt of Dr. Kovash's Cm-244 source is pending. The status of UK's continued access to the Barnwell, SC disposal site has not been confirmed. The ALARA and Trends reports were accepted.

Mr. Wilson presented information on a review of shielding considerations for brachytherapy and therapeutic iodine patients. Additional bedside shields and some room shielding may be needed. It may be feasible to get structurally shielded rooms added in the new women's medical building. Dr. Patel stated, however, that Radiation Medicine had been dropped from that service and none of the Radiation Medicine patients would be going to the building. Mr. Wilson will proceed with gathering facts and justification for additional bedside shields as needed, with the Committee's backing. When new buildings are planned, any required shielding should be included in construction. At this time, the Committee does not recommend the renovation of existing rooms to add shielding. The Radiation Safety Officer should be brought in as a consultant on new construction or renovation projects at the earliest point feasible. There was discussion on how to achieve this. At the August meeting, Mr. Wilson is to present a draft policy on how the Radiation Safety Office can be incorporated into the planning process.

A research protocol for intracoronary irradiation given to Mr. Wilson was reviewed. Since the protocol was not addressed to the Committee or any member, there was no radiation use application attached and no radiation safety procedures or source information included, no action was taken. The protocol copy was given to Dr. Ibbott for any follow-up.

Mr. Wilson presented the preliminary results of the February / March Radiation Control Branch inspections of the Broad Academic, Broad Medical and Gamma Knife / Teletherapy licenses. The agency letters with the official findings have not been received. A prompt response on any corrective actions is planned.

Radiation Safety Committee

Radiation Safety Committee Membership
1999-2000

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Summary of Previous Committee Actions

FY1998-99

- Approved a revised Vehicle Safety Policy, which was submitted to the VP for Fiscal Affairs.
- Recommended revisions to Administrative Regulation III-1.1-5, Committee on Environmental Health and Safety, clarifying roles of subcommittees; revised AR was approved by the President's staff.

FY1997-98

- Requested that EH&S identify present and future issues for consideration and prepare a list of UK's recent accomplishments in this area.
- Recommended that Hazardous Materials Management provide educational assistance to the units in order to avoid future hazardous waste penalties.
- Approved an indoor air quality plan and submitted to the VP for Fiscal Affairs.
- Reviewed and commented on a draft employee safety handbook and recommended distributing a copy to all existing and new employees.
- Approved guidelines and bylaws for the committee.
- Approved a vehicle safety policy and forwarded to the VP for Fiscal Affairs with the recommendation to incorporate it into the UK Business Procedures Manual.

FY1996-97

- Recommended revisions to UK administrative regulations making the General Safety Committee a formal committee of the President.
- Recommended reviewing and revising the safety training program for new employees.
- Asked EH&S to prepare an assessment of major regulatory issues for UK and a parallel list of accomplishments.
- Recommended carbon monoxide detectors be installed in fraternity and sorority houses that heat with gas.
- Reviewed options for purchasing and tracking chemicals and other hazardous materials. Recommended that UK avoid central purchasing and tracking; that chemical inventories be made annually by each principal investigator/supervisor; and that inventories be submitted to EH&S, who would maintain a “central” inventory.

FY1995-96

- Adopted a policy on indoor air quality.
- Formed a subcommittee on general safety; asked the subcommittee to develop an indoor air quality plan for UK.
- Approved a statement on environmental responsibility.
- Recommended University participation in EPA's "Green Lights" program.
- Initiated a recognition program for individuals who make outstanding contributions to safety at UK; EH&S began awarding these Certificates of Appreciation.

FY1994-95

- Added student members to the EH&S committee.
- Recommended the formation of unit safety committees throughout the University.
- Identified and prioritized environmental, health and safety issues of concern for the University and referred them for action by the committee or the EH&S department.

FY1993-94

- Committee on Environmental Health and Safety created.
- Recommended a new Administrative Regulation on Environmental Health and Safety.
- Held special meetings of the committee to review concerns raised by the proposed new Environmental Quality Management Center (Part B hazardous waste storage facility).
- Created a new subcommittee on chemical safety.
- Approved a chemical hygiene plan for the University.