



NEMS ENVIRONMENTAL MANAGEMENT PROGRAM

PROGRAM NAME:	Chemical Management		
SIGNIFICANT ENVIRONMENTAL ASPECT(S): Chemical Waste Air Emissions Liquid discharges to surface and/or groundwaters	DOCUMENT NUMBER:	TBD	
	DATE REVISED:	12/20/06	
	REVISION NUMBER:	1	
	SUNSET DATE:	10/25/07	
	PROGRAM LEAD:	Charlyn Lee, ORF	

SECTION 1 – PROGRAM DESCRIPTION

The chemical waste management program at the NIH Bethesda Campus emphasizes reduction of chemical waste generation through process improvements wherever possible, and proper management of chemical waste streams that are generated. NIH has undergone several successful chemical waste reduction efforts. Examples include voluntary retrofilling or replacement of all high voltage transformers containing polychlorinated biphenyls (PCBs) and an ongoing program to minimize generation of radioactive and mixed wastes (radioactive chemical wastes) from research laboratories. As a result, generation of mixed wastes by NIH has been reduced by over 99% relative to the mid 1990s. More recently, the “Mad as a Hatter Campaign” targeted improvement awareness of mercury hazards and eliminated unnecessary uses of mercury at all NIH facilities. In response to the mandate of E.O. 13148 and NIH’s waste reduction philosophy, initiatives are planned to identify and target additional chemical waste streams for further reduction efforts.

Various offices interact in the management of NIH’s chemical waste program. The Division of Occupational Health and Safety (DOHS) identifies potentially hazardous situations in work areas and recommends appropriate control measures. DOHS also reviews safety protocols for work involving certain hazardous chemicals to ensure that the proposed activities are conducted by trained personnel using the proper safety equipment. The Division of Environmental Protection (DEP) provides services related to the treatment and disposal of chemical waste. The NIH Occupational Medical Service offers a comprehensive occupational medical care program to NIH employees, including providing emergency medical treatment in the event of an acute chemical exposure and providing periodic medical surveillance.

SECTION 2 – GOALS AND OBJECTIVES

FIVE-YEAR GOAL: Develop/Improve/Update Program Management Tools <i>Justification: Programmatic improvements</i>	Performance Indicator(s): Program management tools developed, improved or updated	Resource requirements: No additional resources required
A. Objective: Identify chemical inventory system for a pilot study	Performance Indicator(s): Inventory system identified	Responsibility: Roger Weidner Timeframe: March 2007

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<p>FIVE-YEAR GOAL: Reduce Disposal of Unused Chemicals by 30% by 2009</p> <p><i>Justification: Cost savings</i></p>	<p>Performance Indicator(s): Amount of unused chemicals disposed based on baseline of 2006</p>		<p>Resource requirements: No additional resources required</p>
<p>A. Objective: Generate baseline and develop strategy for reducing unused chemicals</p>	<p>Performance Indicator(s): Baseline generated; strategy developed</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: June 2007</p>
<p>1. Target/Milestone: Add EnviroWare reporting requirement to CTI contract/agreement</p>	<p>Performance Indicator(s): requirement added</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: October 2006</p>
<p>2. Target/Milestone: Generate baseline data on unused chemicals using EnviroWare</p>	<p>Performance Indicator(s): baseline generated</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: March 2007</p>
<p>3. Target/Milestone: Establish Unused Chemicals Management Focus Group</p>	<p>Performance Indicator(s): Focus group developed</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: March 2007</p>
<p>4. Target/Milestone: Develop action plan for reducing disposal of unused chemicals</p>	<p>Performance Indicator(s): Plan developed</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: June 2007</p>
<p>FIVE-YEAR GOAL: Reduce Disposal Rates of NIH Target Chemicals</p> <p><i>Justification: Cost savings, improvement of environmental conditions</i></p>	<p>Performance Indicator(s): Rate of target chemical disposal</p>		<p>Resource requirements: No additional resources required</p>
<p>A. Objective: Generate baseline and develop strategy to reduce disposal rates of target chemicals</p>	<p>Performance Indicator(s): baseline generated; strategy developed</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: June 2007</p>
<p>1. Target/Milestone: Add EnviroWare reporting requirement to contract/agreement</p>	<p>Performance Indicator(s): requirement added</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: October 2006</p>
<p>2. Target/Milestone: Generate baseline data on disposal rates of target chemicals using EnviroWare</p>	<p>Performance Indicator(s): baseline generated</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: March 2007</p>
<p>3. Target/Milestone: Establish Target Chemicals Management Focus Group</p>	<p>Performance Indicator(s): Focus group developed</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: March 2007</p>
<p>4. Target/Milestone: Develop action plan for disposal of target chemicals</p>	<p>Performance Indicator(s): Plan developed</p>	<p>Responsibility: Charlyn Lee</p>	<p>Timeframe: June 2007</p>

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B. Objective: Conduct study to identify opportunities to reduce lab equipment with mercury components	Performance Indicator(s): Study completed	Responsibility: Charlyn Lee	Timeframe: June 2007
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SECTION 3 – SIGNIFICANCE, IMPACTS AND REQUIREMENTS

REASON(S) FOR SIGNIFICANCE:	<ul style="list-style-type: none"> a. This aspect is governed by legal and other requirements. b. Potential impact to environment and public health – Has potential to significantly impact the human health and the environment through toxic air emissions and potential contamination of land, groundwater, and surface water resources c. Potential impact to NIH mission – Represents a significant cost to NIH d. Potential impact to community relations – Is important to NIH’s relationship to the local community and the public at large
POTENTIAL ENVIRONMENTAL/ ORGANIZATIONAL IMPACTS:	<ul style="list-style-type: none"> a. Human health impacts b. Toxic air emissions c. Potential contamination of land, groundwater, and surface waters
LEGAL AND OTHER REQUIREMENTS:	<ul style="list-style-type: none"> a. NIH Manual Issuance 1340, NIH Occupational Safety and Health Management b. NIH Manual Issuance 3032, Waste Minimization and Management at NIH c. Pollution Prevention Plan d. EPA Priority Chemicals List e. Part B Permit f. WSSC Permits g. NIH Chemical Hygiene Plan h. NIH Waste Disposal Guide i. Resource Conservation and Recovery Act j. Emergency Planning and Community Right-to-Know Act (regulations in 40 CFR Part 355, 370, 372) k. COMAR 26, Subtitles 4, 10, 13, 26 l. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management

SECTION 4 – OPERATIONAL CONTROLS

ACTIVITY(IES) THAT GIVES RISE TO ASPECT	CONTROL(S)	RESPONSIBLE PERSON	MONITORING	RECORDS	ACTION TAKEN IF CONTROL FAILS
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NIH Environmental Management System

Take Action to Protect the Future

Document Number: TBD

Date Revised: 12/06/06

Revision Number: 1

Sunset Date: 10/25/07

Management of hazardous waste	<ul style="list-style-type: none"> NIH Waste Disposal Guide 	<ul style="list-style-type: none"> Don Wilson (Chief, WRRB/Project Officer) 	<ul style="list-style-type: none"> Periodic review of the guide 	<ul style="list-style-type: none"> Record of guide changes 	<ul style="list-style-type: none"> Document revision and distribution / additional training
Management of nonhazardous waste	<ul style="list-style-type: none"> NIH Waste Disposal Guide 	<ul style="list-style-type: none"> Bill Ketner (Solid Waste Team Leader/Project Officer) 	<ul style="list-style-type: none"> Periodic review of the guide 	<ul style="list-style-type: none"> Record of guide changes 	<ul style="list-style-type: none"> Document revision and distribution / additional training
Laboratory Moves	<ul style="list-style-type: none"> NIH Waste Disposal Guide 	<ul style="list-style-type: none"> Polly McCarthy, Chief SOSB, DOHS 	<ul style="list-style-type: none"> Periodic review of the guide 	<ul style="list-style-type: none"> Record of guide changes 	<ul style="list-style-type: none"> Document revision and distribution / additional training
Operations of Central Utility Plant	<ul style="list-style-type: none"> NIH discharge permits SOPs 	<ul style="list-style-type: none"> Adam Wolfe (Acting Chief UOB) 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD
Building Maintenance	<ul style="list-style-type: none"> NIH Waste Disposal Guide 	<ul style="list-style-type: none"> Donna Phillips (Building Management Team) Jeff Fellows (Facility Management Team) 	<ul style="list-style-type: none"> Periodic review of the guide 	<ul style="list-style-type: none"> Record of guide changes 	<ul style="list-style-type: none"> Document revision and distribution / additional training
Shop Activities	<ul style="list-style-type: none"> NIH Waste Disposal Guide 	<ul style="list-style-type: none"> Harry Smith 	<ul style="list-style-type: none"> Periodic review of the guide 	<ul style="list-style-type: none"> Record of guide changes 	<ul style="list-style-type: none"> Document revision and distribution / additional training
Janitorial services	<ul style="list-style-type: none"> Terms of contract 	<ul style="list-style-type: none"> Gus Lambis (Project Officer) 	<ul style="list-style-type: none"> ORF Project Officer monitors contract 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD
Turf Maintenance	<ul style="list-style-type: none"> NIH Nutrient Application Plan Cultural Practices (e.g., leaf collection and disposal) 	<ul style="list-style-type: none"> Lynn Mueller (DPM, Grounds) 	<ul style="list-style-type: none"> Annual Soil Analysis 	<ul style="list-style-type: none"> Annual soil analysis results and records 	<ul style="list-style-type: none"> Revise Plan

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Pest Management (exterior)	<ul style="list-style-type: none"> Use of MEO Grounds Staff and Grounds Maintenance Contractor Certified & Registered Applicators 	<ul style="list-style-type: none"> DPM MEO, Grounds Maintenance Grounds Maintenance Contractor Supervisor 	<ul style="list-style-type: none"> Annual applicator training State oversight of program (Annual State inspection of program by MD Department of Agriculture) 	<ul style="list-style-type: none"> Training records and certificates 	<ul style="list-style-type: none"> Cure Notice Sent Independent Pest Management Company brought in
Pest Management (interior)	<ul style="list-style-type: none"> Integrated Pest Management Program 	<ul style="list-style-type: none"> Herb Jacobi, Community Health Branch (CHB), DOHS, ORS 	<ul style="list-style-type: none"> Field surveys by CHB staff 	<ul style="list-style-type: none"> Integrated Pest Management Reports 	<ul style="list-style-type: none"> Training to staff by CHB; correction of practices and conditions
Hazmat Response and Cleanup	<ul style="list-style-type: none"> Emergency Response Plan SOPs(Ask Gary Hess for specifics) 	<ul style="list-style-type: none"> Gary Hess, Director, Chief, Division of Fire Rescue Services 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD
Procurement of Chemicals	<ul style="list-style-type: none"> Green Purchasing Program (<i>in development</i>) 	<ul style="list-style-type: none"> Ray Dillon 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> TBD
Chemical Use, Storage, Transportation	<ul style="list-style-type: none"> NIH Chemical Hygiene Plan Lab SOPs 	<ul style="list-style-type: none"> Polly McCarthy, Chief SOSB, DOHS Dr. Michael Gottesman, Deputy Director for Intramural Research 	<ul style="list-style-type: none"> Annual laboratory surveys by DOHS 	<ul style="list-style-type: none"> Survey reports 	<ul style="list-style-type: none"> Training to staff by DOHS; correction of practices and conditions
Laboratory equipment use	<ul style="list-style-type: none"> NIH Chemical Hygiene Plan Lab SOPs 	<ul style="list-style-type: none"> Polly McCarthy, Chief SOSB, DOHS Dr. Michael Gottesman, Deputy Director for Intramural Research 	<ul style="list-style-type: none"> Annual laboratory surveys by DOHS 	<ul style="list-style-type: none"> Survey reports 	<ul style="list-style-type: none"> Training to staff by DOHS; correction of practices and conditions

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SECTION 5 – RELEVANT DOCUMENT(S)

DOCUMENT NAME	LOCATION	RESPONSIBLE PERSON
NIH Hazard Communication Program	http://www.nih.gov/od/ors/ds/pubs/hcp/	Director, Office of Research Services, Division of Safety
Material Safety Data Sheets	Hardcopies in laboratories and/or access to electronic MSDSs	Laboratory Managers
Integrated Pest Management Program	http://dohs.ors.od.nih.gov/pest_management.htm	Community Health Branch (CHB), DOHS, ORS

SECTION 6 – COMPETENCY OF RESPONSIBLE PERSONS

NAME/TITLE	BASIS FOR COMPETENCE
Don Wilson, Chief, WRRB/Project Officer	
Bill Ketner, Solid Waste Team Leader/Project Officer	
Polly McCarthy, Chief SOSB, DOHS	
Adam Wolfe, Acting Chief, UOB	
Donna Phillips, Building Management Team	
Jeff Fellows, Facility Management Team	
Harry Smith	
Gus Lambis, Project Officer	
Lynn Mueller, DPM, Grounds	
Herb Jacobi, Community Health Branch (CHB), DOHS, ORS	
Gary Hess, Chief, Division of Fire Rescue Services	
Ray Dillon	
Polly McCarthy, Chief SOSB, DOHS	
Dr. Michael Gottesman, Deputy Director for Intramural Research	

SECTION 7 – AUTHORIZATION

NAME:	
SIGNATURE:	

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