

<h1>PPPL</h1>	PRINCETON PLASMA PHYSICS LABORATORY ES&H DIRECTIVES	
	ES&HD 5008 SECTION 12 Environmental Protection	
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ES&HD 5008 Section 12 – Environmental Protection

12.1 INTRODUCTION

Princeton Plasma Physics Laboratory's goal is to be in compliance with all applicable federal, state, and local environmental regulations. In PPPL's Project Mission Statement and Environmental Protection Policy (P-002) PPPL commits to taking actions to comply fully with environmental requirements.

The U.S. Department of Energy (DOE) Orders, which directs all DOE contractors to protect the environment, include specific environmental requirements.

At PPPL, a matrix organization is composed of a laboratory management committee (Environment, Safety, & Health Executive Board), a technical committee (Environmental Review Committee), and a line department (Environment, Safety, & Health and Infrastructure Support Department).

The following section provides the basis for PPPL's Environmental Protection Program and refers the reader to the appropriate document(s) for further details about a particular element of the Program.

12.2 SCOPE

This section is applicable to every Laboratory employee (including visiting scientists and engineers) and all Laboratory subcontractors.

12.3 ACRONYMS

CAA – *Clean Air Act of 1970*; also **CAAA** *Clean Air Act Amendments of 1990* [40 CFR 50 to 87].

CERCLA – *Comprehensive Environmental Response, Compensation and Liability Act of 1980*; also known as "Superfund" [40 CFR 302 to 305, 307 & 310].

CFC – *Chlorofluorocarbons*, Class 1 compounds regulated under CAAA.

CWA – *Clean Water Act of 1977* [40 CFR 122] amendment to Federal Water Pollution control Act of 1972.

DOE-PG – *U.S. Department of Energy - Princeton Group*.

EO – *Executive Order*.

ERC – *Environmental Review Committee (PPPL committee)*.

ERWM – *Environmental Restoration and Waste Management (PPPL Division)*.

ESA – *Endangered Species Act of 1973*.

ES&H – *Environment, Safety & Health (PPPL Division).*

ES&H-EB – *Environment, Safety & Health Executive Board (PPPL).*

ESH&IS – *Environment, Safety & Health and Infrastructure Support (PPPL Department).*

FFCA – *Federal Facilities Compliance Act of 1992.*

FIFRA – *Federal Insecticide, Fungicide, and Rodenticide Act of 1972 [40 CFR 150 to 189].*

HP – *Health Physics (PPPL Branch).*

IH – *Industrial Hygiene (PPPL Branch).*

ISM – *Integrated Safety Management.*

M&O – *Maintenance & Operations (PPPL Division).*

NEPA – *National Environmental Policy Act of 1969 [40 CFR 1500 to 1508, 10 CFR 1021].*

NJDEP – *New Jersey Department of Environmental Protection.*

NJDOH – *New Jersey Department of Health*

NJPDES – *New Jersey Pollutant Discharge Elimination System [NJAC 7:14A-1.1 to 23.34].*

NESHAPs – *National Emission Standards for Hazardous Air Pollutants [40 CFR 61 and 63].*

PCB(s) – *Polychlorinated Biphenyls regulated under TSCA.*

QA – *Quality Assurance (PPPL Division).*

RCRA – *Resource Conservation and Recovery Act of 1976 [40 CFR 240 to 281].*

SARA Title III – *Superfund Amendment and Reauthorization Act of 1986, Emergency Planning and Community Right-to-Know [40 CFR 350, 355, 370, & 372].*

SBRSA – *Stony Brook Regional Sewerage Authority, publicly-owned treatment works; PPPL is an industrial discharger.*

SPCC – *Spill Prevention Control and Countermeasure Plan [40 CFR 110 & 112].*

SDWA – *Safe Drinking Water Act of 1974 [40 CFR 264 to 265, 268, & 280].*

TSCA – *Toxic Substances Control Act of 1976 [40 CFR 700 to 799].*

USEPA – *U.S. Environmental Protection Agency; PPPL is in Region II.*

USTs - *underground storage tanks.*

12.4 RESPONSIBILITIES

12.4.1 Department of Energy –Princeton Group

The DOE–PG has oversight responsibilities for all environmental activities. DOE-PG is the owner and permittee while PPPL is the operator. DOE-PG has NEPA approval authority for categorical exclusions.

12.4.2 Environment Safety & Health –Executive Board

PPPL's ES&H-EB is responsible to the Laboratory Director for the overall direction and guidance of the ES&H program at PPPL. The Laboratory Deputy Director is the chair of this Board. ES&H-EB's charter is found in PPPL Organization and Mission Statement O-021.

12.4.3 Environmental Review Committee

PPPL's ERC is a resource subcommittee supporting the ES&H-EB. Members are technical specialists representing different departments at PPPL. ERC is responsible for acting on environmental issues and reviewing environmental documents. ERC's charter is found in PPPL O-23.

12.4.4 Environment Safety & Health – Infrastructure Support

PPPL ES&H-IS Department is composed of several divisions that are directly responsible for environmental activities: ES&H, ERWM, Site Protection, Materiel Control, QA, and M&O.

ERWM Division is responsible for waste management (hazardous and radiological), restoration projects, pollution prevention and waste minimization, and environmental compliance.

ES&H Division is responsible for NEPA compliance, nuclear safety, electrical safety, construction safety, and radiological safety (HP).

M&O Division is responsible for facilities engineering, house/grounds keeping including solid waste and recycling, facilities operations and maintenance (plumbing, electrical, carpentry, heating and air conditioning).

Materiel Control Division is responsible for distribution of goods throughout the laboratory, inventory control, government vehicles, and vehicle fuel handling.

QA Division is responsible for quality control inspections, procurement quality assurance, audits and assessments, and tracking and data support.

Site Protection Division is responsible for emergency planning, emergency services, industrial hygiene, industrial safety, accident investigations and occupational medicine.

12.4.5 Employees (including visiting staff) and Subcontractors

Employees and Subcontractors are responsible for the following:

- Complying with NEPA requirements;
- Identifying and reporting environmental releases to Site Protection (ext. 3333);
- Understanding the hazards of their work and minimizing risks to self and others;
- Properly disposing of hazardous materials and wastes through ERWM;
- Minimizing use of hazardous chemicals,
- Using recycled materials and recycling materials; and
- Collecting data for environmental reports, where required by permit conditions.

12.5 TRAINING

All employees and subcontractors are required to attend or challenge the General Employee Training course and pass a written test when employment at PPPL begins (training applies to all subcontractors who will be at PPPL for more than 40 hours), and every two years thereafter.

Other training may be required depending upon requirements of work activities.

12.6 ENVIRONMENTAL REQUIREMENTS

The table below provides the environmental requirement and its applicability to PPPL.

Requirement	Applicability
<i>Asbestos</i>	<ul style="list-style-type: none"> • Testing prior to removal of material • Notification to EPA/NJDEP/NJDOH • Removal and monitoring by certified personnel
<i>CAA</i>	<ul style="list-style-type: none"> • Title V exemption • Annual Air Emission Statement exemption • Individual permits for: <ul style="list-style-type: none"> • boilers (4 units), • above ground storage tank vents (2) • dust collectors (3) • stand-by diesel generators (2) • CFC program – inventory and certified technicians.
<i>CERCLA</i>	<ul style="list-style-type: none"> • Inventory completed (1993) • No mandated cleanup activities or further actions warranted.
<i>CWA</i>	<ul style="list-style-type: none"> • Water Quality Standards under NJPDES permits for surface and ground discharges. • Indirect Discharges under Sanitary or Publicly Owned Treatment Works (POTW) for waste water discharges.
<i>EO 11988</i>	Floodplain management compliance with: <ul style="list-style-type: none"> • 500-year floodplain delineation (85 ft above mean sea level at PPPL) • 100-year floodplain delineation (80 ft above mean sea level at PPPL)
<i>EO 11990</i>	Protection of wetlands restricts activities in delineated wetlands.

Requirement	Applicability
<i>EO 12856</i>	Requirements under SARA Title III for Federal facilities: <ul style="list-style-type: none"> • Right –to-Know (R-T-K) • Pollution prevention
<i>ESA</i>	Requires protection of specific animal and plant species.
<i>FFCA</i>	Requires Federal facilities to have Site Treatment Plans for “mixed wastes”, both radiological and hazardous wastes.
<i>FIFRA</i>	Applies to application of herbicides and pesticides by certified contractors.
<i>NEPA</i>	Applies to all activities that have not been categorized as “inherently low hazard” (see ES&H-014).
<i>Historical Preservation</i>	Requires identification of historical and archaeological resources.
<i>Lab Certification</i>	New Jersey program for certifying analytical laboratories for data reported to NJDEP.
<i>Medical Waste</i>	Requires approved waste disposer for medical waste generated by on-site occupational health office.
<i>NJPDES</i>	Under CWA, permit program for : <ul style="list-style-type: none"> • Surface water discharges – monthly reports and periodic chronic toxicity tests; • Ground water discharges – quarterly well reports and twice-annual reports for surface impoundment.
<i>RCRA</i>	<ul style="list-style-type: none"> • Hazardous waste disposal program; • USTs – all tanks removed from service before 1996.
<i>SARA</i>	<ul style="list-style-type: none"> • Inventory of hazardous materials; • Material Safety Data Sheets (MSDS) required; • Completed Tier I form for each chemical above threshold (12 chemicals at PPPL).
<i>SPCC</i>	Required plan for petroleum containing equipment: <ul style="list-style-type: none"> • Inspections and record keeping; • Release notification and reporting requirements.
<i>SDWA</i>	<ul style="list-style-type: none"> • Quarterly inspections of physical connections with water purveyor; • Annual internal inspections of equipment.
<i>Soil Erosion/ Sediment Control</i>	<ul style="list-style-type: none"> • Approval required prior to disturbance of soil > 5000 sq. feet. • Activities to prevent soil erosion for projects not requiring formal approval.
<i>Sanitary</i>	<ul style="list-style-type: none"> • Including radiological sampling of liquid effluent collection tanks (LECT) prior to release to SBRA. • Annual monitoring for chemical oxygen demand of above discharge.
<i>Solid Waste</i>	Approved hauler / recycler for on-site wastes.
<i>TSCA</i>	PCB inventory and approved disposal facility.
<i>Wetlands</i>	Permitted activities require a NJDEP permit.

12.7 IMPLEMENTING DOCUMENTS

The following is a listing of important PPPL environmental documents:

PPPL	Policy/Charter
<i>P-002</i>	Environmental Protection
<i>O-021</i>	Environment, Safety and Health Executive Board Charter
<i>O-023</i>	Environmental Review Committee Charter
	Integrated Safety Management Plan
<i>ES&HD 5008, Section 12</i>	Environmental Protection
<i>ES&HD 5008, Section 10</i>	Radiological Protection
<i>ESH-014</i>	NEPA Review System
ES&H/QA	Plan
<i>EQP-001</i>	Environmental Monitoring Plan (EMP)
<i>EQP-002</i>	Environmental Protection Implementation Plan
<i>EQP-003</i>	Ground Water Management Plan
<i>EQP-004</i>	Institutional Quality Assurance Plan
<i>EQP-005</i>	Radiological ALARA Program Plan
<i>EQP-006</i>	Waste Minimization Plan
<i>EQP-007</i>	Cultural Management Plan
<i>EQP-008</i>	Storm Water Pollution Prevention Plan
ER/WM	Procedure
<i>EM-OP-XX</i>	Waste Management Procedures
<i>EM-OP-31</i>	Surface Water Sampling
<i>EM-OP-32</i>	Ground Water Sampling
<i>EM-OP-33</i>	Rain Water Sampling
<i>EM-OP-34</i>	Environmental Reporting
<i>EM-OP-35</i>	Non-Emergency Release Notification
<i>EM-OP-36</i>	Equipment Management (Maintenance, Calibration, Record Keeping)
M&O	Plan
	Site Management Plan
	Storm Water Management Plan
	Landscape Management Plan
SP	Plan
<i>Emergency Preparedness Plan Supplement 6</i>	Spill Prevention Control and Countermeasure Plan

12.8 REPORTS

Required environmental reports are listed in the table below:

Frequency	Report Title
Bi-Annual	RCRA Waste Generator's Report
Bi-Annual	TSCA PCB Report
Annual	SARA Title III Report
Annual	Site Environmental Report
Annual	Medical Waste Generator's Report
Annual	NESHAPS Report
Semi-Annual	Chronic Toxicity Testing
Quarterly	Ground Water Monitoring Report
Monthly	Permit Status Updates
Monthly	Discharge Monitoring Report
Monthly	SBRSA Self-Monitoring Report
As needed	Asbestos Removal Notification
As needed	Release Confirmation Report

12.9 REVIEWS

The following is a list of examples of reviews performed:

- PPPL Customer Survey for Environmental Restoration/Waste Management
- PPPL Self-Assessment Program
- Monthly PPPL Tracking and Trending Report
- Business Management Reviews or Unified Safety Reviews
- External Agency Audits or Inspections

12.10 REFERENCES

All Laws and Regulations cited in **Section 12.2 Acronyms**.

All Documents listed in **Section 12.7 Implementing Documents**.

All Reports listed in **Section 12.8 Reports**.

DOE References:

DOE 5400.1, General Environmental Protection Program Requirements

DOE 5400.2A, Environmental Compliance Issue Coordination

DOE 5400.5, Radiation Protection of the Public and the Environment

10 CFR 1021, DOE NEPA Guidelines

PPPL References:

ESH-014, PPPL NEPA Review System

EWM-001, PPPL Hazardous Waste Management

PPPL Laboratory Procedure GEN-006, Occurrence Reporting and Processing of Operations Information

PPPL Material Control Policy and Procedures Manual, Section 15

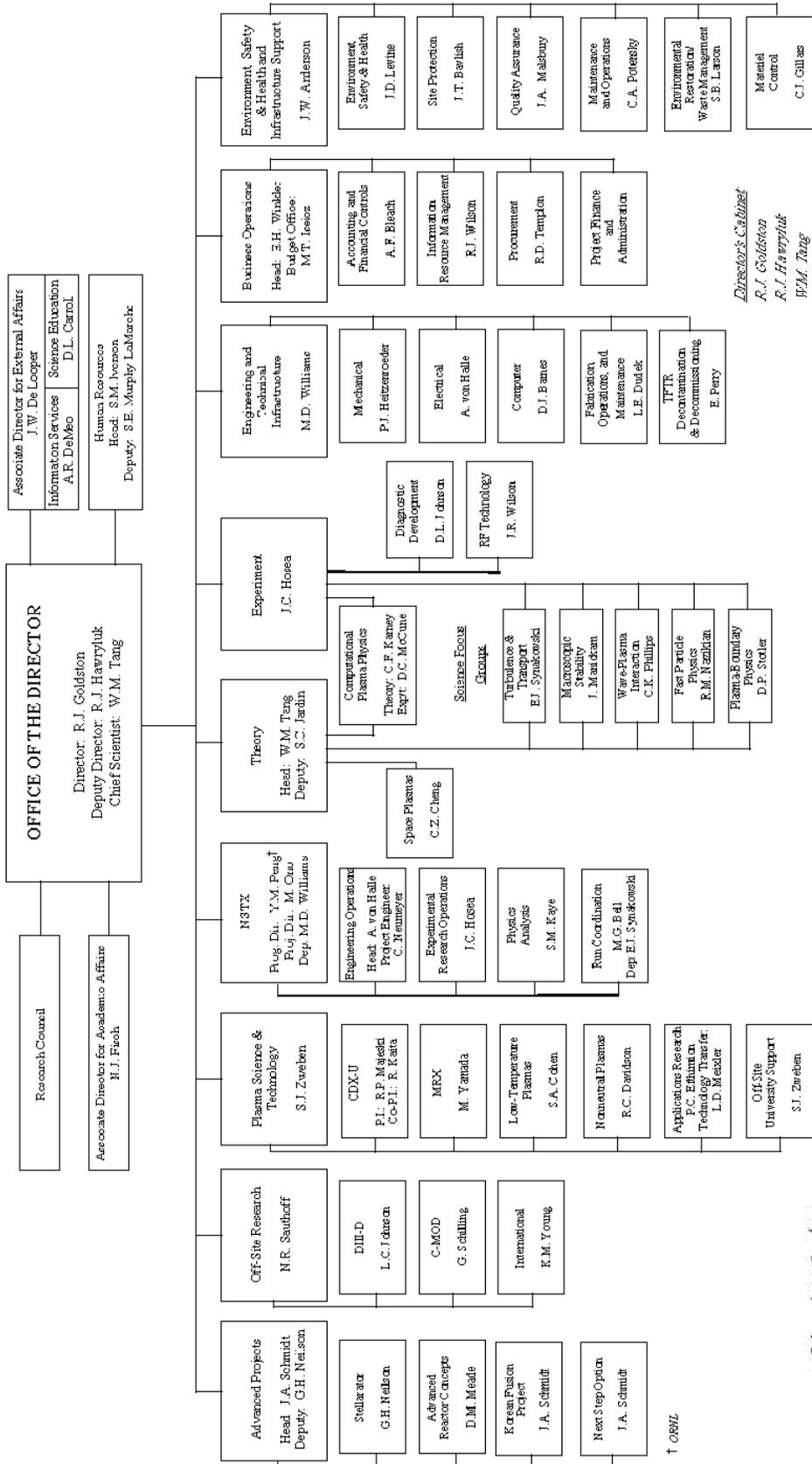
PPPL Organization/Mission Charter 0-021, ES&H Executive Board Charter

PPPL Organization/Mission Charter 0-023, Environmental Review Committee Charter

12.11 EXHIBITS

- PPPL Organization
- ESH/IS Department

PRINCETON PLASMA PHYSICS LABORATORY



Director's Cabinet
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March 28, 1988

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ES&H and Infrastructure Support

