



**PRINCETON PLASMA PHYSICS LABORATORY**  
**ON-SITE HAZMAT TRANSPORTATION SAFETY DOCUMENT**

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## **I PURPOSE, SCOPE, and APPLICABILITY**

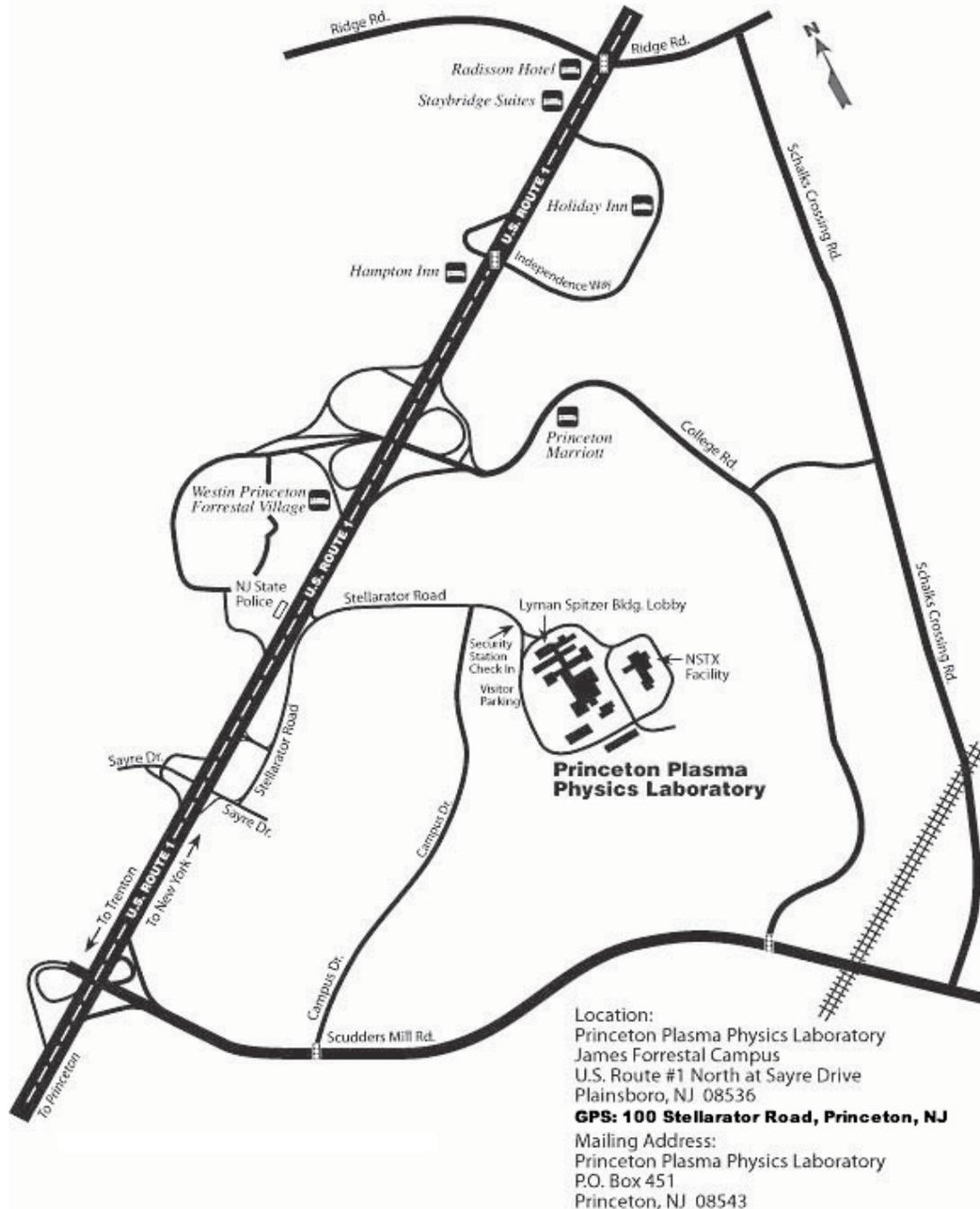
The purpose of this Princeton Plasma Physics Laboratory (PPPL) On-Site Transportation Safety Document (TSD) is to document and demonstrate PPPL's compliance with the on-site transportation safety requirements of DOE Order 460.1C and the associated Contractor Requirements Document (CRD).

This TSD covers all onsite transfers of hazardous materials, substances, and waste. For the purpose of this document, onsite transfers are defined as the transport of hazardous materials and/or waste from one place to another within the boundaries of PPPL.

The requirements of this TSD are applied at PPPL by the use of existing policies and procedures (see section IV, Background and Methodology). The TSD is prepared and controlled by the PPPL Shipping Office of the Material Services Branch (MSB), and the Environmental Services Division (ESD). Updates, as needed, will be prepared, reviewed, approved, and distributed to relevant personnel by the MSB and ESD. Hardcopies of this TSD are maintained in the PPPL Shipping Office and the Hazardous Waste Engineers office. The official electronic copy is maintained by the Best Practices Office in PPPL's electronic document management system.

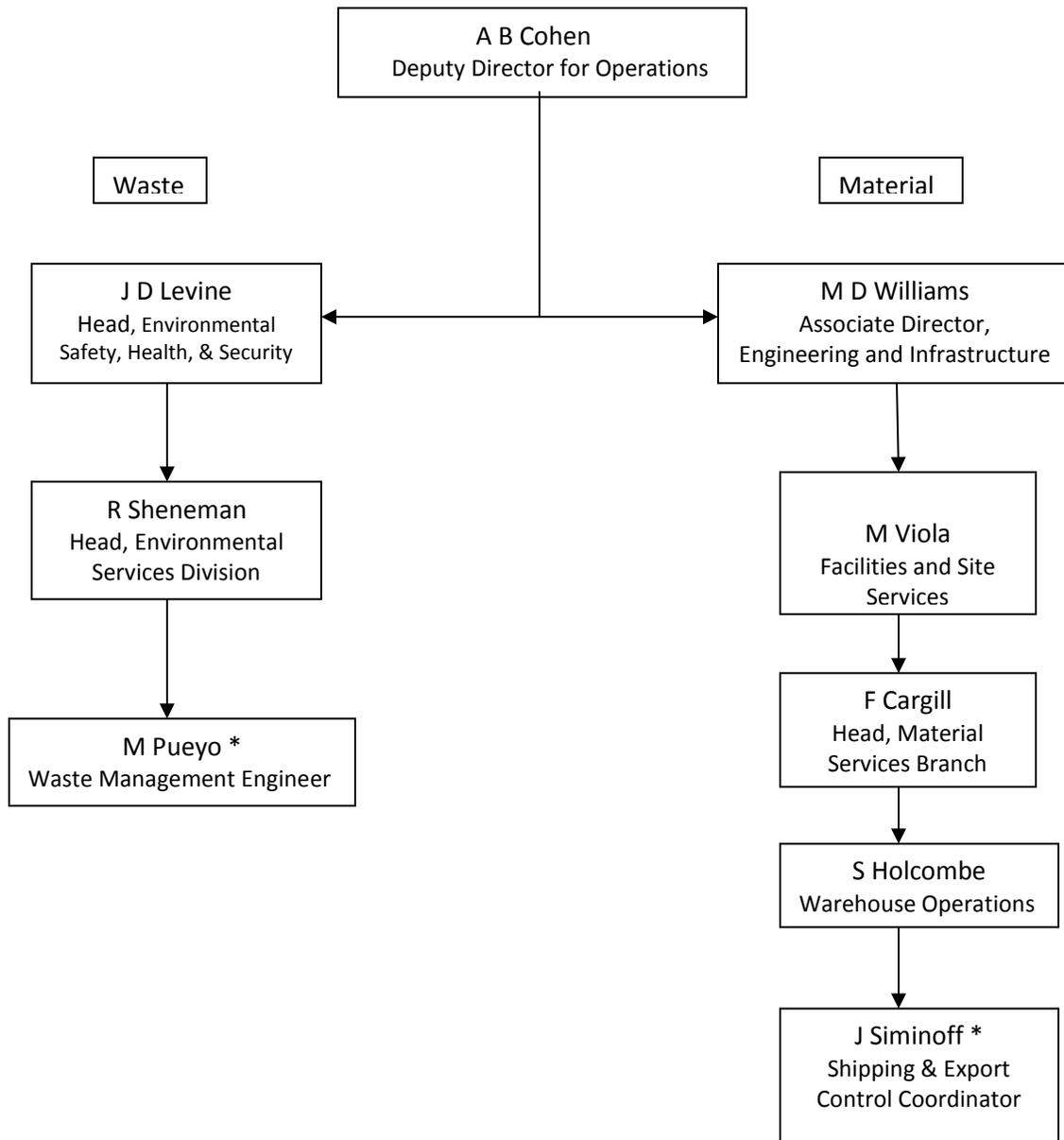
## II SITE DESCRIPTION

PPPL is located at 100 Stellarator Road on the James Forrestal Campus of Princeton University in Plainsboro New Jersey. It encompasses 88.5 acres of land leased to the US Department of Energy. The site has only one entrance which is controlled by a security station and gate. There are no public roads within the boundaries of the site.



### III RESPONSIBLE PARTIES

The responsibility for onsite transfers is shared between the Environmental Services Division for hazardous and radioactive wastes, and the Material Services Branch for hazardous and radioactive materials. The following chart reflects the Lab wide organization of these responsibilities.



\* Denotes Key Personnel responsible for onsite transfers

#### **IV APPLICABLE PLANS & PROCEDURES**

The onsite movement of hazardous materials at PPPL is controlled by Hazardous Waste Management procedures, Material Services Policies & Procedures, Chemical Safety procedures, and Radiological Safety procedures. This TSD provides a brief description of the Hazardous Waste Management procedures, Material Services Policies & Procedures, Chemical Safety procedures, and Radiological Safety procedures that govern the processes for routine and non-routine on-site transfer of hazardous materials/wastes at PPPL. The TSD is controlled jointly by the Material Services Branch and the Environmental Services Division to document PPPL's compliance with the DOE on-site transportation safety requirements of DOE Order 460.1C and the associated Contractor Requirements Document (CRD).

Following is a list and brief description of procedures that govern the transfer of hazardous and radioactive materials/wastes at PPPL:

**EM-CP-21, "Low-Level Radioactive and Mixed Waste Certification Program Plan:"** This Plan describes the organization and methodology for certifying, handling, and characterizing low-level radioactive and mixed waste generated at the Department of Energy's Princeton Plasma Physics Laboratory (DOE-PPPL) for transportation and subsequent burial at approved facilities.

**EM-OP-01, "Removal of Asbestos Containing Materials:"** This procedure describes the management of asbestos removal projects at PPPL and the handling and removal of waste generated as a result of these projects.

**EM-OP-03, "Incompatible Waste Storage in the Hazardous Materials Storage Facility:"** This procedure is designed to ensure that incompatible wastes are segregated appropriately and stored properly at the Hazardous Materials Storage Facility to ensure safety and compliance with federal, and state regulations and DOE requirements.

**EM-OP-04, "On-Site Collection and Transfer of Hazardous Waste:"** This procedure is designed to provide for the safe collection and transfer of hazardous waste from generators to the Hazardous Materials Storage Facility (HMSF).

**EM-OP-05, "Receipt Characterization and Packaging of Hazardous Waste:"** This procedure is designed to ensure that hazardous wastes collected and transferred to the HMSF by the Waste Management Branch are correctly identified, classified, recorded, handled, packaged, marked, labeled, and verified to ensure safety and compliance with federal, and state regulations and DOE requirements.

**EM-OP-06, "Off-Site Shipments of Hazardous, Radioactive, Mixed, and Non-Regulated Wastes:"** This procedure is designed to provide for the safe, off-site shipment of hazardous, radioactive, and mixed wastes, and all other non-regulated wastes processed through the Waste Management Branch of ER/WM. ER/WM is responsible for ensuring that all such shipments are performed in accordance with Federal, State, and local regulations and DOE requirements.

**EM-OP-07, "Solid Radioactive Waste Packaging;"** This procedure provides the PPPL

requirements for packaging of compactable and non-compactable radioactive debris/waste for transportation as defined in the Code of Federal Regulations (CFR) Title 49, Part 173. It applies only to wastes to be packaged in steel boxes and steel drums. The procedure assures that packages are in compliance with Federal, State, DOE, and burial facility requirements.

**EM-OP-09, “Radioactive Waste Characterization:”** The purpose of this procedure is to delineate acceptable methods for characterization of low-level radioactive (LLW) and mixed low-level radioactive waste (MLLW) generated at PPPL packaged for shipment to approved facilities licensed to receive radioactive waste.

**EM-OP-28, “Liquid Radioactive Waste Packaging:”** The purpose of this procedure is to provide ER/WM personnel with proper instructions and guidance for the packaging of liquid radioactive waste. This material will be packaged for transportation in accordance with Federal, State, DOE, and burial facility requirements.

**ESHD 5008, “PPPL Environment, Safety, and Health Directives,”** Section 8, Chapter 1, “Chemicals,” and Chapter 12, “Hazard Communication:” These sections cover the safe handling and storage and labeling of chemicals at the facility.

**MCP&P 100.2, “Material Services Group Environment, Safety, and Health Policy”** This procedure describes the Material Services Branch ES&H objectives of a safe and healthy working environment, and compliance with all applicable safety and environmental regulations. It also describes the training requirements for Material Services personnel involved in the handling of hazardous and radioactive material.

**MCP&P 301.3, “Receipt and Inspection of Materials Requisitioned by the Stockroom”** This procedure includes assurances for the proper handling and control of items moving between the warehouse and the stockroom.

**MCP&P 401, “Receipt, Processing, Delivery, and Shipment of Materials Policy”** This procedure describes the efficient handling, protection, and control of materials during receipt at the warehouse, and delivery to onsite personnel.

**MCP&P 401.5, “Traffic Management”** This procedure includes assurances that materials are properly identified, described, and packaged to ensure safe handling and shipping.

**MCP&P 401.6, “Shipping Hazardous Materials”** The purpose of this procedure is to assure the use of applicable DOE Orders, CFRs, and ES&H directives for the movement of hazardous materials. It describes the responsibilities of the custodian of the hazardous material and Shipping Office personnel to review and prepare the material before onsite movement to the warehouse. This section also references the hazardous training requirements for personnel handling hazardous materials.

**MCP&P 401.8, “Shipment of Material/Equipment to Offsite Locations”** This procedure includes assurances that Hazardous Materials will be picked up onsite according to MCP&P 401.6.

**MCP&P 401.10, “Receipt of Hazardous Materials at Receiving 3”** This procedure describes

proper review, identification, and approval of hazardous materials before they are permitted onsite. Materials must be properly labeled and packaged, and a Material Safety Data Sheet must be available with the material while onsite.

**ES&H – 004, Job Hazard Analysis (Material Services)**

- Receipt, Storage, and Delivery of Materials
- Warehouse Packaging and Transportation
- Contractor Delivery and Pickup of Compressed Gas Cylinders

These documents lists the hazards involved in cited activities and the corresponding safety control measures that are in place to mitigate hazards.

**ES&HD 5008**, Section 9, Chapter 2, “**Compressed Gas Cylinder Safety**” This procedure provides guidelines for the identification, inspection, transportation, storage, installation, use, and disposal of compressed gas cylinders.

**PPPL Transportation Security Plan (TSP)** This plan addresses the hazardous materials security requirements on 49 CFR 172.800 including a security risk assessment and mitigation, personnel security, unauthorized access, en-route security, and training requirements. The TSP is a controlled document that is available to HazMat personnel as required by their work.

**PPPL Emergency Preparedness Plan** PPPL’s Emergency Preparedness Plan (E-Plan) is a comprehensive “all hazards” emergency plan addressing a variety of security, medical, fire, and environmental hazards. PPPL’s Emergency Services Unit (ESU) is the primary on-site emergency response organization. ESU coordinates with the Environmental Services Division, Health Physics Division, and other PPPL organizations as required for hazardous and radioactive materials releases.

## **V     TRAINING**

All HazMat employees at PPPL are trained at a minimum in general awareness, familiarization, and safety of hazardous materials in accordance with DOT (49 CFR, subpart H). Function specific training in hazardous materials and hazardous waste is provided for those employees whose jobs require it. Job-specific training requirements are detailed in the applicable organizational training matrices. HazMat employees involved in the transportation of hazardous materials/wastes receive training on the DOT transportation security requirements and the PPPL Transportation Security Plan as required by 49 CFR 172.704.