

**Classification System for
BNL Land Use / Institutional Control Management Plan**

Soil Remediation Complete - Unrestricted Land Use (A)

Soils that had been contaminated with chemicals and/or radioactivity have been remediated to concentrations that are protective of human health and environment. The areas are currently used for industrial activities. Future residential, recreational, and/or open space activities may be permitted in some areas with appropriate DOE/regulatory agency approval.

- A1 --- Central Steam Facility 1977 Spill Area
- A2 --- Central Steam Facility Off Load Area
- A3 --- Paint Shop Soils Area
- A5 --- TCE Spill Area
- A6 --- Building 479 Spill Areas
- A7 --- AGS Storage Yard 2
- A8 --- Central Steam Facility Lead Contaminated Soils
- A9 --- West Water Tower Lead Contaminated Soils

Soil Remediation Complete - Restricted Land Use (B)

Use of these sites is restricted, but they can be used to support industrial operations with proper operational and engineered controls, and appropriate DOE/regulatory agency approval. These sites were contaminated with chemicals and/or radioactivity and, in most situations, have been remediated to levels that are currently suitable for industrial use. Some of the remediated radiological contamination areas may be suitable for residential use by 2055, following 50 years of natural radioactive decay.

- B1 --- Building 650 Sump and Sump Outfall
- B2 --- Landscaping Soils
- B3 --- AGS Storage Yards
- B4 --- Low Mass Criticality Facility
- B5 --- Building 830
- B6 --- Old Fire House Area
- B8 --- Sewage Treatment Facility
- B9 --- Chemical/Animal Holes
- B9 --- Glass Holes
- B10 --- Former HWMF
- B11 --- Building 96 PCB Soils Area
- B12 --- Bubble Chamber Spill Area
- B13 --- Building 208 Vapor Degreaser and Warehouse Area
- B15 --- Peconic River Remediation Areas
- B16 --- Waste Concentration Facility
- B17 --- Building 464 Mercury Soils Area

Capped/Controlled Contaminated Soils - Restricted Land Use (C)

Contaminated soils and/or material may be present below these capped areas. Controls are in place at the landfills and accelerator facilities to prevent site workers, visitors, and wildlife from being exposed to the contamination (e.g., fencing, postings, controlled access points, etc.). Activities in Landfill and Accelerator Facility activated soil shielding areas are restricted to prevent damage to impermeable caps or other stormwater water management systems. Use of landfill areas is restricted, but in some circumstances these areas may be used to support industrial or recreational activities with proper operational and engineered controls and appropriate DOE/regulatory agency approval. BNL accelerator facilities are in active industrial use. Future use of activated soil shielding areas at the accelerator facilities is dependant upon whether radioactivity levels will be reduced by excavation or "decay in place" remediation scenarios.

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- C1 --- Former Landfill Areas
- C2 --- Current Landfill
- C3 --- Ash Pit Areas
- C4 --- BLIP
- C5 --- Alternating Gradient Synchrotron g-2/V12 Source Area
- C6 --- Accelerator Facility Beam Loss Areas
- C7 --- Old Incinerator

Known or Potentially Contaminated Soils, Remediation Pending - Restricted Land Use (D)

These are areas where plans and resources are being developed to remediate radiological or chemical soil contamination to acceptable soil concentrations. Use of these sites is restricted, but they can possibly be used to support industrial Laboratory operations with proper operational and engineered controls and appropriate DOE/regulatory agency approval. Final Land Use/Institutional Control classifications will be determined following characterization and any necessary cleanup.

- D3 --- Shotgun Range Lead Contaminated Soils
- D4 --- Live Fire Range Lead Soils
- D5 --- Building 197 Mercury Soils Area
- D7 --- C-AD Lead Storage Yard
- D8 --- A&B Liquid Waste Lines
- D9 --- Building 463 (Greenhouses)
- D10 --- FHWMF (Perimeter Soil Contamination)
- D11 --- Former Warehouse Area (Post NSLS-II Construction)

Groundwater Contamination Areas - Restricted Groundwater Use (E)

This means that chemical or radiological contamination is present in groundwater at concentrations that exceed drinking water standards. The contamination is being remediated through a combination of active groundwater treatment systems and/or natural attenuation. Drinking water or process water supply wells cannot be installed in these areas without BNL, DOE and regulatory agency approval. Certain storm water or process water recharge activities may also be restricted. Any water supply well installations or water discharge operations in these areas shall be coordinated via the Work Planning and Control procedure and the Site Use Permit procedure, and be performed in accordance with county and state regulations.

- E1 --- Groundwater Contaminant Plumes (E1)

Radiological Facility, Decontamination & Demolition Pending - Restricted Land Use (F)

These facilities are radiological controlled areas. Plans are under way for their decontamination and decommissioning. Final Land Use/Institutional Control classifications have not yet been determined.

- F1 --- Brookhaven Graphite Research Reactor
- F2 --- High Flux Beam Reactor
- F3 --- Brookhaven Medical Research Reactor
- F4 --- Nuclear Waste Management Facility Building 830
- F5 --- Former Reclamation Facility Building 650
- F7 --- Waste Concentration Facility

Sensitive Areas (Biologically/Culturally Sensitive)-Restricted Land Use (G)

Activities in these areas are restricted because they contain protected plant and animal habitats or cultural

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resources. Certain areas may have undergone remediation for chemical or radiological soil contamination, and may contain some residual, low-level contamination. These sites are restricted, but some industrial or recreational activities may take place with proper operational and engineered controls and DOE/BNL and regulatory agency approval. Any work in these areas shall be coordinated via the Work Planning and Control procedure and the Site Use Permit procedure.

- G1 --- Upland Recharge/Meadow Marsh Area
- G2 --- Recharge Basins HS, HW, HT, HN, HP
- G3 --- Recharge Basins HS, HW, HT, HN, HP
- G5 --- Peconic River Corridor (G5)
- G6 --- BNL Wetlands (G6)
- G6 --- Cultural Resources (G6)
- G6 --- DEC Wetlands (G6)
- G6 --- Tiger Salamander(G6)
- G8 --- Wooded Wetlands (G8)