HFBR and BGRR Projects

Diane Rocco
Director, Environmental Restoration Projects

November 2011
Discussion Topics

- EM / SC / LTS – what are all these acronyms?
- BNL EM Projects
- HFBR Transition to LTS
- Status of BGRR Bioshield Demolition
ERP’s activities at the HFBR/BGRR work are funded by the DOE Office of Environmental Management (EM).

After remediation, site ownership/funding is transitioned from DOE-EM to DOE’s Office of Science (DOE-SC).

Within the BSA structure, the EM-funded activities are implemented through the Environmental Restoration Projects (ERP) organization.

When EM/ERP jobs are completed, the restored areas are transitioned to other users or to the Long Term Stewardship program.
Long Term Stewardship

- The Groundwater Protection Group (within the Environmental Protection Division, (EPD)) carries out the Long Term Stewardship activities at BNL

- Performs groundwater remediation and monitoring, including the Freon-11 plume discussed at the last CAC meeting

- Completed the Peconic River supplemental sediment removal and monitoring, discussed at last meeting

- Performs surveillance and maintenance of former soil cleanup areas/landfills, and the HFBR dome
Map of EM-Funded Projects - before

- Building 705
- Stack
- Building 701
- BGRR
- Building 750
- HFBR
- Building 802
- Fan House
- Building 704
- Fan House
HFBR Dome

- Control Rod Blades and Beam Plugs removed and disposed
- Floors cleared and interior of dome rendered “cold and dark”
- Transition complete from ERP to EPD
- Perform periodic routine inspections
HFBR Exterior Areas

- HFBR Underground Utilities - removed
- Fanhouse Buildings 704 and 802 - removed
- HFBR Stack demolition to be complete by 2020
- HFBR Stack Silencers - removed and packaged for disposal
- HFBR hill area remediated and grassed
- Surveys performed and independently verified
- Transition from ERP to EPD in progress
Changes to the Landscape
• Bioshield Enclosure: 55’ Long by 37’-6” Wide by 33’-7” High
• Bioshield Wall construction: 6” interior steel, 4’-3” concrete, 3” ext. steel
Bioshield demolition delayed

Bioshield concrete was unexpectedly difficult to deal with - very strong, and full of steel pieces

The original overhead Gradall excavator made slow progress

Many options were considered

- Diamond Wire Saw
- Heat treating
- Larger Hydraulic Hammer

New plan - track-mounted excavator with a hydraulic hammer attachment – started 9/14/11
BGRR New Holland Excavator
Biological Shield Demolition – 10/2

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Biological Shield Demolition – 10/10
New excavator increased rate of demolition significantly

All material from bioshield inner steel and concrete will be packaged and removed from the building by end of November.

Completion of physical work scheduled in January and completion of all turnover activities by June 2012.

Funding is in hand to carry the project through December.

Funding to complete the project is being sought, and contingency options are being developed to place the project in a stable and safe condition.
BGRR Waste Packaging and Transportation

- Waste materials are packaged in robust, sealed steel containers with gasketed closures.
- The containers are verified to be clean of any radiological contamination prior to their removal from BGRR building.
- The containers are loaded on railcars at the BNL siding and transferred off-island by LIRR during non-business hours, typically on weekends.
- Containers and railcars are inspected by BNL and railroad personnel prior to movement off site.
- The dose rates from the containers are well below the limits specified for rail transport by DOT regulations.
BGRR Safety Statistics

- Health & Safety Metrics FY11
  - Total of ~ 160,000 hours worked
  - 0 Recordable Injuries (3rd year in a row)
  - 0 DART Cases (3rd year in a row)
  - 0 Personnel Contamination Reports
  - Celebrated 1000 days without a recordable injury in June
  - Achieved ERP’s “Zero” Lost-Time Injury Rate Goal