

HFBR and BGRR Projects



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Discussion Topics

- EM / SC / LTS – what are all these acronyms?
- BNL EM Projects
- HFBR Transition to LTS
- Status of BGRR Bioshield Demolition

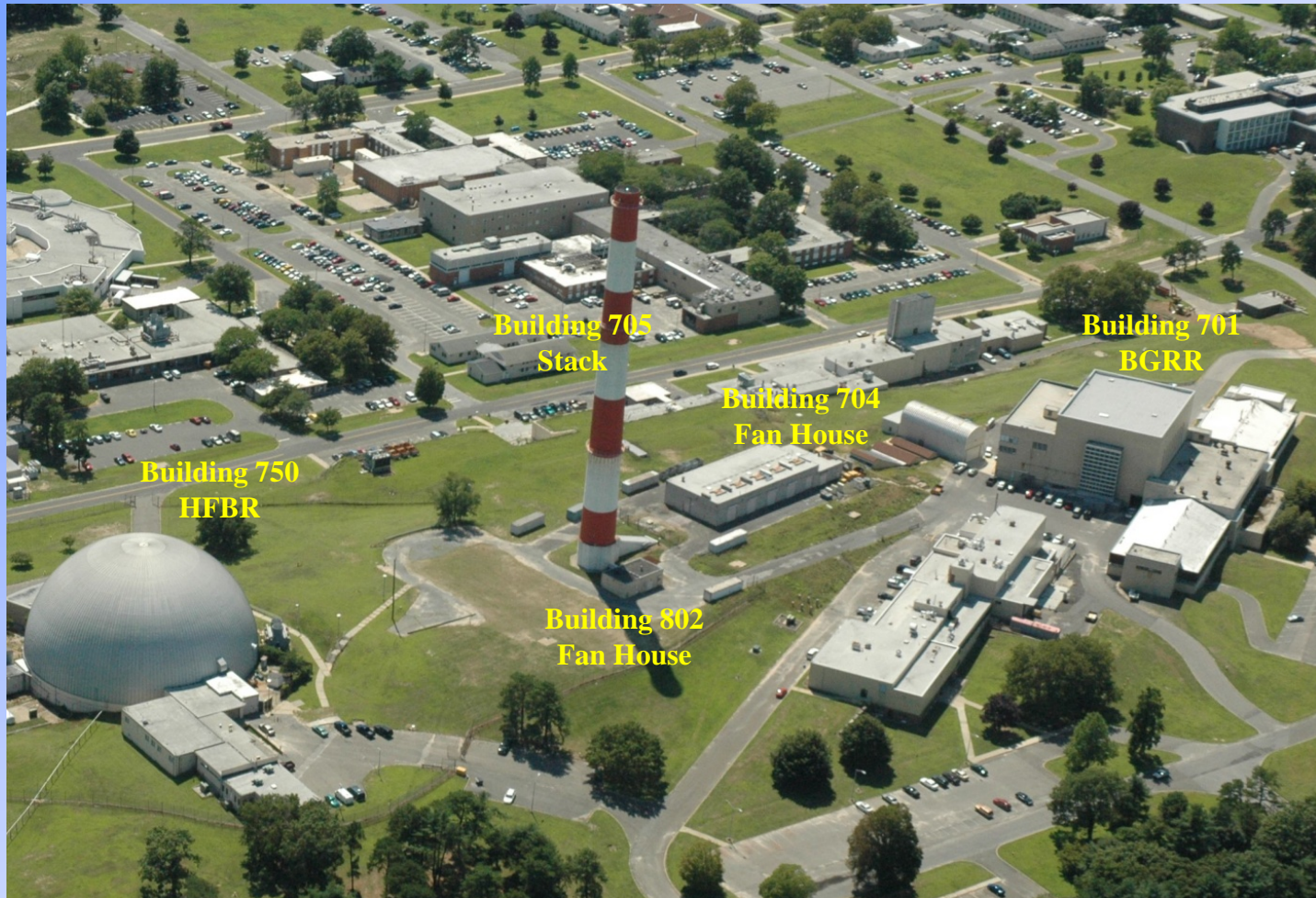
Acronyms and Organizations

- 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

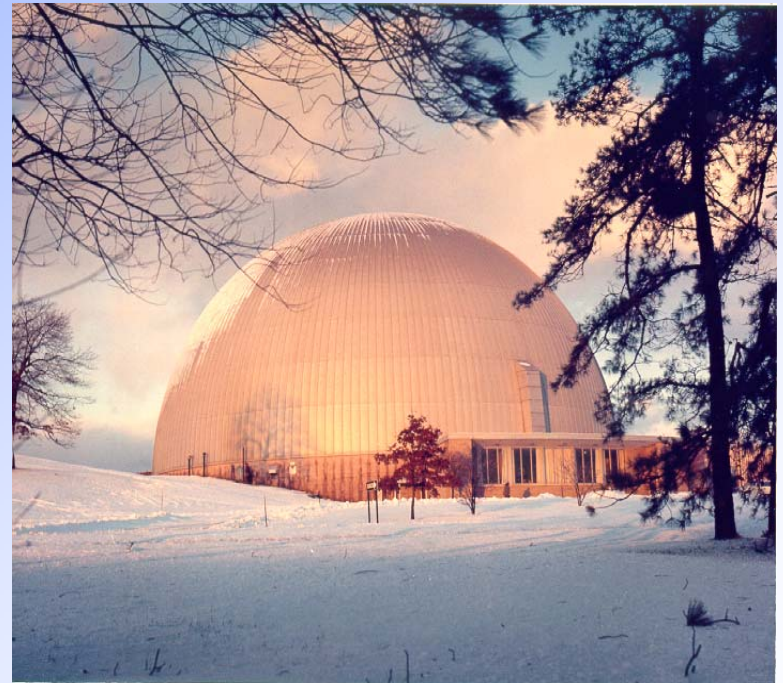
- The Groundwater Protection Group (within the Environmental Protection Division, (EPD)) carries out the Long Term Stewardship activities at BNL
- Performs groundwater remediation and monitoring, including the Freon-11 plume discussed at the last CAC meeting
- Completed the Peconic River supplemental 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



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

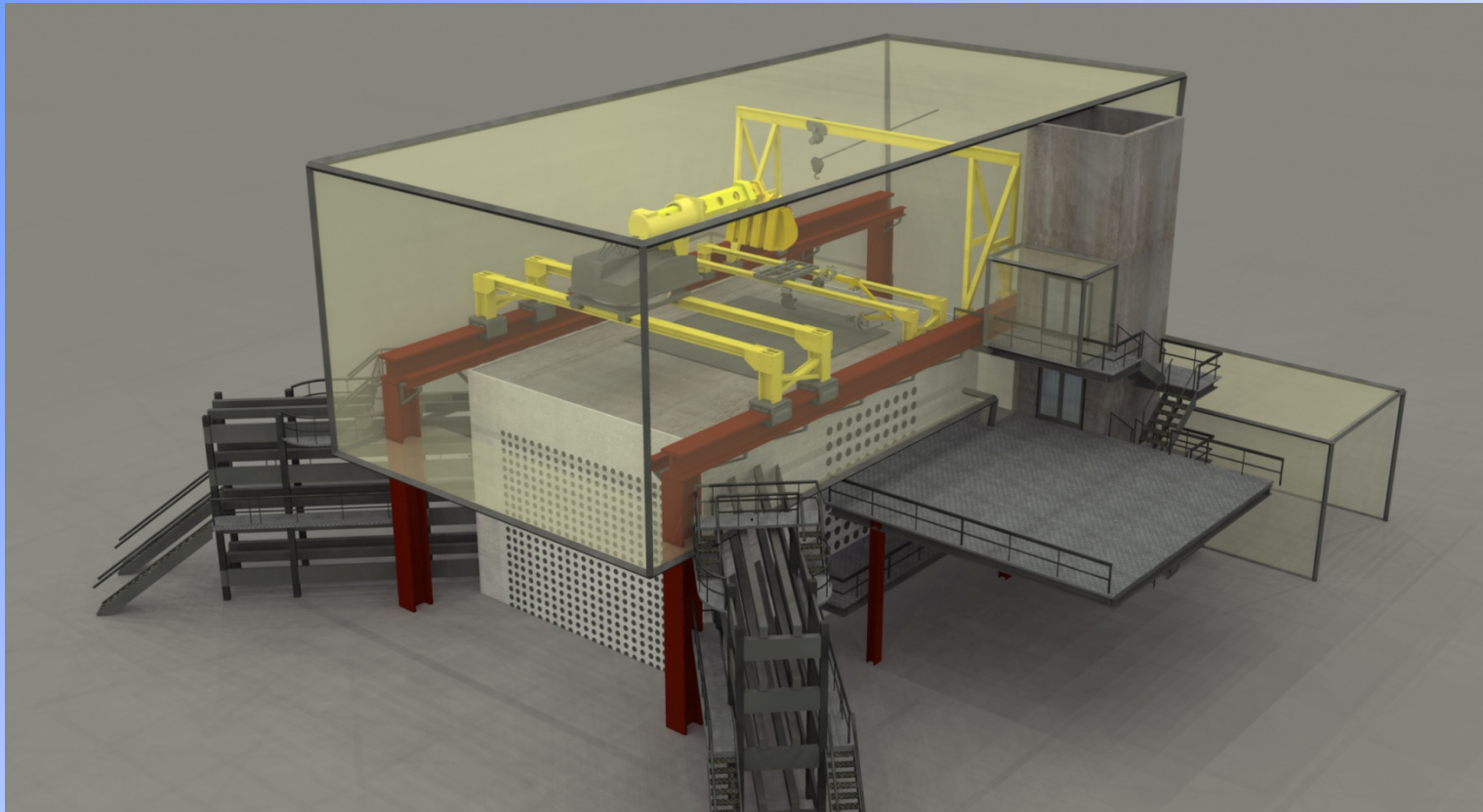
- HFBR Underground Utilities - removed
- Fanhouse Buildings 704 and 802 - removed
- HFBR Stack demolition to be complete by 2020
- HFBR Stack Silencers - removed and packaged for disposal
- HFBR hill area remediated and grassed
- Surveys performed and independently verified
- Transition from ERP to EPD in progress



Changes to the Landscape



BGRR Bioshield Demolition



- Bioshield Enclosure: 55' Long by 37'-6" Wide by 33'-7" High
- Bioshield Wall construction: 6" interior steel, 4'-3" concrete, 3" ext. steel

BGRR Bioshield Demolition

- 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



Biological Shield Demolition – 10/10



Biological Shield Demolition – 10/28



Biological Shield Demolition – 11/4



BGRR Budget / Schedule

- 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 Waste Packaging and Transportation



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