

NEPA Environmental Evaluation Notification Form
National Environmental Policy Act (NEPA)
ENVIRONMENTAL EVALUATION NOTIFICATION FORM

Grantee/Contractor Laboratory: BROOKHAVEN NATIONAL LABORATORY

Project/Activity Title: BLIP to LINAC Cap Extension

CH NEPA Tracking No.: BNL-482 Type of Funding: C-A & BLIP
Operating Funds

B&R Code: _____ Total Estimated Cost: \$65,000

DOE Cognizant Secretarial Officer (CSO): R. Orbach, SC-1

Contractor Project Manager: A. Javidfar

Signature: *A. Javidfar*

Date: 2/24/04

Contractor NEPA Reviewer: M. Davis

Signature: *M. Davis*

Date: 2/24/04

I. Description of Proposed Action:

The proposed action would extend ground water protection measures by constructing a partial concrete cap over the LINAC (Linear Accelerator) tunnel and BLIP (Brookhaven Linac Isotope Producer) spur. A reinforced concrete cap would be placed over the existing tunnel earth around the Y to BLIP to protect the ground adjacent to the tunnel walls, where soil activation was detected. The new cap would also cover two of the three LINAC/HEBT beam stops. The cap is being extended in this area because the infiltration of rainwater through activated soil shielding could generate leachate that contains tritium and sodium-22 at concentrations that exceed the BNL SBMS Accelerator Safety Subject Area limit of 5% of the Drinking Water Standard.

The cap would start from the existing gunite cap around BLIP building 931, and on the north side extend to the concrete wall of building 930. It would be constructed with a 4-inch thick, 4000 psi concrete cap and covered with a roofing type waterproofing membrane. Vehicular traffic over this cap would be prevented by placement of pipe bollards at the west end of the cap. A new catch basin would be installed at the northwest end of the cap to collect rainwater runoff. A drainpipe from the catch basin would be run approximately 40 ft. southwest to a rock rip-rap along the south side of the access road. As part of the proposed action, an HVAC unit for Building 931 would be removed and associated piping capped at the building.

Excavation for this action would be limited only to regrading of the existing ground in order to provide a uniform surface for concrete placement with planned slope for drainage. No reduction of existing earth shielding would take place.

(Reference three attached drawings)

II. Description of Affected Environment:

The proposed action would take place at the northwest end of Building 931A and the southeast side of Building 930. All work would be within previously disturbed areas. No adverse impacts to environmentally sensitive areas would be anticipated.

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III. **Potential Environmental Effects:** (Attach explanation for each "yes" response and "no" response if additional information is available and could be significant in the decision making process.)

A. **Sensitive Resources:** Will the proposed action result in changes and/or disturbances to any of the following resources?

Yes/No

- | | |
|--|------------|
| 1. Threatened/Endangered Species and/or Critical Habitats | <u>No</u> |
| 2. Other Protected Species (e.g., Burros, Migratory Birds) | <u>No</u> |
| 3. Wetlands | <u>No</u> |
| 4. Archaeological/Historic Resources | <u>No</u> |
| 5. Prime, Unique or Important Farmland | <u>No</u> |
| 6. Non-Attainment Areas | <u>No</u> |
| 7. Class I Air Quality Control Region | <u>No</u> |
| 8. Special Sources of Groundwater (e.g., Sole Source Aquifer) | <u>Yes</u> |
| 9. Navigable Air Space | <u>No</u> |
| 10. Coastal Zones (e.g., National Forests, Parks, Trails) | <u>No</u> |
| 11. Areas w/Special National Designation (e.g., National Forests, Parks, Trails) | <u>No</u> |
| 12. Floodplain | <u>No</u> |

B. **Regulated Substances/Activities:** Will the proposed action involve any of the following regulated substances or activities?

Yes/No

- | | |
|---|------------|
| 13. Clearing or Excavation (indicate if greater than 5 acres) | <u>Yes</u> |
| 14. Dredge or Fill (under Clean Water Act section 404; indicate if greater than 10 acres) | <u>No</u> |
| 15. Noise (in excess of regulations) | <u>No</u> |
| 16. Asbestos Removal | <u>No</u> |
| 17. PCBs | <u>No</u> |
| 18. Import, Manufacture or Processing of Toxic Substances | <u>No</u> |
| 19. Chemical Storage/Use | <u>No</u> |
| 20. Pesticide Use | <u>No</u> |
| 21. Hazardous, Toxic, or Criteria Pollutant Air Emissions | <u>No</u> |
| 22. Liquid Effluent | <u>No</u> |
| 23. Underground Injection | <u>No</u> |
| 24. Hazardous Waste | <u>No</u> |
| 25. Underground Storage Tanks | <u>No</u> |
| 26. Radioactive (AEA) Mixed Waste | <u>No</u> |
| 27. Radioactive Waste | <u>No</u> |
| 28. Radiation Exposures | <u>No</u> |

C. **Other Relevant Disclosures.** Will the proposed action involve the following?

Yes/No

- | | |
|--|-----------|
| 29. A threatened violation of ES&H regulations/permit requirements | <u>No</u> |
| 30. Siting/Construction/Major Modification of Waste Recovery or TSD Facilities | <u>No</u> |
| 31. Disturbance of Pre-existing Contamination | <u>No</u> |
| 32. New or Modified Federal/State Permits | <u>No</u> |
| 33. Public controversy (e.g., Environmental Justice Executive Order 12898 consideration and other related public issues) | <u>No</u> |
| 34. Action/involvement of Another Federal Agency (e.g., license, funding, approval) | <u>No</u> |
| 35. Action of a State Agency in a State with NEPA-type law. (Does the State Environmental Quality Review Act Apply?) | <u>No</u> |
| 36. Public Utilities/Services | <u>No</u> |
| 37. Depletion of a Non-Renewable Resource | <u>No</u> |

IV. **Section D Determination:** Is the project/activity appropriate for a determination by the Group Manager under Subpart D of the DOE NEPA Regulations for compliance with NEPA?

Yes

Indicate the recommendation and specific class of action from Appendix A-D to Subpart D (10 CFR 1021):

CX

B2.5 Safety and environmental improvements of a facility, replacement/upgrade of facility components

DOE Recommendation:

BHSO NEPA Coordinator: Caroline Polanish

Signature: *Caroline Polanish*

Date: 5/27/04

LGL-GL: Irene P. Atney

Signature: *Irene P. Atney*

Date: 5/28/04

Group Manager Subpart D CX Determination and Approval:

The preceding pages are a record of documentation required under DOE Final NEPA Regulation, 10 CFR Part 1021.400, to establish that an action may be categorically excluded from further NEPA review. I have determined that the proposed action meets the requirements for the Categorical Exclusion referenced above. Therefore, by my signature below, I have determined that the proposed action may be categorically excluded from further NEPA review and documentation.

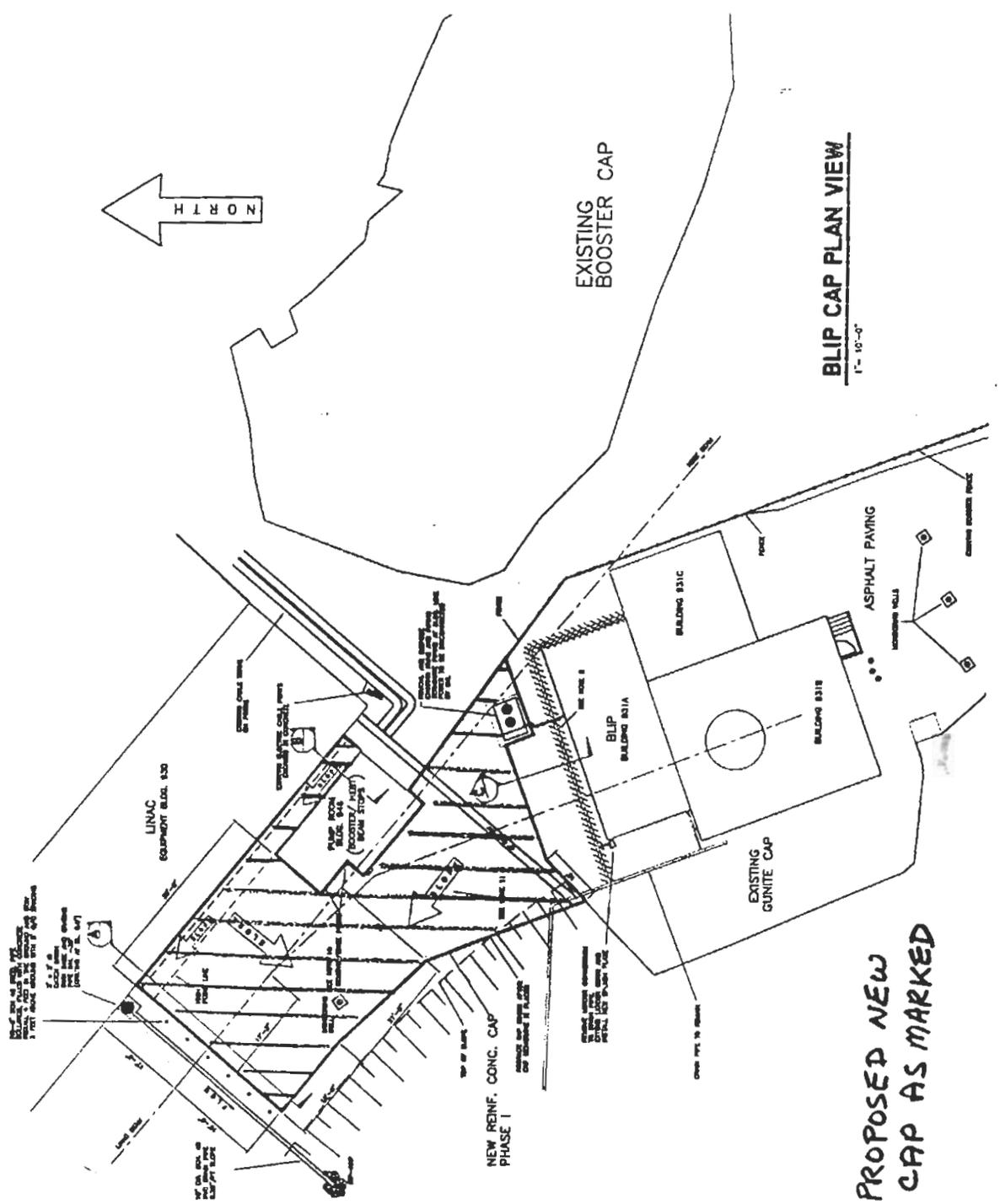
Brookhaven Site Manager: Michael D. Holland

Signature: *M. Holland*

Date: 6/2/04

V. Additional Information

- A8 The Laboratory is situated over a Sole Source Aquifer. The purpose of the proposed action is protection of the aquifer by prevention of rainwater infiltration through potentially activated soils. Recent radiological analysis of the soils suggests that tritium and sodium-22 leached from unprotected activated soil shielding could be transported to the aquifer at concentrations exceeding BNL's institutional limit of 5% of the applicable drinking water standards.
- B13 Excavation for this action would entail regrading the existing ground in order to provide a uniform surface for concrete placement with planned slope for drainage. The size of the cap would be approximately 32 ft. x 75 ft. In addition, a temporary -40 ft. long trench would be excavated to accommodate installation of the catch basin and drain line. The trench area would be returned to grade immediately following installation of the pipe. The use of best management practices to prevent erosion (silt fencing, or hay bales) would be evaluated and implemented as necessary.



EXISTING BOOSTER CAP

BLIP CAP PLAN VIEW
1" = 10'-0"

PROPOSED NEW CAP AS MARKED

EXISTING CONCRETE FOUNDATION
TO BE REINFORCED WITH 4# BARS
AND 4# BARS AT 12" ON CENTER
IN ALL DIRECTIONS
SEE PLAN FOR DETAILS

LINAC EQUIPMENT BLDG. 830

PLATE ROOM BLDG. 834 (PROPERTY / HALL) (ROOM 834)

NEW REINF. CONC. CAP PHASE I

EXISTING GUNITE CAP

ASPHALT PAVING

CONCRETE SIDEWALK

BLIP BLDG. 831A

BLIP BLDG. 831B

BLIP BLDG. 831C

BLIP BLDG. 831D

BLIP BLDG. 831E

BLIP BLDG. 831F

BLIP BLDG. 831G

BLIP BLDG. 831H

BLIP BLDG. 831I

BLIP BLDG. 831J

BLIP BLDG. 831K

BLIP BLDG. 831L

BLIP BLDG. 831M

BLIP BLDG. 831N

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BLIP BLDG. 831BS

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BLIP BLDG. 831BV

BLIP BLDG. 831BW

BLIP BLDG. 831BX

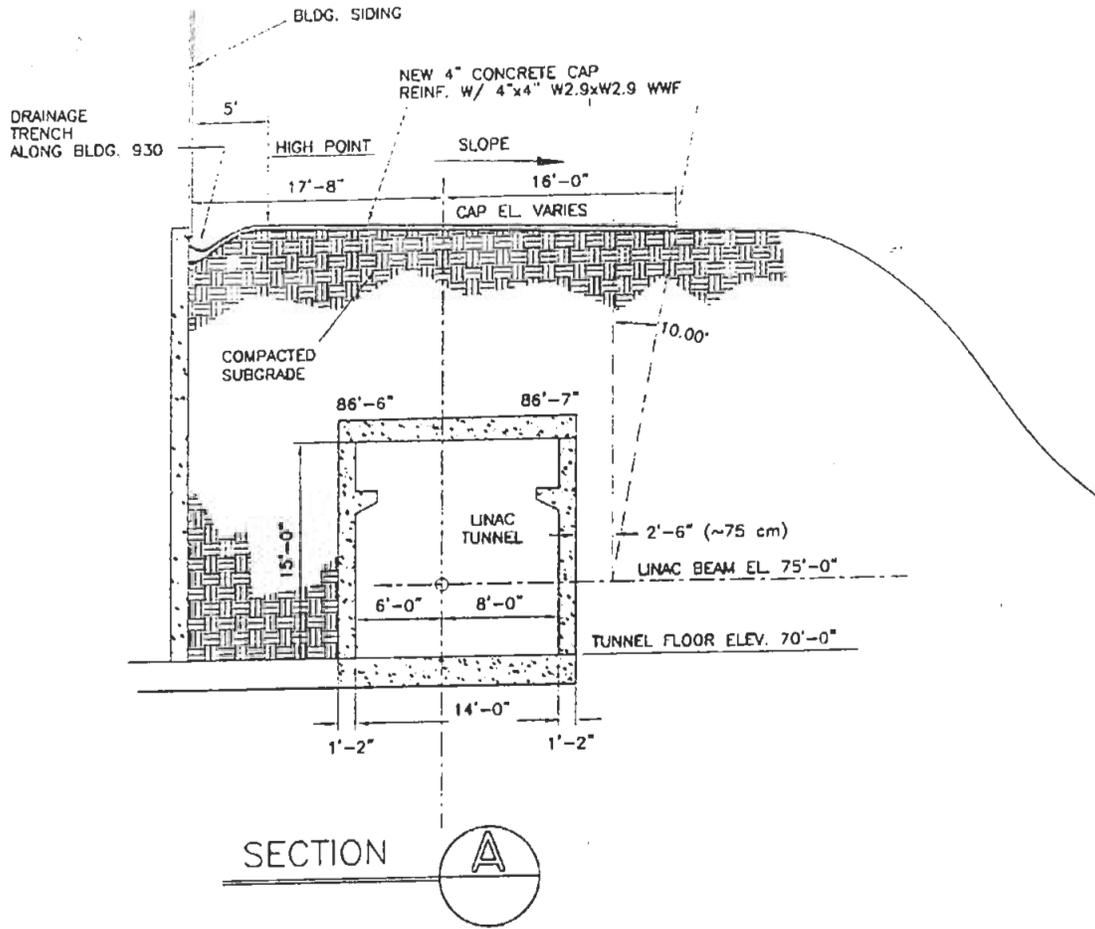
BLIP BLDG. 831BY

BLIP BLDG. 831BZ

BLIP BLDG. 831CA

BLIP BLDG. 831CB

BLIP BLDG. 831CC



EXCAVATE, GRADE AND
COMPACT GROUND TO
RECEIVE 4" CONC. CAP

6" X 6"
CONC. CURB

4'-2"

DRAINAGE
TRENCH

SECTION

