OAK RIDGE NATIONAL LABORATORY

MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

P.O. Box 2008
Oak Ridge, TN 37831-6198
Phone: (865)576-5748
Fax: (865) 576-6616
Internet: skipperdd@ornl.gov

Date: November 29, 2001

To: J. L. Stellern and L. L. Horton

c/att: D. R. Allen (DOE-ORO), G. E. Anderson, W. M. Belvin (DOE-ORO), J. A. Hall – RC, J. B. Roberto

c: K. J. Beierschmitt, K. M. Downer, G. J. Malosh (DOE-ORO)

From: D. D. Skipper, 4500N, MS-6198 D. D. Skipper (by J Hughes)

Subject: **National Environmental Policy Act (NEPA) Review of Project: FY 2002 Physical Sciences Directorate Line Item Project, *Center for Nanophase Materials Sciences: Relocation and Modifications* (2969X)**

Attached is a copy of the completed NEPA Action Review and Documentation Form (ARD) for the subject project. This document contains the data obtained in the NEPA compliance screening of the project and represents a current profile of the planned action and its potential impacts. The data in the ARD have been entered into the Oak Ridge National Laboratory (ORNL) NEPA Compliance Database, which constitutes a permanent repository of auditable UT-Battelle actions screened under NEPA.

Please refer to Section III of the ARD for the NEPA status of your project. Also, a signed copy of this letter and accompanying document must be received prior to the start of the proposed action.

Any changes in the scope of this project should immediately be reported to James Hall, UT-Battelle NEPA Coordinator (576-4211).Variations in the project could result in a change in the NEPA status of your action. It is the responsibility of the project manager/engineer to report any modifications of the action to the NEPA Coordinator. Failure to report changes in your project could result in noncompliance with NEPA.

If you have any questions, please contact James Hall (576-4211) or my office (576-5748).

DDS:qjb

Attachments

NEPA ACTION REVIEW AND DOCUMENTATION FORM
I REVIEW OF PROPOSED ACTION

TOP SECTION FOR NEPA COORDINATOR USE ONLY		
Date Received: 10/31/01	**Project No:** 2969X	**CX Cited:** DOE/EIS-0247; DOE/EA-1362
NEPA Contact: J. A. Hall (576-4211)		

Project Title: Center for Nanophase Materials Sciences: Relocation and Modifications		
Date: 10/30/01	Est. Start Work Date: 9/02	Charge No. (When applicable):
Project Engineer/Manager/Researcher: J. L. Stellern L. L. Horton		Bldg/MS/Phone/Fax No.: 701 SCA/6475/574-6434 4500S/6132/574-5081
Project Location (Plant, Bldg No., etc.): SNS Campus (Chestnut Ridge)		
Environmental Protection Officer: S. M. Trotter	Bldg/MS/Phone/Fax No.: 701 SCA/6475/241-9420/241-5698	
Division/Office: Physical Sciences Directorate	Division/Office Director: J. B. Roberto	
Project Funding Category: LI_X_ GPP__ EXP__ GPE__ Other__		Check Funding Source: DP__ EM__ ER_X_ NE__ TD__ WM__ Other__

1. ENVIRONMENTAL SUMMARY: Please answer Y (yes), N (no), or U (unknown) if your project generates, uses, or causes disturbance to the following:

1. Air emissions	Y	11. Pesticide/herbicide use	N	21. SWMU/AOC	N
2. Liquid effluents	Y	12. Elevated noise levels	N	22. Undeveloped area	N
3. Solid waste	Y	13. Rad./haz. substance chemical exposures	N	23. Clearing or excavation	N
4. Radioactive waste	N	14.Volatile/toxic/water reactive	Y	24. Wetland disturbance	N
5. Hazardous waste	Y	15 . Radiological area	N	25. Floodplain disturbance	N
6. Mixed waste (rad & haz)	N	16. Chemical storage/use	Y	26. Transportation issues	N
7. Radioactive soil	N	17. Petroleum storage/use	Y	27.Import/export chemicals	N
8. Asbestos waste	N	18. Belowground tanks	N	28.Produce/process chemicals	N
9. PCB waste	N	19. Groundwater	N	29.Produce/process new microorganisms	N
10. Biohazards	N	20. Surface water	N	30.Import/export new microorganisms	N

Have pollution prevention opportunities been considered? If yes, how? Pollution prevention measures were addressed during the planning stages for the construction and operation of the proposed facility.

Any new permit/ permit modification required? If yes, state the required permit. Permit issues relating to construction/operation were addressed in the Environmental Assessment (EA) for the Oak Ridge National Laboratory (ORNL) Facilities Revitalization Project (DOE/EA-1362). Permit issues relating to the new site were addressed in the Environmental Impact Statement (EIS) for the Construction and Operation of the Spallation Neutron Source (SNS) (DOE/EIS-0247).

Has this project been reviewed by ORNL Land and Facilities Use Committee? No. Not needed because the site is within the area reviewed in the EIS for SNS.

Comments

2. PURPOSE AND NEED FOR PROPOSED ACTION: Provide background information that leads to the purpose and need for your project.

The Center for Nanophase Materials Sciences (Center) will be a national center for nanophase research on soft materials, interfaces, and other nanophase materials systems that will benefit from neutron characterization. It will provide synthesis, characterization, fabrication, and theoretical capabilities for collaborative research among laboratory staff, academia, and staff from other research facilities including industry. During the conceptual design phase of the project, it was determined that closer access to SNS was important to the future success of the Center.

Although the original plans call for the construction of an approximately 100,000 ft^2, facility (the EA for the ORNL Facilities Revitalization Project listed the Center as 60,000 ft^2), the scientific drivers for the Center required a 30 percent reduction in size.

3. DESCRIPTION OF PROPOSED ACTION: Describe your project in detail, providing as much specific information as possible. Is this a CERCLA action? If so, provide cost and time data. Include attachments where appropriate.

Current plans call for (1) decreasing the size of the Center from its original proposed size of approximately 100,000 ft^2 to approximately 80,000 ft^2 and (2) relocating the Center from its previous selected site, which is approximately 1,000 ft southeast of the main complex of SNS to an area on the east side of the SNS's Central Laboratory Office. An enclosed walkway access (on the upper floors) to SNS Central Laboratory Office building and SNS would be constructed to allow access between these buildings. Additional sidewalks and roadways would be extended to the facility and landscaping would be incorporated into the visual features of the facility.

The decreased size of the Center (a 20,000 ft^2 increase from the size mentioned in the ORNL Revitalization Project EA) will not change the type of research planned to be conducted. Also, the decreased size and relocation will not result in additional environmental hazards or waste streams.

4. DESCRIPTION OF MATERIALS/WASTES: Describe the kinds and approximate amounts of wastes that would be generated and how they would be disposed of.

Decreasing the size of the Center and relocating it will not result in any new waste materials that would require treatment and/or disposal. Waste generated as a result of the Center is addressed in the overall scope of the Facility Revitalization Project EA (DOE/EA-1362, June 2001). Specific waste would include liquid and solid hazardous byproduct from nanoscale research on soft materials, interfaces, nanoscale magnetism, and other nanophase systems. ORNL involvement in the disposal of solid hazardous waste would include characterizing, packaging, and certifying the waste to assure that it meets the acceptance requirements of the receiving organization. Because the site has been cleared for the construction of SNS, no waste would be generated from site-clearing activities.

II. CONDITION FOR CATEGORICAL EXCLUSION
(To be completed by ORNL NEPA Coordinator)

Information in this section is obtained from the Permit Determination Forms (PDFs) submitted to various environmental, safety, and health personnel and from other sources. This information is needed to ensure that the integral elements of the classes of actions as listed in Appendix B of the 10 CFR 1021 are addressed.

Applicable statutory, regulatory, or permit requirements: L. A. Muhs, Clean Water Act Group: The construction site for the Center for Nanophase Materials Sciences will be located within the construction site of SNS Facility. This entire construction area is covered by the Tennessee General Permit for Storm Water Discharges from Construction Activities; therefore, the construction of the proposed facility must be conducted in compliance with all terms and conditions of that general permit.

Waste storage, disposal, recovery, or treatment facilities: The proposed action will not involve the construction of waste storage, disposal, recovery, or treatment facilities.

Disturbance of hazardous substances in the environment: The proposed action will not involve disturbing hazardous substances in the environment.

Other: C. P. Wilson, TSCA Program Manager: Construction activities will not involve:
(1) production/processing new chemicals for commercial purposes; (2) importation/exportation of chemicals; (3) commercial production or intent to patent for production or processing intergeneric new microorganisms; or (4) importation or exportation of intergeneric new microorganisms.

Projects conducted at the Center would need to be evaluated for (1) production/processing new chemicals for commercial purposes; (2) possible Toxic Substance Control Act (TSCA) implications involving importation or exportation of intergeneric new microorganisms; and (3) TSCA implications for importation/exportation of chemicals.

T. M. Bonine, P. G., Hydrogeologist: Ensure that all wells in the vicinity of construction are protected. Attempt to reduce spills of chemicals, etc., onto the ground. Report spill as appropriate.

III. NEPA/NHPA DETERMINATION
(To be completed by ORNL NEPA Coordinator)

ARCHEOLOGICAL/HISTORICAL REVIEW REQUIREMENT: This action falls under Section 5.1.1.3.A.1 of the Cultural Resource Management Plan (DOE/ORO 2085, July 2001).

ENVIRONMENTAL EFFECTS: This project would pose no threat of significant individual or cumulative environmental effects. The described action is part of an Environmental Assessment completed for the ORNL Facilities Revitalization Project (DOE/EA-1362) and the new site for this action was covered in an Environmental Impact Statement for the SNS project (DOE/EIS-0247). The environmental effects are addressed in these two documents.

IMPACTS TO OAK RIDGE RESERVATION (ORR) SENSITIVE RESOURCES: Relocating the facility in the disturbed area next to an SNS facility would not involve additional disturbances to sites that provide a natural habitat for threatened or endangered animal or plant species. No additional wetland disturbance would take place, and the proposed action would not take place within the 100-year floodplain of any surface water body.

CX/EA REQUIREMENT/APPLICABILITY: Construction and operation activities of the Center are covered by the approved EA for ORNL Facilities Revitalization Project, and land disturbance activities are covered by the EIS for the SNS Project.

NEPA ACTION TAKEN: No further NEPA action will be required for the proposed action. However, conditions and requirements stated by compliance personnel in Section II of this form must be addressed prior to the start of the proposed action.