



Department of Energy

Washington, DC 20585

January 25, 2011

MEMORANDUM FOR CAROL M. BORGSTROM
DIRECTOR, OFFICE OF NATIONAL ENVIRONMENTAL POLICY
ACT (NEPA) POLICY AND COMPLIANCE
OFFICE OF GENERAL COUNSEL

FROM: MARCUS E. JONES *Marcus Jones*
ASSOCIATE DIRECTOR OF SCIENCE FOR SAFETY,
SECURITY AND INFRASTRUCTURE

SUBJECT: The Office of Science (SC) Annual National Environmental Policy Act
(NEPA) Planning Summary for 2011

This memorandum is in response to a memorandum from the General Counsel, Scott Blake Harris, dated December 08, 2010, to the Secretarial Officers and Heads of Field Organizations regarding Annual NEPA planning summaries, required by DOE Order 451.1B, *National Environmental Policy Act Compliance Program*.

As requested in the memorandum, attached is the Office of Science's (SC) annual NEPA planning summary for 2011. The two attachments provided are: Attachment 1) *Environmental Assessments Ongoing or Expected to be Prepared in the Next 12 Months*; and Attachment 2) *Environmental Impact Statements Ongoing or Expected to be Prepared in the Next 24 Months*.

If you have any questions regarding our annual SC NEPA planning summary, please direct them to Kelli Markham of my staff at 301-903-6800, kelli.markham@science.doe.gov or Sat Goel at (301) 903-3057, sat.goel@science.doe.gov.

Attachments



cc: with attachments

S.B. Harris, General Counsel

G. Malosh, Deputy Director for Field Operations

C. Baebler, Manager, Ames Site Office

J. Livengood, Manager, Argonne Site Office

A. Richards, Manager, Berkeley Site Office

M. Holland, Manager, Brookhaven Site Office

M. Weis, Manager, Fermi Site Office

J. O. Moore, Assistant Manager for Science, Oak Ridge Site Office

J. Erickson, Acting Manager, Pacific Northwest Site Office

P. Arango, Acting Manager, Princeton Site Office

P. Golan, Manager, SLAC Site Office

S. Mallette, Acting Manager, Thomas Jefferson Site Office

G. Boyd, Manager, Oak Ridge Office

R. Purucker, Manager, Chicago Office

P. Siebach, SC-Chicago Office

G. Hartman, SC-Oak Ridge Office

L. Jessee, GC-20

Annual NEPA Planning Summary

Environmental Assessments Ongoing or Expected to be Prepared in the Next 12 Months

Office of Science Projects

Jan-11

Title, Location, Document Number	Estimated Cost	Estimated Schedule (NEPA Milestones)		Description
Spruce and Peatland Responses Under Climatic and Environmental Change Experiment (SPRUCE), Marcell Experimental Forest, Itasca County, Minnesota (DOE/EA-1764)	\$56,000	EA Determination Date: Transmittal to State: EA Approval: FONSI:	10-Mar-10 TBD TBD TBD	DOE and the U.S. Forest Service propose to study the effects of altered atmospheric and climate conditions to obtain information on the response to elevated temperature and elevated atmospheric carbon dioxide of a black spruce- <i>Sphagnum</i> ecosystem.
Computational Research and Theory (CRT) Facility Project at the Lawrence Berkeley National Laboratory (LBNL), Alameda County, California (DOE/EA-1700)	\$250,000	EA Determination Date: Transmittal to State: EA Approval: FONSI:	20-Oct-09 15-Sep-10 TBD TBD	DOE may soon have to move its National Energy Research Scientific Computing Center (NERSC) from its present location in a leased building in downtown Oakland, California, to a new location, due in part to potentially insufficient electrical power availability at the present location as future generations of NERSC supercomputers are acquired. One possible site for the relocation of NERSC is a new facility proposed to be constructed by the University of California (UC) at LBNL in Berkeley, Alameda County, California. Current Status: The EA was sent out for comment on 09/15/2010 and the comment period closed on 10/15/2010. A public information meeting was held on 09/20/2010.
Environmental Assessment for the Selection of an Offsite Location for Future LBNL Research Activities	\$200,000	EA Determination Date: Transmittal to State: EA Approval: FONSI:	TBD TBD TBD TBD	Environmental Assessment for the selection of an offsite location for future LBNL research activities.

Annual NEPA Planning Summary

Environmental Assessments Ongoing or Expected to be Prepared in the Next 12 Months

Office of Science Projects

Jan-11

Title, Location, Document Number	Estimated Cost	Estimated Schedule (NEPA Milestones)		Description
Linac Coherent Light Source (LCLS)-II at SLAC, San Mateo County, California.		EA Determination Date:	4Q11	The proposed Linac Coherent Light Source (LCLS)-II Project is an expansion of the existing LCLS x-ray free electron laser (FEL) facility at the SLAC National Accelerator Laboratory (SLAC), employing sectors 10-20 of the existing 2-mile linear accelerator (linac). The LCLS-II Project includes a new 135 MeV injector to be built at Sector 10 of the 30-sector SLAC linac to create the high brightness electron beam required for the FEL. The second third of the existing linac will be modified by adding two magnetic bunch compressors. Most of the linac, and its infrastructure, will not be changed. The existing LCLS Beam Transport Hall, located in the Research Yard, will be widened and extended to provide a second linac-to-undulator transport line (LTU2). LTU2 will enter the berm at the east end of the Research Yard, connecting to an underground tunnel housing two undulators and associated equipment. The two undulators will be installed in series along a single electron beam transport line. A shielded electron beam dump will be located approximately 50 meters downstream of the undulator. A new experimental hall, EH2, will be constructed approximately 100 meters downstream of the undulator and contain at least four experiment stations, at least two of which will be housed in shielded hutches.
		Transmittal to State:	TBD	
		EA Approval:	TBD	
	\$50,000	FONSI:	TBD	
Environmental Assessment for Argonne National Laboratory Modernization Planning, Argonne, IL		EA Determination Date:	2Q11	The proposed action is to conduct site infrastructure (e.g., roads, utilities) and natural resources (e.g., historic preservation)-related planning for the construction of new, upgrade of existing, and demolition of obsolete facilities at Argonne National Laboratory.
		Transmittal to State:	3Q11	
		EA Approval:	4Q11	
		FONSI:	4Q11	
	\$50,000			

Annual NEPA Planning Summary

Environmental Assessments Ongoing or Expected to be Prepared in the Next 12 Months

Office of Science Projects

Jan-11

Title, Location, Document Number	Estimated Cost	Estimated Schedule (NEPA Milestones)	Description
White Tailed Deer Management at Brookhaven National Laboratory, Upton, New York	\$40,000	EA Determination Date: 2-Feb-02 Transmittal to State: TBD EA Approval: TBD FONSI: TBD	This EA would assess the various alternatives for white-tailed deer management at Brookhaven National Laboratory. Deer management is desired to reduce long term ecological impacts caused by high deer populations, reduce impacts of car/deer accidents, and to improve the overall health of white-tailed deer on site at the Laboratory. An initial determination was made in 2002. The project has been delayed but is now expected to commence in 2011.
Waste Water Treatment Modifications for Improved Effluent Compliance, Brookhaven National Laboratory, Upton, NY (DOE/EA-1854) Formerly: Rerouting Sewage Treatment Plant Discharge to Direct Groundwater Recharge	\$50,000	EA Determination Date: Dec-10 Transmittal to State: TBD EA Approval: TBD FONSI: TBD	This proposed action would eliminate the current discharge of treated sewage effluent from the BNL Sewage Treatment Plant (STP) to the Peconic River surface water and utilize a local recharge area to return treated sewage effluent to the groundwater system.
Environmental Assessment for the Long Baseline Neutrino Experiment, Fermi National Accelerator Laboratory, Batavia, IL (DOE/EA-1799)	\$200,000	EA Determination Date: 6/21/2010 Transmittal to State: TBD EA Approval: TBD FONSI: TBD	The LBNE would use the existing Main Injector Accelerator at Fermilab to produce a pure beam of muon neutrinos. The neutrinos would be examined at a "near detector" proposed to be constructed at Fermilab, and at a "far detector." The overall intent is to advance our understanding of the physical universe. As neutrinos travel through the earth, they "oscillate." In other words, the relative proportions of the three types of neutrinos (electron, muon, and tau) changes. Through use of neutrino detectors, scientists will obtain the most precise measurements of the mixing angles, look for charge parity (CP)-violating effects and compare them to CP violation observed in quarks and antiquarks.

Annual NEPA Planning Summary

Environmental Assessments Ongoing or Expected to be Prepared in the Next 12 Months

Office of Science Projects

Jan-11

Title, Location, Document Number	Estimated Cost	Estimated Schedule (NEPA Milestones)		Description
Muon-to-Electron Conversion Experiment (Mu2e), Fermi National Accelerator Laboratory, Batavia, IL	\$75,000	EA Determination Date: Transmittal to State: EA Approval: FONSI:	3Q11 TBD TBD TBD	The muon-to-electron conversion experiment (Mu2e) is designed to search for the coherent, neutrino-less conversion of a muon to an electron, in the Coulomb field of a nucleus. The Mu2e experiment would utilize an intense muon beam produced by the accelerator complex at the Fermi National Accelerator Laboratory. Construction would start around 2013. See http://mu2e.fnal.gov/ .
Project X, Fermi National Accelerator Laboratory, Batavia, IL	\$75,000	EA Determination Date: Transmittal to State: EA Approval: FONSI:	4Q11 TBD TBD TBD	Project X is a high-power facility that will support world-leading programs in long-baseline neutrino physics and the physics of rare processes. It would be unique among accelerator facilities worldwide in its flexibility to support multiple physics programs at the intensity frontier. Project X would be based on a 3 GeV continuous-wave superconducting H-linac accelerator. Further acceleration to 8 GeV, injected into Fermilab's existing Recycler/Main Injector complex, would support long-baseline neutrino experiments. Project X would provide 2 MW of total beam power to the 3 GeV program, simultaneously with 2 MW to a neutrino production target at 60-120 GeV. Construction would start around 2015. See http://projectx.fnal.gov/

ATTACHMENT 2

Annual NEPA Planning Summary				
Environmental Impact Statements Ongoing or Expected to be Prepared in the Next 24 Months				
<i>Office of Science</i>				
<i>Jan.2011</i>				
Title, Location, Document Number	Estimated Cost	Estimated Schedule (NEPA Milestones)		Description
Environmental Impact Statement for the Deep Underground Science and Engineering Laboratory, Lead, SD	TBD	EIS Determination Date:	4Q11	The Deep Underground Science and Engineering Laboratory would be a multi-program Laboratory. It would be a good possible location for the Long Baseline Neutrino Experiment far detector. This EIS is expected to commence in late FY11 or early FY12. The National Science Foundation, which is the lead agency, has yet to prepare a Notice of Intent or schedule a scoping meeting.
		NOI:	TBD	
		Scoping:	TBD	
		Draft	TBD	
		Hearings	TBD	
		Final	TBD	
		ROD	TBD	
Next Generation Light Source for the Lawrence Berkeley National Laboratory	TBD	EIS Determination Date:	TBD	The Next Generation Light Source (NGLS), as envisioned, would be a linear accelerator "light source" capable of producing extraordinarily bright, short, soft x-ray pulses at rates of hundreds of thousands of times per second. Soft x-rays are ideal for studying solar cells, fuel cells, advanced electronics, biological systems, cleaner catalysts, and high-temperature superconductors. If located at the LBNL site, the NGLS could be a national user facility available not only to scientists at LBNL and UC Berkeley but to researchers around the nation and the world.
		NOI:	TBD	
		Scoping:	TBD	
		Draft	TBD	
		Hearings	TBD	
		Final	TBD	
		ROD	TBD	