NEPA

National Environmental Policy Act

LESSONS LEARNED

U.S. DEPARTMENT OF ENERGY QUARTERLY REPORT

September 1, 2000; Issue No. 24 For Third Quarter FY 2000

Emergency NEPA Procedures Invoked for Actions Taken after Los Alamos Fire

To avert further harm in the wake of the May 2000 Los Alamos wildfire, DOE is taking emergency actions with potentially significant impacts, without preparing an EIS. Instead, DOE is proceeding under "alternative arrangements" to comply with NEPA, as provided under 40 CFR 1506.11, a section of the Council on Environmental Quality (CEQ) NEPA regulations that deals with emergency circumstances. The specific alternative arrangements were established in consultation with CEQ, as discussed further below. DOE's post-fire emergency activities include constructing a 70-foot-high water retention structure in Pajarito Canyon to protect Los Alamos National Laboratory (LANL) nuclear facilities and the downstream communities from flooding due to summer rainstorms and possible contaminant transport.

Agencies seldom have invoked the emergency provision of the CEQ regulations, only about 30 times in 22 years, in cases that demanded immediate action to respond to threats to life, national security, or an important resource. Based on DOE records, this is only the third time DOE has used these procedures. The other cases involved the Bonneville Power Administration's actions to save the endangered sockeye salmon on the Snake River and the threatened failure of the Par Pond Dam at the Savannah River Site, both in 1991.

A 70-foot-high retention structure, shown here under construction by the U.S. Army Corps of Engineers, is among the DOE actions taken in response to the Cerro Grande Fire at Los Alamos.

After consulting with CEQ on the Los Alamos wildfire, DOE published a Notice of Emergency Action and is now preparing a Special Environmental Analysis to evaluate the environmental impacts of the completed and ongoing emergency actions. This analysis is a major component of DOE's NEPA compliance for the emergency actions extending through November 2000.

Emergency Actions Have Net Beneficial Impacts

The fire began on May 4 when high winds caused a prescribed burn within the Bandelier National Monument in New Mexico to spread out of control.

continued on page 4

NEPA staff positions open. Apply by September 8. See page 2.

Inside *LESSONS LEARNED*

Welcome to the 24th quarterly report on lessons learned in the NEPA process. Note that this issue includes a cumulative index covering the past six years of reports.

Carol Borgstrom

Director
Office of NEPA Policy and Compliance

Be Part of Lessons Learned

We Welcome Your Contributions

We welcome suggestions and contributed drafts for the *Lessons Learned Quarterly Report.* Draft articles for the next issue are requested by November 1, 2000. To propose an article for a future issue, contact Yardena Mansoor at yardena.mansoor@eh.doe.gov, or phone 202-586-9326.

Fourth Quarter Questionnaires Due November 1, 2000

Lessons Learned Questionnaires for NEPA documents completed during the fourth quarter of fiscal year 2000 (July 1 through September 30, 2000) should be submitted by November 1, but preferably as soon as possible after document completion. The Questionnaire is available interactively on the DOE NEPA Web at tis.eh.doe.gov/nepa/ under DOE NEPA Process Information. For Questionnaire issues, contact Vivian Bowie at vivian.bowie@eh.doe.gov, or phone 202-586-1771.

Feedback on LLQR

Do you have a comment or a suggestion? Please submit feedback to either of the contacts listed above.

LLQR Online

Current and past issues of the *Lessons Learned Quarterly Report* are available on the DOE NEPA Web at tis.eh.doe.gov/nepa/ under DOE NEPA Process Information.

LLQR Index

A cumulative index of the LLQR is provided in the September issue each year.

Printed on recycled paper

EH Reorganization Confers New Name: Office of NEPA Policy and Compliance

The July 2000 reorganization of the Office of Environment, Safety and Health (EH) to better align EH missions and functions has affected the Office of NEPA Policy and Assistance only slightly: the new name is Office of NEPA Policy and Compliance. Stan Lichtman, previously Director, Waste Activities Division (position abolished), is now the Deputy Director of the Office. Three Unit Leaders remain with new names for their Units: Carolyn Osborne, Eastern Energy and Waste Management Unit; Eric Cohen, Western Energy and Waste Management Unit; and Jim Daniel, Science/ Nuclear Unit. LL

NEPA Staff Positions Open: Apply by September 8

DOE's Office of NEPA Policy and Compliance is seeking three Environmental Protection Specialists at the GS-13/14 levels. Each incumbent will serve as a NEPA specialist, primarily for projects in DOE's energy, waste management, nuclear, defense, and science programs. The duty station is Washington, D.C. Competition is nationwide, and applications must be received or postmarked by September 8, 2000. The vacancy announcement (PN-00-EH-092), which provides further position details and instructions for applying, may be accessed via the Internet at www.hr.doe.gov/pers/doejobs.htm. TDD users may call 301-903-0547 to obtain a copy. For further information, contact a DOE personnel representative at 301-903-1545. DOE is an Equal Opportunity Employer. LL

Three DOE Programs Earn NAEP Awards

NEPA Lessons Learned a Winner

DOE received three out of the seven awards announced by the National Association of Environmental Professionals (NAEP) at its June conference in Portland, Maine. NAEP has conducted its National Environmental Excellence Awards competition for the past four years to recognize projects and programs that serve as models of excellence and stand out as significant contributions in the environmental professions. The DOE awardees are:

NAEP President's National Environmental Excellence Awards

★ *DOE NEPA Lessons Learned Program*: Recognized for in-depth self examination of the NEPA Program, internal and external information sharing of NEPA lessons learned, measuring overall NEPA process effectiveness, and continuous improvement.

★ *DOE Environmental Management Research and Development Program Plan, Idaho National Engineering and Environmental Laboratory*: Recognized for planning long-term strategy and investment for new science and technology for cleanup of the national nuclear weapons complex.

National Environmental Excellence Award

★ *Upper Great Plains Regional Environmental Management System, Western Area Power Administration*: Recognized for its exemplary waste management and compliance record, customer service and stewardship, endangered species recovery and protection, and effective coordination among regulatory agencies, Native American Tribes, and environmental groups.

Conference Theme: "Overcoming Barriers to Environmental Improvement"

NAEP is a multidisciplinary, professional association with some 5,000 members, many of whom take an active interest in NEPA. (See the *Lessons Learned Quarterly Report* Cumulative Index, this issue, to find past articles on NAEP.) At every annual NAEP conference, NEPA is one of the main themes. In Portland, about 25 NEPA-related presentations were given on topics ranging from perspectives on the role of NEPA in the 21st century to project-specific case studies, including some from DOE's NEPA Community.

Yardena Mansoor and Hitesh Nigam accept the NEPA Lessons Learned Program Award from NAEP President Andrew McCusker (far left) and Award Chairman Jim Melton (far right) on behalf of the Office of NEPA Policy and Compliance.

The meeting began with a plenary session address by Anne Miller, Acting Director of the Environmental Protection Agency's (EPA) Office of Federal Activities. Linda Murphy, Director of Ecosystem Protection, EPA New England, delivered the keynote address. NEPA-related sessions included those on Native American issues, legal issues, and the integration of NEPA with international (i.e., ISO) standards.

At a session on NEPA case studies, Lance McCold, representing Oak Ridge National Laboratory, which assisted DOE in preparing the EIS for the JEA Circulating Fluidized Bed Combustor Project (DOE/EIS-0289), described how successive internal drafts resulted in a set of mitigation measures to which the project proponent, a private utility company, became clearly committed.

Next NAEP Conference in Arlington, Virginia, June 2001

NAEP has announced that its next conference will be held June 24 to 28, 2001, in Arlington, Virginia. NAEP is soliciting abstracts for papers and posters to be presented during the conference, which will include a large NEPA component. Abstracts are due to NAEP by October 16. Visit the NAEP Web site at www.naep.org for more information on the 2001 NAEP Conference, abstract requirements, and the award nomination form.

Emergency NEPA Procedures for LANL (continued from page 1)

DOE and other agencies immediately took action to contain and extinguish the fire and limit its damage – establishing clearings for fire lines, clearing access roads and improving existing roads for heavy transport equipment and fire trucks, cutting down trees to protect utilities and structures, setting small backfires to protect buildings and utilities, and dropping water and fire-retardant slurry from low-flying helicopters and airplanes. These actions taken during the fire had relatively minor environmental impacts that were primarily beneficial.

Post-fire runoff, shown here emerging from a culvert, is now black with soot.

Recovery Team Undertakes Broad Range of Post-Fire Actions

By the time the fire was brought under control two weeks later, it had burned almost 43,000 acres, including 7,650 acres on LANL. The fire's destruction of vegetation cover left the area vulnerable to soil erosion and flooding from summer rainstorms. LANL hydrologists estimated that runoff could be significantly greater than before the fire, potentially threatening the property and well-being of the 10,000 residents located downstream of the DOE lands in White Rock, the Pueblo of San Ildefonso, and the Pueblo of Cochiti. Soil erosion and flooding also could threaten to release hazardous and radioactive contaminants from 168 potential release sites and two nuclear facilities at LANL. It may take years to decades in some locations for enough vegetation to become established on hillsides and canyons to deter soil erosion and flooding.

Post-Fire Emergency Actions at LANL

- **Environmental Damage Assessment:** On-foot and aerial surveys; repairing and replacing air and surface water monitoring stations; contaminant monitoring
- **Potential Release Sites:** Stabilizing and protecting damaged or vulnerable sites; treating, removing, and disposing of contaminants; excavating canyon bottoms
- **Cultural Resources:** Assessing, protecting, and stabilizing damaged or vulnerable sites
- **Threatened and Endangered Species:** Assessing fire and post-flood impacts on threatened and endangered species and their habitats
- **Utilities and Infrastructure:** Protecting and repairing buildings, structures, roads, and utilities; decontaminating or demolishing contaminated buildings
- **Hazard Reduction Actions:** Stabilizing soils and reseeding; improving, replacing, and installing culverts; retaining or diverting stormwater runoff; relocating hazardous material and special nuclear material; removing dead and damaged trees
- **Other Recovery Actions:** Staging and storing equipment and building materials, installing temporary housing

Because July and August are peak months for rainstorms, the post-fire conditions justified taking further emergency actions without sufficient time to prepare an EIS. These emergency response actions have a net beneficial impact, although potential environmental impacts to specific receptors range from beneficial to adverse. The actions most likely to result in adverse impacts include removing potential contaminants, especially in canyon bottoms and floodplains. Although these actions would reduce the potential spread of contaminants, by removing additional vegetation they would also increase the potential for soil erosion. Flood control mechanisms, such as berms, dams, sediment traps, and catchment basins, alter local drainage patterns and also could cause adverse environmental impacts.

DOE Consults with CEQ, Commits to Public Involvement

In May and early June 2000, officials of DOE and the other Federal agencies represented on the Cerro Grande Fire Burned Area Emergency Rehabilitation Team consulted with CEQ regarding environmental review for the emergency actions. In a June 15 letter documenting

continued on next page

Emergency NEPA Procedures for LANL (continued from previous page)

these consultations, Henry Garson, NEPA Compliance Officer for the National Nuclear Security Administration's Office of Defense Programs, described DOE's plans and commitments for alternative NEPA compliance. DOE would issue a Notice of Emergency Action, provide a range of public involvement opportunities, monitor the effectiveness and environmental effects of emergency actions, make monitoring results public and consider any resulting comments, and modify actions during implementation to mitigate adverse effects. DOE also committed to prepare a Special Environmental Analysis, to be issued in September 2000, to evaluate the environmental impacts of the completed and ongoing emergency actions.

Newly installed concrete barriers protect the historic Pond Cabin from potential stormwater damage. The cabin, built in 1914, is listed on the New Mexico State Register of Historic Places.

These alternative arrangements for complying with NEPA proved satisfactory to CEQ, as stated in the June 15, 2000, response from Dinah Bear, General Counsel: "We commend DOE for its commitment to provide for continuing public involvement, including soliciting comment on the Notice of Emergency Action, the Special Environmental Analysis, and on monitoring results and prospective mitigation." CEQ requested a brief report summarizing the conduct of the alternative arrangements and identifying any lessons learned or recommendations that DOE thinks would be useful to consider in future emergency situations, which DOE agreed to provide when the alternative arrangements are concluded.

DOE Publishes Notice of Emergency Action Required under 10 CFR 1021.343

DOE then issued a Federal Register Notice (65 FR 38522; June 21, 2000) that listed past, current, and planned DOE emergency actions from the beginning of the fire through November 2000. The Notice also addressed the potential environmental impacts of these emergency actions and possible mitigation measures, and DOE's plans for continuing public involvement and preparation of a Special Environmental Analysis. DOE has held weekly public meetings (until recently broadcast on local radio) and uses a Web site, press releases, telephone information line, and informal consultations to provide continuing information to stakeholders. DOE and the other agencies taking emergency actions have consulted with the affected Pueblos, and have accommodated their requests to preserve locations of cultural value. The U.S. Fish and Wildlife Service, State Historic Preservation Officer, and Advisory Council on Historic Preservation also were consulted. In addition, DOE established a Public Advisory Group to focus on communications issues as they relate to potential runoff and flood mitigation activities.

Cerro Grande Fire Burned Area Emergency Rehabilitation Team Members

Federal

- Department of Energy
- Forest Service
- Natural Resources Conservation Service
- National Park Service
- Bureau of Indian Affairs

State and Local

- State of New Mexico
- County of Los Alamos
- University of California

Pueblos

- Santa Clara Pueblo
- San Ildefonso Pueblo

Information Sources

Additional information, including photos and the Rehabilitation Plan, is available on the Web site of the Cerro Grande Fire Burned Area Emergency Rehabilitation Team at www.baerteam.org/cerrogrande/. The Notice of Emergency Action is available on the DOE NEPA Web at tis.eh.doe.gov/nepa/ under DOE NEPA Announcements (and also at the LANL Web site, www.lanl.gov/worldview/ under Cerro Grande Fire). When issued, the Special Environmental Analysis will be available on the DOE NEPA Web under DOE NEPA Analyses.

For information on the role of the wildfire scenario accident analysis of the LANL Site-wide EIS in prompting mitigation actions, see *Lessons Learned Quarterly Report*, June 2000, page 1. LANL's *Wildfire 2000,* August 2000, provides a more detailed comparison of the EIS postulated accident with the actual fire and is available on the LANL Web site at

continued on page 6

Emergency NEPA Procedures for LANL (continued from page 5)

http://lib-www.lanl.gov/la-pubs/00393627.pdf. DOE issued an EA on the *Wildfire Hazard Reduction and Forest Health Improvement Program at LANL* (DOE/EA-1329) in August. For further information, contact Elizabeth Withers, NEPA Compliance Officer, Los Alamos Area Office, at ewithers@doeal.gov, or phone 505-667-8690.

Thank You, Elizabeth Withers

The Office of NEPA Policy and Compliance extends its appreciation to Elizabeth Withers, the Los Alamos Area Office NEPA Compliance Officer, for her hard work in coordinating NEPA compliance for emergency actions taken by DOE in response to the Cerro Grande Fire. Under difficult circumstances, Elizabeth kept affected parties informed of fast-breaking events, while managing the preparation of NEPA documents and coordinating the Department's efforts with other agencies, particularly on matters pertaining to endangered species and protection of cultural resources.

Water Retention Structure Challenged

The Army Corps of Engineers is constructing for DOE a 70-foot-high water retention structure in Pajarito Canyon to protect the residents of White Rock and LANL facilities, including Technical Area 18, which contains nuclear facilities. Runoff control will be needed for several years until the groundcover regenerates. The structure, to be completed in September, will not hold back water permanently like a conventional dam, but instead is designed with a free-flow outlet structure to completely release impounded floodwater at a controlled rate within 96 hours. Forest Guardians, an environmental organization based in Santa Fe, questions the need for the "dam" and has filed a Notice of Intent to sue the Corps of Engineers for alleged violations of Section 404 of the Clean Water Act.

So, You Think DOE Gets a Lot of Public Comments...

Massive Response to Forest Service Roadless Area Conservation Program

Encouraging public participation in Federal decision making that may affect the environment, as NEPA requires, can sometimes lead to a seemingly overwhelming number of letters, postcards, faxes, e-mail and telephone messages, public meeting transcripts, petitions, and resolutions. Each submittal may contain several distinct comments.

A typical high-profile DOE EIS may elicit hundreds or even a few thousand comments. In one of its largest public responses ever, DOE so far has tallied about 11,000 comments (from about 2,300 letters and other submittals) on the Draft EIS for the Yucca Mountain Geologic Repository (DOE/EIS-0250). DOE conducted 21 public hearings and established a public comment period of almost 200 days for this Draft EIS.

But this does not even come close to the U.S. Forest Service's ongoing experience in preparing an EIS for its Roadless Area Conservation Program and related proposed rule, which would apply to about 160 National Forests and Grasslands. (For information on the program, visit the Forest Service Web site at www.roadless.fs.fed.us/). Public participation activities for the Roadless Area Conservation Program included about 450 public scoping meetings and hearings on the Draft EIS.

In its scoping process, the Forest Service received more than 517,000 letters, cards, and other submittals, containing well over one million comments. Form letters and post card campaigns accounted for about 481,000 of the submitted items.

During a 60-day Draft EIS public comment period ending in July 2000, the Forest Service estimates that it received more than one million letters, cards, and other items, which include about 60,000 individually written letters – 6,000 of them from local, state, and Federal agencies. The Forest Service has assigned 95 full-time staff members to analyze these comments.

Based on the Roadless Area Conservation Program and similar experiences, the Forest Service, in consultation with the Council on Environmental Quality, is developing new training on methods for agencies to manage and meaningfully incorporate large volumes of public comments received in the NEPA process. The Office of NEPA Policy and Compliance intends to consult with the Forest Service to identify lessons learned for such cases. (For related articles on responding to public comments, see *Lessons Learned Quarterly Reports* for September 1996, page 4, and September 1997, page 12.)

Interim DOE Technical Standard on Evaluating Radiation Doses to Biota Available for Use

The Office of Environment, Safety and Health announces the availability of a new interim DOE technical standard, "A Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota," for use in DOE compliance and risk assessment activities pending formal approval by the DOE Technical Standards Program. This voluntary consensus technical standard was developed through the Department's Biota Dose Assessment Committee.

As Assistant Secretary David Michaels stated in a July 19, 2000, distribution memorandum, the technical standard "provides a graded approach (including screening methods and methods for detailed analyses) and related guidance that DOE and DOE contractors may use for demonstrating compliance with requirements for protection of biota in DOE Order 5400.5, 'Radiation Protection of the Public and the Environment,' and for conducting ecological risk assessments of radiological impact at contaminated sites."

The interim standard and the "RAD-BCG Calculator" – an electronic spreadsheet that allows users to enter site-specific data to help determine whether radiation doses to biota exceed recommended limits – can be downloaded from the Biota Dose Assessment Committee's Web site at www.eh.doe.gov/oepa (click on "Focus Areas," select "Biota Dose Assessment Committee," then select "Technical Standard"). For further information, contact the Committee Chair, Stephen Domotor, Office of Environmental Policy and Guidance, at stephen.domotor@eh.doe.gov, or phone 202-586-0871.

Draft Guidelines for Environmental Review of Trade Agreements

Executive Order 13141, "Environmental Review of Trade Agreements" (64 FR 63167; November 18, 1999), directs responsible agencies to carefully assess and consider environmental impacts of trade agreements "through a process of ongoing assessment and evaluation, and, in certain instances, written environmental review." (See *Lessons Learned Quarterly Report*, December 1999, page 2.) A provision of the Executive Order designates the U.S. Trade Representative and the Chair of the Council on Environmental Quality (CEQ) to develop procedures for conducting environmental reviews (ERs) in consultation with appropriate foreign policy, environmental, and economic agencies.

Based on an "extensive interagency process" and input solicited from advisory committees and the public (65 FR 9757; February 22, 2000), draft implementing guidelines were recently published in the Federal Register (65 FR 42743; July 11, 2000). Key components of the draft guidelines are: criteria for conducting an ER, initiation of the ER process, scope and analysis, documentation, timing, and public participation. A public hearing was held on August 2 and 3, 2000, in Washington, D.C., and written public comments were due by August 25, 2000. The U.S. Trade Representative and CEQ plan to issue final guidelines this fall.

e-NEPA: Progress in Adding Missing EAs and EISs to NEPA Web

By: Denise Freeman, *Acting Webmaster, Office of NEPA Policy and Compliance*

The Office of NEPA Policy and Compliance appreciates the support of the DOE NEPA Community in providing missing e-files. We have made substantial progress, but our work is not yet complete. As of August 2000, the DOE NEPA Web full text searchable document collection includes:

- 26 of the 40 EISs issued between January 1, 1995, and December 31, 1997
  18 of the 20 EISs issued between January 1, 1998, and mid-August 2000.
- 124 of the 190 EAs issued between January 1, 1995, and December 31, 1997
  34 of the 64 EAs issued between January 1, 1998, and mid-August 2000.
- All Records of Decision and Notices of Intent issued since 1998.

The Office of NEPA Policy and Compliance continues to seek e-files for missing documents and will add them to the Web site as they arrive.

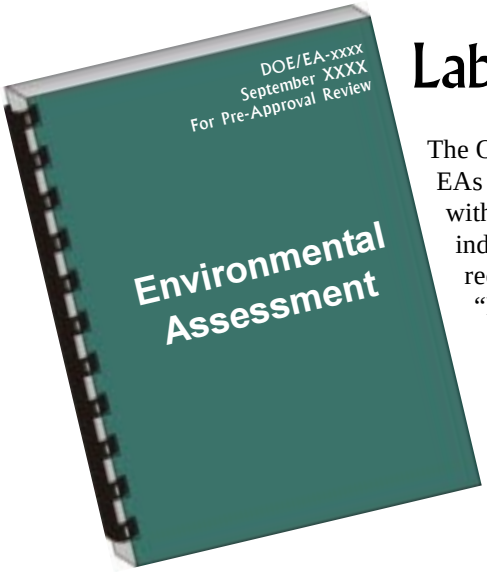
Affected Environment and No Action Alternative: Different Concepts, Different Time Frames

An incorrect premise sometimes takes root in the early stages of an EIS's development – that the environmental impacts of the no action alternative are equivalent to the description of the affected environment. These are different concepts, however, and serve different purposes.

The affected environment is the setting within which a proposed action would take place. It encompasses current conditions and, as relevant, past fluctuations and patterns in natural and human systems. The description of the affected environment in a NEPA document is a snapshot of *present* conditions of resources and geographic areas that potentially could be affected by a proposed action and its alternatives. It lays the foundation – an environmental baseline – for assessing potential impacts of a proposed action.

In contrast, the potential impacts of the no action alternative are estimated from a projection of current conditions into the *future*, under the influence of activities that would continue and those that would carry out decisions previously made. Although the no action alternative often is described as maintaining the "status quo," this does not mean that no action is a static condition. Rather, the impacts of this alternative form a different sort of baseline that allows decision makers and the public to compare future impacts under alternative scenarios. To allow meaningful comparisons, the time span used to assess the impacts of the no action alternative must be comparable to the time span used to analyze the impacts of the action alternatives.

For example, the affected environment's air quality discussion might describe the general climate, wind, temperature, rainfall, ambient concentrations of air pollutants at the site, and current site emissions and emission rates. Also, this discussion would, as appropriate, identify existing air quality permits and specify the attainment status for criteria pollutants. In contrast, impact assessment for the no action alternative would project future site emissions and emission rates without the proposed action. The impact assessment also would identify the impacts of such future emissions on compliance with applicable air quality regulations and permits, the attainment status for criteria pollutants, and human health and environment. LL



Label an EA for Pre-Approval Review

The Office of NEPA Policy and Compliance notes that on several occasions EAs were provided to States and Tribes (and others) for pre-approval review with no indicator of their status, and these EAs were therefore indistinguishable from approved EAs. To avoid such confusion, we recommend labeling an EA on its cover to indicate its status as being "For Pre-Approval Review." LL

Using Appropriate Number of Significant Digits

What's Wrong with "480 m^3 (16,951 ft^3)" of Radioactive Waste?

One editorial error we frequently find in reviewing draft NEPA documents is the reporting of quantities with more digits than are "significant" – that is, more digits than are meaningful in light of the precision of the underlying data.

If a material is weighed on a scale that is precise only within a kilogram, for example, it is not meaningful to report the weight in tenths of a kilogram. By extension, a quantity calculated from several measurements can be no more precise (in terms of the number of significant digits) than the measurement with the least number of significant digits.

Reporting more than the appropriate number of significant digits may mislead the reader to think that quantities are known more precisely than is the case, and may ultimately decrease a report's credibility. Further, displaying insignificant digits makes the meaningful differences between quantities, such as the features or impacts of alternatives, harder to discern. Environmental radiation-related dose and effect estimates, for example, are rarely valid to more than one or two significant digits.

This overview is intended to remind NEPA document preparers of the need to use good judgment in reporting numerical values. For a fuller treatment of significant digits – and the related topics of rounding, scientific measurement, precision versus accuracy, and range versus point values – refer to the *DOE Fundamentals Handbook: Mathematics* (Volume 1of 2, DOE-HDBK-1014/1-92, June 1992, on the EH Web site at tis.eh.doe.gov/techstds/standard/hdbk1014/h1014v1.pdf), or perform a Web search using the terms *significant digits* or *significant figures* to identify other useful sites. Another reference, the American Society for Testing and Materials *Standard for Use of the International System of Units (SI): The Modern Metric System* (IEEE/ASTM SI-10), is available for purchase at www.astm.org/DATABASE.CART/PAGES/IEEE.htm. LL

Here's How it Works — A Quick Review

Identifying Significant Digits

- A non-zero digit is significant.

  Example: 48 has 2 significant digits

- Zero is significant:

  when located between two non-zero digits.

  Example: 408 has 3 significant digits

  when after the decimal and no non-zero digits follow.

  Example: 408.0 has 4 significant digits

- Zero is not significant:

  when after the decimal, but followed by non-zero digits (i.e., when used only to locate the decimal point in a quantity less than 1).

  Example: 0.048 has 2 significant digits

  when to the right of non-zero digits but before the decimal (unless context indicates otherwise).

  Example:

  500 normally has 1 significant digit, signifying a quantity between 450 and 549 (unless context indicates otherwise)

  To indicate otherwise, such as that 500 has 3 significant digits, use

  — a decimal point (500.), or
  — powers of 10 (5.00×10^2)

Arithmetic with Significant Digits

- When adding and subtracting quantities with different numbers of significant digits:

  the result has as many significant digits after the decimal as the measurement with the fewest significant digits after the decimal.

  Example: 48.134 + 1.1 = 49.2 (not 49.234)
  48 + 1.1 = 49 (not 49.1)

- When multiplying and dividing quantities with different numbers of significant digits:

  the result has as many significant digits as the measurement with the fewest significant digits.

  Example: 480 x 35.3147 = 17,000*

  * In the subtitle of this article, 480 m^3 contains 2 significant digits. Converting to cubic feet (35.3147 cubic feet per cubic meter) does not increase the precision of the measure – so the converted value should be stated as 17,000 ft^3.

- An exact quantity does not affect the number of significant digits in arithmetic results.

  Example:

  5 EISs (exact count) x 0.236 kg/EIS = 1.18 kg (not 1.180 kg) (where 0.236 and 1.18 each have 3 significant digits)

DOE NEPA Guidance Updates from the Office of NEPA Policy and Compliance

Stakeholder Directory, 14th Edition

Status: Issued July 2000. Request copies from contact, or access on the DOE NEPA Web at tis.eh.doe.gov/nepa/ under DOE NEPA Tools.

Contact: Katherine Nakata
katherine.nakata@eh.doe.gov
202-586-0801

Mini-guidance Compendium from *Lessons Learned Quarterly Reports*

Status: In preparation, distribution planned in October 2000. This document is a compilation of all mini-guidance articles published since LLQR started in December 1994 through the September 2000 issue.

Contact: Yardena Mansoor
yardena.mansoor@eh.doe.gov
202-586-9326

Accident Analysis under NEPA

Status: More than 200 comments were received from DOE's NEPA Community on the draft guidance (dated April 2000). Major comments focused on differences between nuclear safety analyses and accident analyses under NEPA, including the appropriate accident scenarios to be considered and how to consider impacts on involved workers. Some commenters expressed concerns that the guidance would impose new analytical requirements, such as the need to consider indirect impacts. The NEPA Office will consult with commenters in revising the guidance, with issuance planned for November 2000.

Contact: Eric Cohen
eric.cohen@eh.doe.gov
202-586-7684

Incorporating Environmental Justice Considerations into the DOE NEPA Process

Status: More than 100 comments were received from DOE's NEPA Community on the draft guidance (dated April 2000). Comments included requests to clarify the recommended assessment effort and how to apply the sliding scale approach, address transportation issues, and make the guidance more concise. The NEPA Office will consult with commenters in revising the guidance, and plans to provide a revised draft in December 2000 for comment by minority and low-income stakeholders who participated in early scoping of the guidance.

Contact: Carolyn Osborne
carolyn.osborne@eh.doe.gov
202-586-4596

Revisions to DOE Floodplain and Wetlands Regulations (10 CFR Part 1022)

Status: Draft revisions underway to public notification procedures and other sections of the regulations, in response to discussion at the June 2000 NCO meeting and informal NCO follow-up comments. The NEPA Office plans to provide a draft preamble and revised regulations to DOE's NEPA Community for comment in November 2000.

Contact Katherine Nakata
katherine.nakata@eh.doe.gov
202-586-0801

Revisions to DOE NEPA Regulations (10 CFR Part 1021)

Status: Revisions under consideration to categorical exclusion B3.6 concerning bench-scale and small-scale research and other sections of the regulations, in response to discussions at the June 2000 NCO meeting and informal NCO follow-up comments. The NEPA Office plans to provide a draft preamble and revised regulations to DOE's NEPA Community for comment in 2001.

Contact: Mary Greene
mary.greene@eh.doe.gov
202-586-9924

New on the NEPA Bookshelf

From time to time the Office of NEPA Policy and Compliance describes (without endorsement) new books that may be useful or interesting to the DOE NEPA Community. (See *Lessons Learned Quarterly Report*, December 1999, page 15; June 1999, page 10; and September 1998, page 5. Also, "Suggestions for the NEPA Practitioner's Bookshelf," August 1996, is available in the DOE NEPA Compliance Guide on the DOE NEPA Web at tis.eh.doe.gov/nepa/ under "DOE NEPA Tools.")

Environmental Impact Statements: A Comprehensive Guide to Project and Strategic Planning

Charles H. Eccleston; May 2000
John Wiley & Sons, Inc.
605 Third Avenue
New York, NY 10158
Phone: 800-225-5945
ISBN 0-471-35868-1
346 pages; $69.95

In this new book on managing the EIS process, Charles H. Eccleston seeks to synthesize all relevant guidance and requirements that an EIS must satisfy, while advancing the perspective that the EIS process can be a framework for broader Federal planning. Mr. Eccleston, who chairs the Tools and Techniques NEPA Practice Committee of the National Association of Environmental Professionals, addresses "pre-scoping" tasks, the EIS planning process, EIS documentation requirements, and decision implementation (e.g., by integrating NEPA and ISO 14000). These topics and related tools, techniques, and approaches are presented within the context of the author's "Total Federal Planning" strategy, which applies principles from value engineering, total quality management, and systems engineering to the EIS process with the goal of improving Federal planning and decision making.

As in his previous book, *The NEPA Planning Process: A Comprehensive Guide with Emphasis on Efficiency* (*Lessons Learned Quarterly Report*, June 1999, page 10), Mr. Eccleston, a contractor employee at DOE's Hanford Site, draws upon the DOE NEPA program for some of the material in this book, including specific EISs, the DOE EIS Checklist, and the *Lessons Learned Quarterly Report*.

Book Review: "Founding Father" Challenges Practitioners to Fulfill NEPA's Potential

By: Clarence Hickey, *Office of Science NEPA Compliance Officer*

The National Environmental Policy Act: An Agenda for the Future
Lynton Keith Caldwell
Indiana University Press, 1999
Phone: 800-842-6796
Internet: www.indiana.edu/~iupress/
ISBN 0-253-33444-6
272 pages, $29.95

Professor Lynton Caldwell, often referred to as the "Father of NEPA," has compiled his observations into a new book "in the belief that [NEPA] offers a set of goals that could guide the nation toward an economically and environmentally tolerable, sustainable future." This volume discusses NEPA's historical background, EIS successes and challenges, domestic and international integration of environmental policy into decisions, NEPA and the global environment, and the implications of NEPA for the environmental future. (Dr. Caldwell compliments DOE on its EA Checklist and the 1994 EA Process Improvement Team.)

Dr. Caldwell concludes that NEPA's promise is not yet fulfilled, stating: "The goals declared in NEPA are as valid today as they were in 1969, perhaps more so." NEPA's purpose, he claims, "was never the writing of impact statements, but this action-forcing procedure has been a great inducement to ecological rationality in Federal actions, which traditionally *have* largely ignored environmental consequences." Even so, Dr. Caldwell claims that agencies have narrowed their application of the EIS over time, resulting in failure to meet the congressional intent of integrating environmental values into their missions. He argues for the intended connectedness of Sections 101 and 102 of NEPA: "That Section 102 and the EIS were intended to implement

continued on page 12

Book Review (continued from page 11)

Section 101 may be implicit in the logical construction of the statute and in its legislative history, but unfortunately it is neither sufficiently explicit in its text nor forceful enough in implementation of the Council on Environmental Quality (CEQ) regulations. In consequence, the Supreme Court and some agencies have asserted or assumed the separability of the sections, thus opening the way to narrowing the application of the EIS."

Dr. Caldwell discusses societal values and environmental ethics in the NEPA context. In his final chapter, "Future Directions: Beyond NEPA," he provides his recipe for achieving the Act's purposes anew and for building on the successes of NEPA. He writes, "NEPA principles must be asserted with a clarity and force sufficient to energize action toward achieving a sustainable quality of life on Earth. For this reason both a reaffirmation and a reinforcement of NEPA are necessary toward activating its declared intent."

Dr. Caldwell's thought-provoking book challenges some of the norms we take for granted in our NEPA work on behalf of the Federal government. It is interesting to read what the Father of NEPA has observed after 30 years of NEPA practice and what he envisions ahead. I recommend this book to DOE's NEPA professionals and environmental staff, our contractor helpers, and DOE's policy makers and managers as well.

For further information or to discuss this book, contact Mr. Hickey at clarence.hickey@science.doe.gov, or 301-903-2314.

Transitions

Exemplary Management Practice: New NCO Had to Demonstrate NEPA Knowledge

Joseph Rau is the NEPA Compliance Officer (NCO) for the Rocky Flats Field Office (RFFO), succeeding Reginald Tyler. Acting RFFO Manager Paul Golan's NCO designation memorandum is unique in describing the new NCO's qualifications: "Joe has been acting and gaining experience as NCO under Mr. Tyler's supervision since January 2000. Joe underwent a board review on May 17, 2000, and under direct questioning he successfully demonstrated a working knowledge of NEPA policies, procedures, regulations, and objectives that adequately prepares him to assume the duties of RFFO NCO. The board consisted of two former NEPA Compliance Officers, a Department of Energy lawyer regularly assigned to cover NEPA issues, and the Assistant Manager for Environment and Infrastructure." Mr. Rau may be contacted at joe.rau@rfets.gov, or phone 303-966-7410.

Hitesh Nigam Becomes Fissile Materials Disposition NCO

Hitesh Nigam, who served in DOE's Office of NEPA Policy and Compliance since 1991 and was a major contributor to the data collection and analysis portions of the *Lessons Learned Quarterly Reports*, has joined the Office of Fissile Materials Disposition as its NEPA Compliance Officer. The Office is under the Deputy Administrator for Defense Nuclear Nonproliferation, part of the new National Nuclear Security Administration. Mr. Nigam will be responsible for NEPA activities associated with storage and disposition of surplus fissile materials.

Hitesh wishes to thank all the people that he worked with during the last nine years, especially the Program and Field NEPA Ninjas and many contractors who provided NEPA-related assistance. We wish him well in his new position. He can be reached at hitesh.nigam@hq.doe.gov, or phone 202-586-0750.

DOE-Wide NEPA Contracts Updates

On June 12, 2000, DOE exercised the first option period of the DOE-wide NEPA contracts for document preparation services with SAIC and Tetra Tech, Inc., extending the contracts for one year through June 17, 2001. (A contract with Battelle Memorial Institute was awarded in March 1998, and a decision on exercising an option will be due in early 2001.) For questions or comments on the DOE-wide NEPA contracts, contact David Gallegos at dgallegos@doeal.gov or 505-845-5849.

The following tasks have been awarded recently under the DOE-wide contracts; for previously reported tasks, see "Contracting, NEPA" in the *Lessons Learned Quarterly Report* Cumulative Index in this issue.

The Three DOE-wide NEPA Contractor Teams:

Battelle Memorial Institute
Program Manager: Lucinda Low Swartz
swartzl@battelle.org
phone: 301-933-4668; fax: 301-933-6796

Science Applications International Corporation (SAIC)
Program Manager: Nicholas S. Dienes
dienesn@saic.com
phone: 505-842-7841; fax: 505-842-7898

Tetra Tech, Inc.
Program Manager: Thomas Magette
tom.magette@tetratech.com
phone: 703-931-9301; fax: 703-931-9222

Task Description	DOE Contact	Date Awarded	Contract Team
Community Involvement Support	Ted Taylor, LAAO 505-665-7203 ttaylor@doeal.gov	4/21/00	Tetra Tech, Inc.
High Level Waste EIS Support	Richard Kimmel, ID 208-526-5583 kimmelrj@id.doe.gov	4/27/00	Tetra Tech, Inc.
High Flux Beam Reactor Strategy Study	Mike Holland, CH/BHG 631-344-3552 mholland@bnl.gov	6/6/00	Tetra Tech, Inc.
Sacramento Area Voltage Support EIS	Loreen McMahon, WAPA 916-353-4460 mcmahon@wapa.gov	6/9/00	Tetra Tech, Inc.
Horizon Pipeline Project EA	Federal Energy Regulatory Commission	6/13/00	Tetra Tech, Inc.
Center for Applied Repository and Underground Science at WIPP EA	Harold Johnson, CAO 505-234-7349 johnsoh@wipp.carlsbad.nm.us	6/28/00	Battelle
Supplement Analysis for Waste Management PEIS	Robert Rothman, OH 937-865-3823 robert.rothman@ohio.doe.gov	7/10/00	Battelle
Paducah Gaseous Diffusion Plant Landfill EA	David Tidwell, OR 270-441-6807 tidwellwd@oro.doe.gov	8/4/00	Tetra Tech, Inc.

Training Opportunities

NEPA-related courses are listed in the Lessons Learned Quarterly Report *for information only, without endorsement.*

- **An Overview of Environmental Laws and Regulations for Managers**
  Washington, DC: September 8, 2000
  Fee: $350

  USDA Graduate School/
  DOE National Environmental Training Office (NETO)
  Phone: 803-725-0818
  E-mail: NETO@srs.gov
  Internet: www.em.doe.gov/neto/

- **Cumulative Effects Assessment**
  Olympia, WA: September 19 and 20, 2000
  Fee: None; sponsored by the Council on Environmental Quality
  E-mail: envimptr@aol.com

  Irving, TX: November 1 to 3, 2000
  Fee: $695
  E-mail: info@eiatraining.com

  Environmental Impact Training
  Dr. Larry Canter, University of Oklahoma
  Dr. Samuel Atkinson, University of North Texas
  Phone: 830-596-8804
  Internet: www.eiatraining.com

- **Historic Preservation Law**
  Los Angeles, CA: October 30 and 31, 2000
  Fee: $795

  ALI-ABA/National Trust for Historic Preservation
  Phone: 800-253-6397
  E-mail: phunt@ali-aba.org
  Internet: www.ali-aba.org

- **Implementation of NEPA on Federal Lands and Facilities**
  Durham, NC: October 30 – November 3, 2000
  Fee: $960

  Nicholas School of the Environment
  Duke University
  Phone: 919-613-8082
  E-mail: britt@duke.edu
  Internet: www.env.duke.edu/

- **The NEPA Toolbox: Positive Public Involvement**
  Denver, CO: December 4 and 5, 2000
  Fee: $595 by 11/15; then $650

  The NEPA Toolbox: Integrating NEPA and Section 106
  Denver, CO: December 6, 2000
  Fee: $395 by 11/15; then $425

  The NEPA Toolbox: Assessing Cumulative Impacts
  Denver, CO: December 7 and 8, 2000
  Fee: $595 by 11/15; then $650

  Environmental Training and Consulting International, Inc. (ETCI)
  Phone: 720-859-0380
  E-mail: info@envirotrain.com
  Internet: www.envirotrain.com

- **Reviewing NEPA Documents**
  Dayton, OH: September 12 to 14, 2000
  Las Vegas, NV: December 12 to 14, 2000
  Fee: $795

  Cultural and Natural Resource Management
  Denver, CO: September 19 to 20, 2000
  Fee: $595

  Writing for Technical Specialists
  Denver, CO: October 16 to18, 2000
  Fee: $795

  How to Manage the NEPA Process and Write Effective NEPA Documents
  Las Vegas, NV: October 24 to 27, 2000
  Fee: $995

  The Shipley Group
  Phone: 888-270-2157 or 801-298-7800
  E-mail: ben@shipleygroup.com
  Internet: www.shipleygroup.com

ALI-ABA Course Materials

The American Law Institute (ALI)-American Bar Association (ABA) offers videos, audio tapes, and course materials from its Environmental Law courses for sale on the Internet. For a catalog, visit the ALI-ABA Web site at www.ali-aba.org/aliaba/Envlaw.htm.

USDA Graduate School and NETO Form Partnership

The USDA Graduate School has entered into a partnership with DOE's National Environmental Training Office (NETO) to provide nationwide environmental training. Under this partnership, the Graduate School is offering seven courses in the Environmental Sciences curriculum area in FY 2000 and plans to expand to 13 courses next year. For further information, visit the NETO Web site at http://www.em.doe.gov/neto/, or contact David Hoel at david.hoel@srs.gov, or phone 803-725-0814.

DOE Litigation Updates

Appeals Court Affirms that EIS Is Not Required for Oak Ridge Metals Recycling under CERCLA

The U.S. Court of Appeals for the District of Columbia Circuit affirmed a 1999 district court ruling that DOE cannot be required to prepare an EIS for the recycling and sale of radioactively contaminated metals recovered from decontamination and decommissioning of three buildings at the East Tennessee Technology Park (formerly the K-25 Gaseous Diffusion Plant) on the Oak Ridge Reservation. (See *Lessons Learned Quarterly Report*, September 1999, page 11.)

Section 113(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) bars legal challenges to a removal or remediation action under CERCLA until the action is completed. The plaintiffs, the Oil, Chemical and Atomic Workers International Union, AFL-CIO, and others, had argued that the decision to recycle radioactive metal is an action subject to NEPA. The Appeals Court, however, affirmed that the recycling is part of a larger removal action under CERCLA and, therefore, the courts have no jurisdiction over the NEPA claim. *Oil, Chemical and Atomic Workers International Union v. Richardson*, No. 99-5295, U.S. District Court of Appeals for the District of Columbia Circuit; July 7, 2000 (appeal from the U.S. District Court for the District of Columbia, No. 97-1926; June 29, 1999).

[Notwithstanding this favorable court ruling, the Secretary has established a policy of not releasing scrap metals for recycling if they contain detectable radioactive contamination from DOE operations. See the Secretary's memorandum of July 13, 2000, Release of Surplus and Scrap Materials, available at: www.eh.doe.gov/oepa (select "DOE Directives Development Initiative for the Measurement and Release of Surplus Materials," then "Public Documents," then "DOE Memorandum").] LL

Other Agency NEPA Cases

Court Upholds Postal Service EA for Hovercraft Mail Delivery Test

To test the reliability of a less expensive means of mail delivery, the U.S. Postal Service proposed a two-year experimental project to deliver mail to eight remote Alaskan villages by hovercraft instead of fixed-wing aircraft. Although hovercraft can move over land, the Postal Service's proposal was to use them only on rivers. As part of its EA process, the Postal Service issued a notice of intent and conducted a scoping process that identified noise and potential effects on fish and wildlife, endangered species, subsistence activities, and commercial fishing as potential impacts of concern.

The Postal Service prepared a draft EA and circulated it for public comment in April 1997, and issued an EA and finding of no significant impact (FONSI) in July 1997. Nine Alaska Native communities and tribal councils sued, based on NEPA claims (and consistency with the Coastal Zone Management Act). The U.S. District Court for the District of Alaska issued a summary judgment in favor of the Postal Service, and the Ninth Circuit Court of Appeals affirmed the District Court's judgment.

NEPA Claims Address Impacts, Mitigation, and Alternatives

The plaintiffs challenged the validity of the Postal Service's EA on the grounds that it failed to adequately: (1) analyze environmental impacts, (2) specify mitigation, and (3) consider an acceptable range of alternatives, including the no action alternative.

Adequacy of Impact Analysis; Agency Must Consider – not Defer to – Expert Agency's Comments

The plaintiffs' first NEPA claim was that the EA's impact analysis did not support a FONSI. To succeed in their challenge, plaintiffs would have to demonstrate that the Postal Service failed to "articulate a rational connection between the facts found and the conclusions made."

continued on page 16

Other Agency NEPA Cases (continued from page 15)

The plaintiffs pointed to many instances in which the EA states that various impacts "could" or "may" result from the project. On this basis, the plaintiffs asserted that the EA implicitly admitted that insufficient data had been gathered on the likely impacts of the project. The court found this argument unpersuasive, however, because the EA, "considered as a whole," does not conclude that these were "substantial questions."

The plaintiffs also pointed to a Fish and Wildlife Service comment on the draft EA that the project might produce a long-term disturbance of roosting waterfowl along the Kuskokwim River, significantly affecting nesting and migration patterns. The Fish and Wildlife Service recommended further studies before issuing the EA. The Appeals Court found that the EA carefully analyzed this issue and concluded that a short-term disturbance of roosting is the probable impact of the project. The Fish and Wildlife Service itself had concluded in its comments that "a short term disturbance of roosting of birds would probably not be significant," and noted that comparison with control points outside the project area would accomplish the purpose that would be served by further studies. Thus the court found that the differences between the two agencies' positions were not great and that the Postal Service had met its obligation – not to defer to the Fish and Wildlife Service positions – but rather to consider and respond to its concerns.

Mitigation Measures Need Not Be Specific

Plaintiffs also claimed that the mitigation measures described in the EA were not specific or obligatory. The Appeals Court noted, however, that the requirement in the Council on Environmental Quality NEPA regulations to discuss mitigation (40 CFR 1502.16(h)) applies to an EIS, not an EA. In this case, the Postal Service EA concluded (with adequate support in the administrative record) that: "No mitigation for impacts on fish and wildlife is required for the two-year project due to the insignificance of all the impacts. However, the [Postal Service] has elected to implement a monitoring program on birds and fish in an attempt to gather additional information during the pilot [project]."

Evaluation of Alternatives, Including No Action

The Postal Service's NEPA regulations (39 CFR 775.8(a)(4)) require it to "study, develop, describe, and evaluate, at all decision points, reasonable alternatives to recommended actions which may have a significant effect on the environment." The plaintiffs contended that the EA did not adequately evaluate the no action alternative and failed to consider a reasonable range of alternatives.

The Postal Service EA equated no action with the status quo – that is, delivery of mail by fixed-wing aircraft. The plaintiffs argued that no meaningful consideration of the no action alternative was possible without baseline studies determining the environmental effects of mail delivery via fixed-wing aircraft. Given the project's objectives and the Postal Service's statutory obligation to deliver mail to these remote locations, however, the court found that the EA's characterization of the environmental effects of "no action" as "no change" was not arbitrary or capricious.

The Appeals Court also found that the EA considered a reasonable range of alternatives, given the objectives of the project. Noting that the Postal Service seeks to improve the reliability and efficiency of mail delivery service to remote Alaskan villages, the court stated that the agency was not required to consider alternatives such as trucks, boats, or fixed-wing aircraft that would not serve this purpose. The court noted that the Postal Service also considered suspending hovercraft operations during subsistence bird-hunting season. Because the Postal Service determined that the project's effects on waterfowl would be insignificant, the Postal Service rejected this more costly "seasonal use" option. The EA nevertheless stated that this option (or the option of stopping the project altogether) may be adopted if monitoring indicates that unexpected adverse environmental impacts occur.

Finding no substantial argument that the Postal Service's EA exceeded agency discretion or failed to comply with governing law, the Appeals Court upheld the District Court decision. *Akiak Native Community et al. v. United States Postal Service*, No. 98-35466, 2000 U.S. App. LEXIS 11618 (9th Cir. May 25, 2000). LL

EAs and EISs Completed (April 1 – June 30, 2000)

EAs

Bonneville Power Administration
DOE/EA-1326 (5/24/00)
Tucannon River Spring Chinook Captive Broodstock Program, Lyons Ferry, WA
Cost: $18,000
Time: 6 months

Grand Junction Project Office/ Environmental Management
DOE/EA-1338 (4/25/00)
Transfer of DOE Grand Junction Office to Non-DOE Ownership
Cost: $99,000
Time: 8 months

Office of Science
DOE/EA-1196 (4/18/00)
Implementation of the Natural and Accelerated Bioremediation Research Program and Selection of the Field Research Centers
Cost: $121,000
Time: 42 months

Richland Operations Office/ Environmental Management
DOE/EA-1319 (6/15/00)
Disposition of Surplus Hanford Site Uranium
Cost: $164,000
Time: 12 months

EISs

Bonneville Power Administration
DOE/EIS-0285 (65 FR 39146; 6/23/00)
(EPA Rating: EC-1)
Transmission System Vegetation Management Program for CA, ID, MT, OR, UT, WA, WY
Cost: (Cost report in preparation)
Time: 35 months

Fossil Energy/National Energy Technology Laboratory
DOE/EIS-0289 (65 FR 40629; 6/30/00)
(EPA Rating: EC-2)
JEA Circulating Fluidized Bed Combustor Project, Jacksonville, FL
Cost: $942,000
Time: 31 months

Oak Ridge Operations Office/ Environmental Management
DOE/EIS-0305 (65 FR 40629; 6/30/00)
(EPA Rating: EC-2)
Treating Transuranic (TRU)/Alpha Low-Level Waste at the Oak Ridge National Laboratory, Oak Ridge, TN
Cost: $481,000
Time: 17 months

ENVIRONMENTAL PROTECTION AGENCY (EPA) RATING DEFINITIONS

Environmental Impact of the Action

LO – Lack of Objections
EC – Environmental Concerns
EO – Environmental Objections
EU – Environmentally Unsatisfactory

Adequacy of the EIS

Category 1 – Adequate
Category 2 – Insufficient Information
Category 3 – Inadequate

(See the March 1997 *Lessons Learned Quarterly Report* for a full explanation of these definitions.)

For the Record

The EIS numbers for the following documents were incorrectly reported in the June 2000 issue of *Lessons Learned.*

Notice of Intent

Western Area Power Administration
DOE/EIS-0315
Caithness Big Sandy Project, Wikieup, AZ
4/6/00 (65 FR 20811; 4/18/00)

Draft EIS

Oak Ridge Operations Office
DOE/EIS-0305
Treating Transuranic (TRU)/Alpha Low-Level Waste at the Oak Ridge National Laboratory, Oak Ridge, TN
March 2000 (65 FR 11575; 3/3/00)

What Worked and Didn't Work in the NEPA Process

To foster continuing improvement in the Department's NEPA Compliance Program, DOE Order 451.1A requires the Office of NEPA Policy and Assistance to solicit comments on lessons learned in the process of completing NEPA documents and distribute quarterly reports. This Quarterly Report covers documents completed between April 1 and June 30, 2000. Comments and lessons learned on the following topics were submitted by questionnaire respondents.

The material presented here reflects the personal views of individual questionnaire respondents,which (appropriately) may be inconsistent. Unless indicated otherwise, views reported herein should not be interpreted as recommendations from the Office of Environment, Safety and Health.

Scoping and Public Participation

What Worked

- *Early stakeholder interactions.* The Operations Office had met frequently with stakeholders to discuss the proposed project before the NEPA process began. The public hearing on the draft EIS was well attended and substantive comments were received.
- *An established community involvement program.* The project proponent had a very well developed and effective community involvement program. The public appeared to be quite knowledgeable about the proponent and the proposed project. Consequently, comments from the public were few and tended to focus on very specific issues.
- *Comprehensive mailing list.* Some of the success of this project was due to the existence of a comprehensive mailing list.
- *Toll-free telephone number and community bulletin board.* Communications with the public were facilitated by a toll-free telephone contact and use of community bulletin boards.

What Didn't Work

- *Weather-related delays.* Hurricane Floyd caused the initial public hearing to be rescheduled. This led to some confusion of the public, but the situation could not be avoided.

Data Collection/Analysis

What Worked

- *Use of hypothetical scenarios.* Generic scenarios for future land uses and a hypothetical probable worst-case scenario were used to determine environmental impacts. This approach was necessary as this EA concerned transfer of a DOE property to non-DOE ownership, and DOE would have had no control over future uses of the property.

What Didn't Work

- *Non-standard methodologies.* Use of non-standard methodologies in evaluating certain impacts impeded development of scientific conclusions.
- *Insufficient contractor expertise.* The contractor preparing the NEPA document did not appear to be using staff with the appropriate background or an adequate number of staff.

Document Completion

What Worked

- *Teleconferences.* Weekly teleconferences among the several responsible DOE offices and sites helped to coordinate responses to public comments and maintain updates of project status.

What Didn't Work

- *Contract change orders.* The contract established for preparation of the NEPA document was fixed price. Multiple change orders had to be executed, which disrupted work flow.
- *Multiple NEPA Document Managers.* Three different NEPA Document Managers were assigned to this EIS over the course of its completion. This caused difficulties in keeping the document on schedule.
- *Unanticipated external consultations.* Initial contacts with organizations outside of DOE had identified no problems, whereas subsequent contacts resulted in the need for more extensive discussions and review, which produced some delay.

What Worked and Didn't Work (continued)

Teamwork

What Worked

- *Integration of NEPA and procurement processes.* Milestones established during the procurement process helped to move the NEPA document preparation forward.
- *Selection of a known contractor.* Selection of a contracting organization with whom we had worked previously on EIS preparation was an advantage with regard to communications and understanding.
- *Staff knowledge and experience.* Knowledgeable and experienced staff included a writer/editor whose work was well respected.
- *Direct channels of communication.* Direct channels of communication between the NEPA document preparers and the other team members were established early in the process, providing a pathway for directly addressing issues.

What Didn't Work

- *Coordination between multiple DOE sites.* This EA needed to be coordinated between two DOE sites, making communication of issues more difficult than those that are normally resolved within only one site.
- *Unclear distribution process.* There was a great deal of confusion about the distribution process for this EIS; it was unclear what role each office had in the distribution process and what steps were required. Guidance describing the NEPA draft document distribution process and the appropriate roles and responsibilities for draft document reviews is greatly needed.
- *Unavailability of experts.* The contractor did not make members of their team readily available during comment resolution meetings, inhibiting effective teamwork.
- *Distance between DOE and its contractors.* It was difficult to work with the contractors because of their great distance from the responsible DOE office. Resolution of DOE's comments via phone and e-mail resulted in some tense discussions. Face-to-face meetings would have been preferable, but there was insufficient budget for this.

Timing

- *NEPA compliance became the critical path.* The NEPA process began early enough to avoid being on the critical path; however, key design information necessary to perform the analysis of alternatives was not provided until much later, resulting in delays that put NEPA on the critical path.

Agency Planning and Decision Making

What Worked

- *Review of project plans.* The NEPA analysis facilitated thinking about alternative means for addressing various aspects of project work. In several instances, the review of plans was helpful because it confirmed the correct course of action was being pursued or indicated the need to alter the plans.
- *Identification of mitigative measures.* The NEPA process helped illuminate potential environmental problems associated with the proposed project and identified mitigative measures to avoid potential negative impacts.

What Didn't Work

- *A change in preferred siting.* A change in siting of the preferred alternative (not prompted by the NEPA review) impeded the completion of the EA and required notification of a new set of stakeholders in a different state.

Enhancement/Protection of the Environment

- *Protection of wetlands.* As a result of the NEPA review, a small wetland was identified and mitigation measures will be implemented.

What Worked and Didn't Work (continued)

- *Minimization of potential impacts.* The NEPA process helped to identify potential issues or opportunities for environmental improvements that were brought to the attention of the operators of the proposed facility. As a result, adjustments were made to reduce potential impacts of the project.
- *Protection of an endangered fish species.* The NEPA process facilitated a project to aid in the recovery of an endangered fish species.

Other

- *Post-Draft EIS regulatory changes.* During the NEPA process for this project, requirements for the Coastal Zone Management Act changed in the project area. The implementing agency wanted us to publish additional information in the Draft EIS addressing this, but our Draft EIS had already been issued. We eventually provided supplemental information to them that summarized key parts of the Draft EIS and this satisfied their requirement.

Effectiveness of the NEPA Process

For the purposes of this section, "effective" means that the NEPA process was rated 3, 4, or 5 on a scale of 0 to 5, with 0 meaning "not effective at all" and 5 meaning "highly effective" with respect to its influence on decision making.

- For this quarter, in which questionnaire responses were received for 3 EAs and 2 EISs, 2 of the 7 respondents rated the NEPA process as "effective."
- One respondent who rated the process as "effective" stated that "The NEPA process served effectively to point out several opportunities for potential environmental enhancement. The process also served to confirm the value of approaches to environmental management that were incorporated into existing project plans."
- One respondent rated the process as "not effective at all" because of a belief that DOE had already decided to implement the proposal. This repondent also noted that the NEPA process helped to identify mitigation measures that will avoid potential impacts.

NEPA Document Cost and Completion Time Facts

Costs

EISs

- Cost data are available for two of the three EISs completed in the quarter ending June 30, 2000; the costs were $481,000 and $942,000.
- Cumulatively, for the 12 months that ended June 30, 2000, the median cost for the preparation of 7 EISs was $2.0 million; the average cost was $5.0 million.

EAs

- For this quarter, the median cost of four EAs was $110,000; the average was $101,000.
- Cumulatively, for the 12 months that ended June 30, 2000, the median cost for the preparation of 17 EAs was $95,000; the average cost was $94,000.

Completion Times

EISs

- For this quarter, the average and median completion times of three EISs were 28 and 31 months, respectively.
- Cumulatively, for the 12 months that ended June 30, 2000, the median completion time for the preparation of 8 EISs was 30 months; the average was 35 months.

EAs

- For this quarter, the median completion time of four EAs was 11 months; the average was 17 months.
- Cumulatively, for the 12 months that ended June 30, 2000, the median completion time for the preparation of 20 EAs was 11 months; the average was 14 months.

Recent EIS-related Milestones (June 1 – August 31, 2000)

Notices of Intent

Bonneville Power Administration
DOE/EIS-0320
Stateline Wind Project, Walla Walla County, WA and Umatilla County, OR
5/25/00 (65 FR 35624; 6/5/00)

DOE/EIS-0321
Condon Wind Project, Gilliam County, OR
6/27/00 (65 FR 41450; 7/5/00)

Western Area Power Administration
DOE/EIS-0323
Sacramento Area Voltage Support Project
7/31/00 (65 FR 48496; 8/8/00)

Draft EIS

Nuclear Energy
DOE/EIS-0310
Programmatic EIS for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility
July 2000 (65 FR 46455; 07/28/00)

Records of Decision

Bonneville Power Administration
DOE/EIS-0285
Transmission System Vegetation Management Program
7/28/00 (65 FR 48490; 8/8/00)

Environmental Management
DOE/EIS-0218
Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel [fourth revision to original ROD (61 FR 25092, May 17, 1996)]
7/10/00 (65 FR 44767; 7/19/00)

Environmental Management/ Oak Ridge Operations Office
DOE/EIS-0305
Treating Transuranic (TRU)/Alpha Low-Level Waste at the Oak Ridge National Laboratory, Oak Ridge, TN
8/3/00 (65 FR 48683; 8/9/00)

Environmental Management/Savannah River Operations Office
DOE/EIS-0279
Savannah River Site Spent Nuclear Fuel Management
7/24/00 (65 FR 48224; 8/7/00)

Notice of Emergency Action

National Nuclear Security Administration/ Defense Programs
Emergency Activities Conducted at Los Alamos National Laboratory, Los Alamos County, NM, in Response to Major Disaster Conditions Associated with the Cerro Grande Fire
6/16/00 (65 FR 38522; 6/21/00)

Supplement Analyses

Bonneville Power Administration

Wildlife Mitigation Program (DOE/EIS-0246)

DOE/EIS-0246-SA-10
Ladd Marsh Wildlife Management Area Additions, Siminonis and Wallender Properties, Union County, OR
(Decision: No further NEPA review required) July 2000

Watershed Management Program (DOE/EIS-0265)

DOE/EIS-0265-SA-32
Grande Ronde Model Watershed Program, Imnaha/Parks Ditch Water Conservation, Imnaha, OR
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-33
Lolo Creek Watershed Project, Clearwater County, ID
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-34
Eliminate Gravel Push-up Dams in Lower North Fork John Day River, Grant County, OR
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-35
Mitigate Effects of Runoff and Erosion on Salmonid Habitat in Pine Hollow Watershed, Sherman and Wasco Counties, OR
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-36
Yakima Basin Channels-Dixon Acquisition, Kittas County, WA
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-37
McCoy Creek/Cunha Ranches Restoration Project, LaGrande County, OR
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-38
McCoy Meadows Restoration Project, LaGrande County, OR
(Decision: No further NEPA review required) July 2000

DOE/EIS-0265-SA-39
Asotin Creek Channel, Floodplain, and Riparian Restoration Project, Asotin County, WA
(Decision: No further NEPA review required) August 2000

DOE/EIS-0265-SA-40
Tucannon River Watershed Fish Habitat Enhancement Project, Columbia County, WA
(Decision: No further NEPA review required) August 2000

DOE/EIS-0265-SA-41
Meadow Creek/Habberstadt Fish Habitat Enhancement Project, Union County, OR
(Decision: No further NEPA review required) August 2000

[Note: Readers interested in how the Bonneville Power Administration efficiently uses its programmatic EISs may refer to "The 'Pragmatic' EIS," *Lessons Learned Quarterly Report*, December 1997, page 4.]

Cumulative Topical Index to Quarterly Reports on Lessons Learned in the NEPA Process

KEY
Primary Topic
secondary topic
Month Year/page number(s)

M

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