Department of Energy Technical Support Document
National Environmental Policy Act Implementing Procedures
Supplement to Notice of Proposed Rulemaking
Proposed Changes and Supplemental Supporting Basis
December 17, 2010

This Technical Support Document supplements the Department of Energy's (DOE's) Notice of Proposed Rulemaking.

In this Technical Support Document, the Department of Energy presents each of the proposed changes to its NEPA implementing regulations (10 CFR part 1021, Subparts C and D) and provides information that supplements the Preamble discussion of the supporting basis for each proposed change. If a provision of DOE's NEPA implementing regulations is not included in the table, DOE does not propose to change it. The left column of the table below shows the proposed changes in tracked changes format, and the right column provides the supplemental supporting basis.

For many classes of actions, the supporting basis provides links to referenced documents. For assistance in accessing referenced documents, send an email to askNEPA@hq.doe.gov with "TSD" in the subject line, or see the Federal Register notice, at "For Further Information Contact."

Proposed Change to 10 CFR part 1021	Supplemental Supporting Basis
Subpart C – Implementing Procedures	
§ 1021.311 Notice of intent and scoping. (d) Except as provided in paragraph (~~g~~f) of this section, DOE shall hold at least one public scoping meeting as part of the public scoping process for a DOE EIS. DOE shall announce the location, date, and time of public scoping meetings in the NOI or by other appropriate means, such as additional notices in the FEDERAL REGISTER, news releases to the local media, or letters to affected parties. Public scoping meetings shall not be held until at least 15 days after public notification. Should DOE change the location, date, or time of a public scoping meeting, or schedule additional public scoping meetings, DOE shall publicize these changes in the FEDERAL REGISTER or in other ways as appropriate. (f) A public scoping process is optional for DOE supplemental EISs (40 CFR 1502.9(c)(4)). If DOE initiates a public scoping process for a supplemental EIS, the provisions of paragraphs (a) through (~~f~~e) of this section shall apply.	Discussion of the proposed changes is provided in Section IV.A of the Preamble.
§ 1021.322 Findings of no significant impact. (f) DOE may revise a FONSI at any time, so long as the revision is supported by an existing EA. A revised FONSI is subject to all provisions of ~~paragraph (d) of~~ this section.	Discussion of the proposed changes is provided in Section IV.A of the Preamble.
§ 1021.331 Mitigation action plans. (b) In certain circumstances, as specified in § 1021.322(b)(~~2~~1), DOE shall also prepare a Mitigation Action Plan for commitments to mitigations that are essential to render the impacts of the proposed action not significant.	Discussion of the proposed changes is provided in Section IV.A of the Preamble.

Subpart D – Typical Classes of Actions	
§ 1021.410 Application of categorical exclusions (classes of actions that normally do not require EAs or EISs). (a) The actions listed in appendices A and B to this subpart D are classes of actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment (categorical exclusions). (b) To find that a proposal is categorically excluded, DOE shall determine the following: (1) The proposal fits within a class of actions that is listed in appendix A or B to this subpart D; (2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. Extraordinary circumstances are unique situations presented by specific proposals, ~~such as~~ including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; ~~or~~ and unresolved conflicts concerning alternative uses of available resources ~~within the meaning of section 102(2)(E) of NEPA~~; and (3) The proposal has not been segmented to meet the definition of a categorical exclusion. Segmentation can occur when a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. The scope of a proposal must include the consideration of connected and cumulative actions, that is, t~~T~~he proposal is not ~~"~~connected "to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)) ~~to other actions with potentially significant impacts~~, is not related to other ~~proposed~~ actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.~~25~~27(~~a~~b)(~~2~~7)), and is not precluded by 40 CFR 1506.1 or § 1021.211 of this part concerning limitations on actions during EIS preparation.	Discussion of the proposed changes is provided in Section IV.C of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	(c) All categorical exclusions may be applied by any organizational element of DOE. The sectional divisions in appendix B to this subpart D are solely for purposes of organization of that appendix and are not intended to be limiting. (d) A class of actions includes activities foreseeably necessary to proposals encompassed within the class of actions (such as award of implementing grants and contracts, site preparation, purchase and installation of equipment, and associated transportation activities ~~and award of implementing grants and contracts~~). (e) Categorical exclusion determinations for actions listed in appendix B shall be documented and made available to the public by posting online, generally within two weeks of the determination, unless additional time is needed in order to review and protect classified information, "confidential business information," or other information that DOE would not disclose pursuant to the Freedom of Information Act (FOIA) (5 U.S.C. 552). Posted categorical exclusion determinations shall not disclose classified information, "confidential business information," or other information that DOE would not disclose pursuant to FOIA. (See also 10 CFR 1021.340.)	
Appendix A		
A1	Routine actions necessary to support the normal conduct of ~~agency~~ DOE business~~, such as~~ limited to administrative, financial, and personnel actions.	Discussion of the proposed changes is provided in Section IV.D of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
A3	Adjustments, exceptions, exemptions, appeals~~,~~ and stays, modifications, or rescissions of orders issued by the Office of Hearings and Appeals.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
A6	Rulemakings that are strictly procedural, ~~such as~~including, but not limited to, rulemaking (under 48 CFR ~~part~~ chapter 9) establishing procedures for technical and pricing proposals and establishing contract clauses and contracting practices for the purchase of goods and services, and rulemaking (under 10 CFR part 600) establishing application and review procedures for, and administration, audit, and closeout of, grants and cooperative agreements.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.

~~A7 Transfer, lease, disposition, or acquisition of interests in personal property (e.g., equipment and materials) or real property (e.g., permanent structures and land), if property use is to remain unchanged; i.e., the type and magnitude of impacts would remain essentially the same.~~ A7 [Reserved]	Discussion of the proposed changes is provided in Section IV.D of the Preamble.
A9 Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including~~.~~, but not limited to, computer model~~l~~ing), document preparation (~~such as~~ including, but not limited to, conceptual design ~~or~~, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document ~~mailings,~~ publication~~,~~ and distribution~~;~~, and classroom training and informational programs), but not including site characterization or environmental monitoring. (~~Also see~~See also B3.1of appendix B to this subpart.)	Discussion of the proposed changes is provided in Section IV.D of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
A10 Reports ~~or~~ and recommendations on legislation or rulemaking that ~~is~~are not proposed by DOE.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
A12 Emergency preparedness planning activities, including, but not limited to, the designation of onsite evacuation routes.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
A13 Administrative, organizational, or procedural Policies, Orders, Notices, Manuals and ~~g~~Guide~~line~~s.	Discussion of the proposed changes is provided in Section IV.D of the Preamble.
A14 Approval of technical exchange arrangements for information, data, or personnel with other countries or international organizations~~,~~ (including, but not limited to, assistance in identifying and analyzing another country's energy resources, needs and options~~.~~).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
Appendix B	
B. The classes of actions listed below include the following conditions as integral elements of the classes of actions. To fit within the classes of actions listed below, a proposal must be one that would not:	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

(1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, ~~including~~ or similar requirements of DOE ~~and/~~or Executive Orders~~.~~;

(2) Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities~~.~~;

(3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; or

(4) Have the potential to cause significant impacts on ~~Adversely affect~~ environmentally sensitive resources. An environmentally sensitive resource is typically a resource that has been identified as needing protection through Executive Order, statute, or regulation by Federal, state, or local government, or a Federally recognized Indian tribe. An action may be categorically excluded if, although sensitive resources are present ~~on a site~~, the action would not have the potential to cause significant impacts on~~adversely affect~~ those resources (~~e.g.,~~such as construction of a building with its foundation well above a sole-source aquifer or upland surface soil removal on a site that has wetlands). Environmentally sensitive resources include, but are not limited to:

(i) Property (such as ~~e.g.,~~ sites, buildings, structures, and objects) of historic, archeological, or architectural significance designated by Federal, state, or local governments, or a Federally recognized Indian tribe, or property determined to be eligible for listing on the National Register of Historic Places;

(ii) Federally-listed threatened or endangered species or their habitat (including critical habitat)~~,~~ or Federally-proposed or candidate species or their habitat

	(Endangered Species Act),; ~~or~~ state-listed endangered or threatened species or their habitat; and Federally-protected marine mammals and Essential Fish Habitat (Marine Mammals Protection Act; Magnuson-Stevens Fishery Conservation and Management Act); (iii) Floodplains and wetlands~~Wetlands regulated under the Clean Water Act (33 U.S.C. 1344) and floodplains;~~ (as defined in 10 CFR 1022.4, "Compliance with Floodplain and Wetland Environmental Review Requirements: Definitions," or its successor); (iv) Areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national monuments, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, scenic areas (such as National Scenic and Historic Trails or National Scenic Areas), and marine sanctuaries; ~~(v) Prime agricultural lands;~~ (v) Prime or unique farmland, or other farmland of statewide or local importance, as defined at 7 CFR 658.2(a), "Farmland Protection Policy Act: Definitions," or its successor; (vi) Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region); and (vii) Tundra, coral reefs, or rain forests.	
B1	**Categorical Exclusions Applicable to Facility Operation**	
B1.1	Changing ~~Rate increases~~ rates for services or prices for products ~~or services~~ marketed by parts of DOE other than Power Marketing Administrations, and approval of rate or price ~~increases~~ changes for non-DOE entities, that ~~do not exceed~~ are consistent with the change in the ~~overall price level in the economy (inflation)~~implicit price deflator for ~~, as measured by~~ the Gross ~~National~~ Domestic Product ~~(GNP) fixed weight price~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. DOE proposes to cite a standard index of inflation in the national economy, the implicit price deflator for Gross Domestic Product. The index can be found on Table 1.1.9 at www.bea.gov/national/nipaweb/SelectTable.asp, and a glossary of terms is available at http://www.bea.gov/glossary/glossary.cfm.

	~~index~~ published by the Department of Commerce, during the period since the last rate or price ~~increase~~change. ~~(Also see B4.3.)~~	
B1.2	Training exercises and simulations (including, but not limited to, firing-range training, small-scale and short-duration force-on-force exercises, emergency response training, fire fighter and rescue training, and decontamination and spill cleanup training~~).~~) conducted under appropriately controlled conditions and in accordance with applicable requirements.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. Examples of DOE NEPA documents for such projects: • DOE/EIS-0243-SA-02: Nevada Test Site and Off-Site Locations in the State of Nevada to Address the Increase in Activities Associated with the National Center for Combating Terrorism & Counterterrorism Training & Related Activities (2003). In 2003, NNSA prepared a Supplement Analysis entitled Supplement Analysis for the Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada to Address the Increase in Activities Associated with the National Center for Combating Terrorism & Counterterrorism Training & Related Activities (DOE-EIS-0243-SA-02) to determine whether an anticipated increase in national security projects after the terrorist attacks of September 11, 2001, required further NEPA analysis. This analysis covered military training/exercises, and testing, evaluation, and development of technology for multiple Federal government agencies. A copy of this document is available upon request via askNEPA@hq.doe.gov. • DOE/EA-1776: Idaho National Laboratory Radiological Response Training Range, FONSI (October 2010). This EA analyzed the potential environmental impacts of creating and operating a facility at the Idaho National Laboratory at which emergency response training activities would be conducted to support the development of an effective response capability for major radiological incidents. Analyzed operations included the conduct of training exercises involving up to 75 people in a range of scenarios in which short-lived radioactive materials would be released. Participants would be trained in activities such as contamination control, site characterization, and field sample collection. The analysis showed that, under appropriately controlled conditions, such training activities do not have the potential to result in significant environmental impacts. The Environmental Protection Agency's (EPA's) Radiological Emergency Response Team (RERT) has participated in exercises simulating radiological emergencies involving nuclear power plants and Department of Energy weapons and waste storage facilities, and military sites. As described on EPA's website, these response exercises

		included more than a dozen realistic "full field" simulations that were conducted in a field environment over several days with the participation of RERT and other state, local, and Federal agencies; DOE hosted or participated in several of these, including the Digit Pace II exercise described below. EPA and DOE experience with these exercises shows that such actions can be conducted safely in an environmental sound manner, and that these actions normally would not have the potential to result in significant environmental impacts. • Exercise Digit Pace EA, FONSI (April 1997) This EA analyzed response activities related to a simulated accident involving one or more mock-ups of a nuclear weapon during transport to Kirtland Air Force Base (KAFB), Albuquerque, New Mexico. Participants included RERT, the Department of Defense (DoD), the Federal Emergency Management Agency (FEMA), and state and local governments. Activities included emergency response to a truck fire, spill prevention and response, communication coordination between agencies, and evacuation of "residents." The analysis and actual experience showed that, under appropriately controlled conditions, such training activities do not have the potential to result in significant environmental impacts. A copy of this document is available upon request via askNEPA@hq.doe.gov.
B1.3	Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (~~e.g.,~~including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed~~.~~, provided that the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation~~,~~ (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal~~.~~). Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent that replacement is ~~in~~ in-~~-~~kind and is not a substantial upgrade or improvement. ~~In~~ In-~~-~~kind replacement includes installation of new components to replace	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

outmoded components, ~~if~~provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

(a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;
(b) Door and window repair or replacement;
(c) Wall, ceiling, or floor repair or replacement;
(d) Reroofing;
(e) Plumbing, electrical utility, lighting, and telephone service repair or replacement;
(f) Routine replacement of high-efficiency particulate air filters;
(g) Inspection and/or treatment of currently installed utility poles;
(h) Repair of road embankments;
(i) Repair or replacement of fire protection sprinkler systems;
(j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;
(k) Erosion control and soil stabilization measures (such as reseeding and revegetation);
(l) Surveillance and maintenance of surplus facilities in accordance with DOE Order ~~5820.2~~435.1, "Radioactive Waste Management," or its successor;
(m) Repair and maintenance of transmission facilities, ~~including~~ such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed transmission lines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions)~~;~~ or its successor;
(n) Routine testing and calibration of facility components, subsystems, or portable equipment (~~including but not limited~~

	~~to,~~such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes); ~~and~~ (o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), ~~including~~and removal of contaminated intact equipment and other material~~s~~ (~~other than~~not including spent nuclear fuel or special nuclear material in nuclear reactors)~~.~~; and (p) Removal of debris.	
B1.5	Minor improvements to existing steam plants and cooling water systems (including, but not limited to, modifications of existing cooling towers and ponds), ~~within an existing building or structure if~~provided that the improvements would not: (1) ~~C~~create new sources of water or involve new receiving waters; (2) have the potential to cause significant impacts on water~~adversely affect water~~ withdrawals or the temperature of discharged water; or (3) increase introductions of, or involve new introductions of, hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.6	Installation or modification of retention tanks or small (normally under one acre) basins and associated piping and pumps for existing operations to control runoff or spills (such as under 40 CFR part 112). Modifications include, but are not limited to, installing liners or covers. (See also B1.33 of this appendix.)	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.7	Acquisition, installation, operation, modification, and removal of electricity transmission control and monitoring devices for grid demand and response, communication systems, data processing equipment, and similar electronic equipment.	Discussion of the proposed changes is provided in Section IV.E of the Preamble.
B1.9	Placement of airway safety markings on ~~and~~, painting of, and repair and in-kind replacement of ~~(but excluding~~ lighting~~)~~ ~~of~~ on ~~existing~~ electrical transmission lines and antenna structures, wind turbines, and similar structures in accordance with applicable requirements (such as Federal Aviation	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	Administration standards.).	
B1.10	Routine, onsite storage at an existing facility of activated equipment and material (including, but not limited to, lead) used at that facility, to allow reuse after decay of radioisotopes with short half-lives.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.11	Installation of fencing, including, but not limited to that for border marking, that would not have the potential to cause significant impacts on will not adversely affect wildlife movements populations or migration or surface water flow.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.12	Detonation Outdoor detonation or burning of explosives or propellants that failed in outdoor tests (i.e., duds) or, were damaged in outdoor tests (e.g.,such as by fracturing), or were otherwise not consumed in testing. in oOutdoor detonation or burning would be in areas designated and routinely used for explosive detonation or burningthose purposes under an existing applicable permits issued by Federal, state, or and local authorities (such as a permit for a RCRA miscellaneous unit (40 CFR part 264, subpart X)).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.13	Construction, acquisition, and relocation-, consistent with applicable right-of- onsite pathways -way conditions and approved land use or transportation improvement plans, of pedestrian walkways and trails, bicycle paths, small outdoor fitness areas, and short onsite access roads and railroads.rail lines (such as branch and spur lines).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. This categorical exclusion is consistent categorical exclusions for constructing, acquiring, and relocation of such projects used by the following Federal agencies: Department of Homeland Security (DHS), Bureau of Indian Affairs, and Federal Highway and Transit Administrations. DHS categorical exclusion (71 FR 16790; April 4, 2006; E7): Construction of physical fitness and training trails for non-motorized use on Department facilities in areas that are not environmentally sensitive, where run-off, erosion, and sedimentation are mitigated through implementation of best management practices. This [categorical exclusion] would encompass property management activities primarily at properties within the U.S. Coast Guard, Science and Technology Directorate, and the Federal Law Enforcement Training Centers. Bureau of Indian Affairs categorical exclusion (Department of the Interior Departmental Manual (DOI DM) 516 Chapter 10, Section 10.5, L(2)): Construction of bicycle and pedestrian lanes and paths adjacent to existing

		highways and within the existing rights-of-way. Federal Highway and Federal Transit Administrations categorical exclusion (23 CFR 771.117(c)(3)): Construction of bicycle and pedestrian lanes, paths, and facilities.
B1.14	Refueling of ~~an~~ operating nuclear reactors, during which operations may be suspended and then resumed.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.15	Siting, construction ~~(~~or modification~~)~~, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; ~~employee~~ health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (~~including~~ such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclud~~ing~~e facilities for nuclear weapons activities and waste storage activities, such as~~, except as provided in other parts of this appendix~~ activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.16	Removal of asbestos-containing materials from buildings in accordance with applicable requirements (such as 40 CFR part 61~~(~~, "National Emission Standards for Hazardous Air Pollutants~~), subpart M (National Emission Standard for Asbestos);~~"; 40 CFR part 763~~(~~, "Asbestos~~), subpart G (Asbestos Abatement Projects);~~"; 29 CFR part 1910, subpart I~~(~~, "Personal Protective Equipment~~), §1910.134 (Respiratory Protection); subpart Z (Toxic and Hazardous Substances), §1910.1001 (Asbestos, tremolite, anthophyllite and actinolite);~~"; and 29 CFR part 1926~~(~~, "Safety and Health Regulations for Construction~~), subpart D (Occupational Health and Environmental Controls),~~	Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	§1926.58 (Asbestos, tremolite, anthophyllite, and actinolite), other appropriate Occupational Safety and Health Administration standards in title 29, chapter XVII of the CFR,"; and appropriate state and local requirements, including certification of removal contractors and technicians.).	
B1.17	Removal of polychlorinated biphenyl (PCB)-containing items, such as (including, but not limited to, transformers or and capacitors,), PCB-containing oils flushed from transformers, PCB-flushing solutions, and PCB-containing spill materials from buildings or other aboveground locations in accordance with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitionsapplicable requirements (such as 40 CFR part 761).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.18	Siting, construction, and operation of additional water supply wells (or replacement wells) within an existing well field, or modification of an existing water supply well to restore production, ifprovided that there would be no drawdown other than in the immediate vicinity of the pumping well, and the covered actions would not have the potential to cause significant no resulting long-term decline of the water table, and would not have the potential to cause significant degradation of the aquifer from the new or replacement wellno degradation of the aquifer from the new or replacement well.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.19	Siting, construction, modification, and operation, abandonment, and removal of microwave, and radio communication, and meteorological towers and associated facilities, provided that if the towers and associated facilities would not be in a governmentally designated scenic area (see B(4)(iv) of this appendix) unless otherwise authorized by the appropriate governmental entityan area of great visual value.	Discussion of the proposed changes is provided in Section IV.E of the Preamble.
B1.20	Small-scale activities undertaken to protect cultural resources (such as fencing, labeling, and flagging) or to protect, restore, or improve fish and wildlife habitat, fish passage facilities (such as fish ladders or and minor diversion channels), or fisheries. Such activities would be conducted in accordance with an existing natural or cultural resource plan, if any.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

B1.21	Noise abatement measures~~ (such as~~including, but not limited to, construction of noise barriers and installation of noise control materials~~.~~).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.23	Demolition and subsequent disposal of buildings, equipment, and support structures (including, but not limited to, smoke stacks and parking lot surfaces)~~.~~, provided that there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment.	Discussion of the proposed changes is provided in Section IV.E of the Preamble.
B1.24	Transfer, lease, disposition, or acquisition of interests in ~~uncontaminated permanent or temporary structures, equipment therein, and only land that is necessary for use of the transferred structures and equipment, for residential, commercial, or industrial uses~~personal property (including, but not limited to, ~~office space, warehouses, equipment storage facilities) where,~~ equipment and materials) or real property (including, but not limited to, permanent structures and land), provided that under reasonably foreseeable uses~~,~~ (1) there would ~~not~~ be ~~any lessening in quality~~no potential for release of substances at a level, or ~~increases in volumes, concentrations,~~in a form, that could pose a threat to public health or ~~discharge rates, of wastes, air emissions, or water effluents~~the environment~~,~~ and ~~environmental~~ (2) the covered actions would not have the potential to cause a significant change in impacts ~~would generally be similar to those~~from before the transfer, lease, disposition, or acquisition of interests.~~ Uncontaminated means that there would be no potential for release of substances at a level, or in a form, that would pose a threat to public health or the environment.~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.25	Transfer, lease, disposition, or acquisition of interests in ~~uncontaminated~~ land and associated buildings for cultural resources protection, habitat preservation, or fish and wildlife management, ~~and only associated buildings that support these purposes. Uncontaminated means~~provided that there would be no potential for release of substances at a level, or in a form, that ~~w~~could pose a threat to public health or the environment.	Discussion of the proposed changes is provided in Section IV.E of the Preamble.

B1.26	Siting, construction ~~(or~~, expansion, modification, ~~or~~ replacement~~)~~, operation, and decommissioning of small (total capacity less than approximately 250,000 gallons per day) wastewater and surface water treatment facilities whose liquid discharges are externally regulated, and small potable water and sewage treatment facilities.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.27	Activities that are required for the disconnection of utility services (~~such as~~including, but not limited to, water, steam, telecommunications, and electrical power) after it has been determined that the continued operation of these systems is not needed for safety.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.28	Minor activities that are required to place a facility in an environmentally safe condition where there is no proposed use for the facility. These activities would include, but are not limited to, reducing surface contamination, and removing materials, equipment or waste (such as final defueling of a reactor, where there are adequate existing facilities for the treatment, storage, or disposal of the materials, equipment or waste~~.~~). These activities would not include conditioning, treatment, or processing of spent nuclear fuel, high-level waste, or special nuclear materials.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.29	Siting, construction, expansion, modification, operation, and decommissioning of ~~a~~ small (less than approximately 10 acres~~)~~ ~~onsite~~) solid waste disposal ~~facility~~ facilities for construction and demolition waste ~~which would~~ , in accordance with applicable requirements (such as 40 CFR part 257, "Criteria for Classification of Solid Waste Disposal Facilities and Practices," and 40 CFR part 61, "National Emission Standards for Hazardous Air Pollutants") that would not release substances at a level, or in a form, that ~~w~~could pose a threat to public health or the environment. ~~These wastes, as defined in the Environmental Protection Agency's regulations under the Resource Conservation and Recovery Act, specifically 40 CFR 243.101, include building materials, packaging, and rubble.~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B1.30	Transfer actions, in which the predominant activity is transportation, ~~and in which~~ provided that (1) the receipt and	Discussion of the proposed changes is provided in Section IV.E of the Preamble.

storage capacity and management capability for the amount and type of materials, equipment, or waste to be moved ~~is small and incidental to the amount of such materials, equipment, or waste that is~~ already ~~a part of ongoing~~ exists at the receiving site and (2) all necessary facilities and operations at the receiving site. Such transfers are not regularly scheduled as part of ongoing routine operations.	Many DOE NEPA documents have analyzed the risks of transporting materials, equipment, and waste, including radioactive and hazardous wastes and other materials. The analyses show that the transportation risks are small for a wide variety of proposed actions and cargo types. The following documents are representative of such analyses and support DOE's conclusion that, within the context of this categorical exclusion, transportation of materials, equipment, and waste normally would not result in a potential for significant impacts. DOE experience, including a safe transportation track record over many years, confirms the analyses and findings. Environmental Assessments (EAs) and Findings of No Significant Impact (FONSIs): • DOE/EA-1651: Environmental Assessment for U-233 Material Downblending and Disposition Project at the Oak Ridge National Laboratory, Oak Ridge, Tennessee, FONSI (January 2010). The EA evaluated the impacts of planned activities to modify selected Oak Ridge National Laboratory (ORNL) facilities and process equipment, processing of the ORNL inventory of uranium-233 (U-233) and other small quantities of similar material currently stored at other DOE sites, and transporting the processed material to an off-site disposal facility. • DOE/EA-1607: Environmental Assessment for the Disposition of DOE Excess Depleted Uranium, Natural Uranium, and Low-Enriched Uranium, FONSI (June 2009). The EA analyzed transportation impacts of shipping natural uranium feed and product, low-enriched uranium feed and product, depleted uranium feed and tails under both incident-free and accident conditions (Sections 4.2.1, 4.2.2, 4.3.1, 4.5.1, 5.1, 5.2). Analysis showed impacts would not be significant. • DOE/EA-1386: Final Environmental Assessment for the Remote-handled Waste Disposition Project, FONSI (February 2009). The EA analyzed risks of transporting remote-handled waste over highways and local roads under routine and accident conditions, and found potential radiation dose to the public from transportation would be virtually immeasurable (Sections 5.1.4.2, 5.2.1). • DOE/EA-1393: Programmatic Environmental Assessment for the U. S. Department of Energy, Oak Ridge Operations Implementation of a Comprehensive Management Program for the Storage, Transportation, and Disposition of Potentially Reusable Uranium Materials, FONSI (October 2002). The EA analyzed impacts of implementing a comprehensive management program of uranium materials located at multiple sites, including transporting these materials for management to other sites. The analysis concluded transportation risks would be small (Sections 4.4.3, 4.5.3, 4.6.3,

4.7.3, 4.8.3, 4.9.3, 4.10).

- DOE/EA-1339-A: Waste Disposition Activities at the Paducah Site (November 2002), FONSI (December 2003).The EA analyzed impacts of transporting polychlorinated biphenyl wastes, low-level waste, mixed wasted, and transuranic wastes from the Paducah Site for disposal at various locations in the United States. The potential effects of transport over both highway and rail routes were found to be not significant (Sections 4.1.3, 4.3, and 5.0).
- DOE/EA-1308: Offsite Transportation of Certain Low-Level and Mixed Radioactive Waste from the Savannah River Site for Treatment and Disposal at Commercial and Government Facilities, FONSI (February 2001). This EA analyzed the potential environmental impacts of transporting certain hazardous and radioactive wastes at the Savannah River Site to off-site treatment and disposal facilities. DOE determined the impacts would be insignificant.

Environmental Impact Statements (EISs):

- DOE/EIS-0226: Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (January 2010). The EIS evaluated radiological and nonradiological impacts from transporting radioactive or hazardous materials from the West Valley site in New York to offsite disposal sites. The analysis showed the risks would be small, i.e. it is likely there would be no fatal cancers attributable to radiation exposure under routine and accident conditions (Sections 4.5.16, 6.10). This analysis is consistent with analyses in EAs for which DOE has concluded that such impacts are not significant.
- DOE/EIS-0380: Final Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, Los Alamos, New Mexico (May 2008). The EIS analysis evaluated the transport of radioactive, hazardous, and commercial materials onsite and from various offsite locations. The analysis determined that it is unlikely that transportation of radioactive materials under any of the alternatives discussed in the EIS would cause a fatality as a result of radiation either from incident-free operations or postulated accidents. The radiological risks to the population would be small under all alternatives, i.e. it is likely there would be no fatal cancers attributable to radiation exposure under routine and accident conditions (Section S.9). This analysis is consistent with analyses in EAs for which DOE has concluded that such impacts are not significant.
- DOE/EIS-0355: Remediation of the Moab Uranium Mill Tailings, Grand and

	San Juan Counties, Utah, Final Environmental Impact Statement (July 2005). The analysis in the EIS showed that risks of transportation of contaminated waste and materials at the Moab Site and vicinity properties to disposal locations would be small, i.e. it is likely there would be no fatal cancers attributable to radiation exposure under routine and accident conditions (Section 4.1.12.3). Experience implementing the action to date confirms the predictions. This analysis is consistent with analyses in EAs for which DOE has concluded that such impacts are not significant. Other: • DOE/EM/NTP/HB-01: A Resource Handbook on DOE Transportation Risk Assessment (July 2002). In addition to providing technical guidance on conducting transportation risk assessments in DOE NEPA documents based on decades of experience analyzing shipments of virtually all types of radioactive materials and wastes, the Handbook (Section 4.2 and 4.3) summarizes the results of transportation risk assessments in 17 DOE NEPA documents for a wide range of cargo types; documents analyzed include major DOE programmatic EISs for waste management, spent nuclear fuel management, and disposition of nuclear materials. The results showed that transportation risks, including those under routine and accident conditions, would be small, i.e. it is likely there would be no fatal cancers attributable to radiation exposure.
B1.31 ~~Relocation~~Installation or relocation and operation of machinery and equipment~~, such as analytical~~(including, but not limited to, laboratory ~~apparatus~~equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment~~, including minor construction necessary for removal and installation, where~~), provided that uses of the installed or relocated items ~~will be similar to their former uses and~~are consistent with the general missions of the receiving structure. ~~Included in this category of actions are~~Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

B1.32 Traffic flow adjustments to existing roads ~~at DOE sites~~ (including, but not limited to, stop sign or traffic light installation, adjusting direction of traffic flow, and adding turning lanes~~). Road~~), and road adjustments ~~such as~~(including, but not limited to, widening ~~or~~ and realignment) that are ~~not included~~within an existing right-of-way and consistent with approved land use or transportation improvement plans.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
Proposed new categorical exclusion: B1.33 Design, construction, and operation of control practices to reduce stormwater runoff and maintain natural hydrology. Activities include, but are not limited to, those that reduce impervious surfaces (such as vegetative practices and use of porous pavements), best management practices (such as silt fences, straw wattles, and fiber rolls), and use of green infrastructure or other low impact development practices (such as cisterns and green roofs).	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. Many of the actions in the scope of the proposed categorical exclusion are found in Environmental Protection Agency's Guidance No. EPA 841-B-09-001 (December 2009) intended to implement Section 438 of the Energy Independence and Security Act (EISA) of 2007. These actions are practices that are commonly recommended by the Environmental Protection Agency (EPA) through its Stormwater Program's Green Infrastructure initiative and the Federal Highway Administration (FHWA)-sponsored "Context Sensitive Solutions" program. These Federal agency websites serve as information portals and repositories of private sector experience and studies by experts. Additionally, expert studies and industry experience on storm water management practices, particularly in the transportation sector, can be found at the website of the Context Sensitive Solutions Clearinghouse, which is funded by the Federal Highway Administration. The Clearinghouse website is sponsored and developed through a partnership with: • American Association of State Highway and Transportation Officials (AASHTO) • Federal Transit Administration • Institute for Transportation Engineers (ITE) • National Association of City Transportation Officials (NACTO), and • National Park Service
Proposed new categorical exclusion: B1.34 Containment, removal, and disposal of lead-based paint in accordance with applicable requirements (such as provisions relating to the certification of removal contractors and technicians at 40 CFR part 745, "Lead-Based Paint Poisoning	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. This proposed categorical exclusion is based on regulations and standards governing containment, removal, and disposal of lead-based paint in and from buildings and other structures. Use of the proposed categorical exclusion would require adherence to

Prevention In Certain Residential Structures").	applicable regulations and standards (e.g., EPA's Lead Renovation, Repair, and Painting Program Rule (40 CFR part 745)). This categorical exclusion is consistent with categorical exclusions for lead paint removal used by other Federal agencies: the U.S. Environmental Protection Agency and the Department of the Army. U.S. Environmental Protection Agency categorical exclusion (40 CFR 6.204(a)(2)(ix)): Actions involving containment or removal and disposal of asbestos-containing material or lead-based paint from EPA owned or operated facilities when undertaken in accordance with applicable regulations. Department of the Army categorical exclusion (32 CFR 651, Appendix B(g)(1)): Routine repair and maintenance of buildings, airfields, grounds, equipment, and other facilities. Examples include, but are not limited to: Removal and disposal of asbestos-containing material (for example, roof material and floor tile) or lead-based paint in accordance with applicable regulations; removal of dead, diseased, or damaged trees; and repair of roofs, doors, windows, or fixtures (REC required for removal and disposal of asbestos-containing material and lead-based paint or work on historic structures).
Proposed new categorical exclusion: B1.35 Siting, construction, modification, and operation of recycling or compostable material drop-off, collection, and transfer stations on or contiguous to a previously disturbed or developed area and in an area where such a facility would be consistent with existing zoning requirements. The stations would have appropriate facilities and procedures established in accordance with applicable requirements for the handling of recyclable or compostable materials and household hazardous waste (such as paint and pesticides). Except as specified above, the collection of hazardous waste for disposal and the processing of recyclable or compostable materials are not included in this class of actions.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. This categorical exclusion is supported by existing categorical exclusions from the Department of Homeland Security (DHS) and U.S. Department of Agriculture, Rural Utilities Service (RUS). DHS categorical exclusion (from 71 FR 16790; April 4, 2006): A6 -- Procurement of non-hazardous goods and services, and storage, recycling, and disposal of non-hazardous materials and wastes, that complies with applicable requirements and is in support of routine administrative, operational, or maintenance activities. Storage activities must occur on previously disturbed land or in existing facilities. Examples include but are not limited to: (a) Office supplies, (b) Equipment, (c) Mobile assets, (d) Utility services, (e) Chemicals and low level radio nuclides for laboratory use, (f) Deployable emergency response supplies and equipment, and (g) Waste disposal and contracts for waste disposal in established permitted landfills and facilities. DHS support, including experience, for this categorical exclusion, is contained in its

	Administrative Record for Categorical Exclusions (CAT EX). RUS categorical exclusion (from 7 CFR 1794.21(b)(22)): Construction of onsite facilities designed for the transfer of ash, scrubber wastes, and other byproducts from coal-fired electric generating stations for recycling or storage at an existing coal mine (surface or underground).
Proposed new categorical exclusion: B1.36 Determinations that real property is excess to the needs of DOE and, in the case of acquired real property, the subsequent reporting of such determinations to the General Services Administration or, in the case of lands withdrawn or otherwise reserved from the public domain, the subsequent filing of a notice of intent to relinquish with the Bureau of Land Management, Department of the Interior. Covered actions would not include disposal of real property.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. This categorical exclusion is supported by existing categorical exclusions from the Department of Homeland Security (DHS), U.S. Coast Guard, U.S. Coast Guard, Department of the Air Force, and Department of the Army. Department of Homeland Security categorical exclusion (from 71 FR 16790; April 4, 2006): C5 -- Determination that real property is excess to the needs of the Department and, in the case of acquired real property, the subsequent reporting of such determination to the General Services Administration or, in the case of lands withdrawn or otherwise reserved from the public domain, the subsequent filing of a notice of intent to relinquish with the Bureau of Land Management, Department of Interior. DHS support, including experience, for this categorical exclusion, is contained in its Administrative Record for Categorical Exclusions (CAT EX). U.S. Coast Guard categorical exclusion (from COMMANDANT INSTRUCTION M16475.1D, Figure 2-1 – Coast Guard Categorical Exclusions): (15) Transfer of real property from the USCG to the General Services Administration, Department of the Interior, and other Federal departments and agencies, or as mandated by Congress; and the granting of leases, permits, and easements where there is no substantial change in use of the property. (Checklist required.) Department of the Air Force categorical exclusion (from 32 CFR part 989, Appendix B): A2.3.17. Transferring land, facilities, and personal property for which the General Services Administration (GSA) is the action agency. Such transfers are excluded only if there is no change in land use and GSA complies with its NEPA requirements. A2.3.18. Transferring administrative control of real property within the Air Force or to another military department or to another Federal agency, not including GSA,

		including returning public domain lands to the Department of the Interior. Department of the Army categorical exclusion (from 32 CFR part 651, Appendix B): (f)(3) Transfer of real property administrative control within the Army, to another military department, or to other federal agency, including the return of public domain lands to the Department of Interior, and reporting of property as excess and surplus to the GSA for disposal (REC required). Presidential Memorandum for the Heads of Executive Departments and Agencies – Disposing of Unneeded Federal Real Estate, June 10, 2010
B2	Categorical Exclusions Applicable to Safety and Health	
B2.1	Modifications ~~of~~within or contiguous to an existing structure, in a previously disturbed or developed area, to enhance workplace habitability (including, but not limited to~~:~~, installation or improvements to lighting, radiation shielding, or heating/ventilating/air conditioning and its instrumentation~~;~~, and noise reduction).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B2.2	Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, water consumption monitors and flow control systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment).	Discussion of the proposed changes is provided in Section IV.E of the Preamble.
B2.3	Installation of, or improvements to, equipment for personnel safety and health~~,~~ (including, but not limited to, eye washes, safety showers, radiation monitoring devices, ~~and~~ fumehoods, and associated collection and exhaust systems~~,~~), provided that the covered actions would not have the potential to cause a significant increase in emissions.~~emissions would not increase.~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B2.4	~~Development and implementation of Equipment Qualification Programs (under DOE Order 5480.6, "Safety of DOE-owned Nuclear Reactors") to augment information on safety-related~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	~~system components or to improve systems reliability.~~ Activities undertaken to (1) qualify equipment for use or improve systems reliability or (2) augment information on safety-related system components. These activities include, but are not limited to, transportation container qualification testing, crane and lift-gear certification or recertification testing, high efficiency particulate air filter testing and certification, stress tests (such as "burn-in" testing of electrical components~~,~~ and leak testing), and calibration of sensors or diagnostic equipment.	
B2.5	Safety and environmental improvements of a facility~~,~~ (including, but not limited to, replacement and upgrade of facility components~~,~~) that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements ~~may~~ include, but are not limited to~~:~~, ~~R~~replacement/upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground or belowground tanks and related piping ~~if~~ , provided that there is no evidence of leakage, based on testing ~~that meets performance~~ in accordance with applicable requirements ~~in~~ (such as 40 CFR ~~part 280, subpart D (40 CFR part 280.40). This includes activities taken under RCRA, subtitle I; 40 CFR part~~part 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities"~~, subpart J; 40 CFR part 280, subparts B, C,~~ and ~~D; and other applicable state, Federal and local requirements for underground storage tanks.~~40 CFR part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks"). These actions do not include rebuilding or modifying substantial portions of a facility~~,~~ (such as replacing a reactor vessel~~.~~).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B2.6	~~Packaging, transportation, and storage of radioactive materials from the public domain, in accordance with the Atomic Energy Act upon a request by the Nuclear Regulatory Commission or~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. DOE has extensive experience that demonstrates these activities do not pose the potential for significant environmental impact. For example, the Off-Site Source

~~other cognizant agency, which would include a State that regulates radioactive materials under an agreement with the Nuclear Regulatory Commission or other agencies that may, under unusual circumstances, have responsibilities regarding the materials that are included in the categorical exclusion. Covered materials are those for which possession and use by Nuclear Regulatory Commission licensees has been categorically excluded under 10 CFR 51.22(14) or its successors. Examples of these radioactive materials (which may contain source, byproduct or special nuclear materials) are density gauges, therapeutic medical devices, generators, reagent kits, irradiators, analytical instruments, well monitoring equipment, uranium shielding material, depleted uranium military munitions, and packaged radioactive waste not exceeding 50 curies.~~ Recovery of radioactive sealed sources and sealed source-containing devices from domestic or foreign locations provided that (1) the recovered items are transported and stored in compliant containers, and (2) the receiving site has sufficient existing storage capacity and all required licenses, permits, and approvals.	Recovery Project operated by NNSA has successfully recovered almost 23,000 sources from more than 800 sites. For information on DOE's Office-Site Source Recovery Projects, see http://osrp.lanl.gov/.
B3 Categorical Exclusions Applicable to Site Characterization, Monitoring, and General Research	
B3.1 ~~Onsite and offsite site~~Site characterization and environmental monitoring~~,~~ (including, but not limited to, siting, construction ~~(or,~~ modification~~)~~, operation, and dismantlement ~~or~~ and ~~closing (~~abandonment~~)~~ of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis~~.~~). Such activities would not have the potential to cause significant impacts from ground disturbance. ~~A~~Covered activities ~~covered~~ include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in salt water and freshwater. See B3.16 of this appendix for salt water and freshwater activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic,	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. Other agencies have established categorical exclusions that relate to geophysical investigation/exploration activities: Forest Service (36 CFR 220.6(e)(8)): Short-term (1 year or less) mineral, energy, or geophysical investigations and their incidental support activities that may require cross-country travel by vehicles and equipment, construction of less than 1 mile of low standard road, or use and minor repair of existing roads. Examples include but are not limited to: (i) Authorizing geophysical investigations which use existing roads that may require incidental repair to reach sites for drilling core holes, temperature gradient holes, or seismic shot holes; (ii) Gathering geophysical data using shot hole, vibroseis, or surface charge

	electrical, seismic, ~~and~~ radar~~-~~, and temperature gradient), geochemical, and engineering surveys and mapping, ~~including~~and the establishment of survey marks~~-~~. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments~~,~~ (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools~~;~~); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants~~;~~ (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities~~, including~~ (such as assessment of potential wind energy resources~~;~~); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.	methods; (iii) Trenching to obtain evidence of mineralization; (iv) Clearing vegetation for sight paths or from areas used for investigation or support facilities; (v) Redesigning or rearranging surface facilities within an approved site; (vi) Approving interim and final site restoration measures; and (vii) Approving a plan for exploration which authorizes repair of an existing road and the construction of 1/3 mile of temporary road; clearing vegetation from an acre of land for trenches, drill pads, or support facilities. U.S. Geological Survey categorical exclusion (Departmental Manual Part 516, Chapter 9.5 (A, B, C, G, H, J, P)): (A) Topographic, land use and land cover, geological, mineralogic, resources evaluation, and hydrologic mapping activities, including aerial topographic surveying, photography, and geophysical surveying. (B) Collation of data and samples for geologic, paleontologic, hydrologic, mineralogic, geochemical and surface or subsurface geophysical investigations, and resource evaluation, including contracts therefore. (C) Acquisition of existing geological, hydrological or geophysical data from private exploration ventures. … (G) Test or exploration drilling and downhole testing, including contracts therefore. (H) Establishment of survey marks, placement and operation of field instruments, and installation of any research/monitoring devices. … (J) Establishment of seasonal and temporary field camps. … (P) Minor activities required to gain or prepare access to sites selected for completion of exploration drilling operations or construction of stations for hydrologic, geologic, or geophysical data collection.
B3.3	Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish ~~or~~ and wildlife resources or to the protection of cultural resources, provided that such activities would not have the	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	potential to cause significant impacts on~~and that involve only negligible habitat destruction or population reduction~~ fish and wildlife habitat or populations or to cultural resources.	
B3.4	Drop, puncture, water-immersion, thermal, and fire tests of transport packaging for radioactive or hazardous materials to certify that designs meet the applicable requirements ~~of~~ (such as 49 CFR ~~§§~~173.411 and 173.412 and ~~requirements of severe accident conditions as specified in~~ 10 CFR ~~§~~71.73~~.~~).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B3.6	Siting, construction ~~(or~~, modification~~)~~, operation, and decommissioning of facilities for ~~indoor bench~~small-scale research and development projects ~~projects and~~; conventional laboratory operations (~~for example,~~such as preparation of chemical standards and sample analysis); ~~small-scale research and development projects;~~ and small-scale pilot projects (generally less than ~~two~~2 years) frequently conducted to verify a concept before demonstration actions~~. Construction (~~, provided that construction or modification~~)~~ w~~i~~oul~~l~~d be within or contiguous to ~~an already~~a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).~~ See also C12~~ For purposes of this category, "demonstration actions" means actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment. Demonstration actions frequently follow research and development and pilot projects that are directed at establishing proof of concept.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B3.7	Siting, construction, and operation of new ~~infill exploratory and experimental (test) oil, gas, and geothermal wells, which are to be drilled in a geological formation that has existing operating wells~~terrestrial infill exploratory and experimental (test) wells in a locally characterized geological formation in a field that contains existing operating wells, properly abandoned wells, or unminable coal seams containing natural gas, provided that the site characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers, and the actions are otherwise consistent with applicable best practices and DOE protocols, including those that protect against uncontrolled releases of harmful materials. Such wells may	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	include those for brine, carbon dioxide, coalbed methane, gas hydrate, geothermal, natural gas, and oil. Uses for carbon sequestration wells include, but are not limited to, the study of saline formations, enhanced oil recovery, and enhanced coalbed methane extraction.	
B3.8	Outdoor terrestrial ecological and ~~other~~ environmental research in a small area (generally less than 5 acres), (including, but not limited to, siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for ~~sample~~associated analysis,~~) in a small area (generally less than five acres)~~ provided that such activities ~~that~~ would not have the potential to cause significant impacts on ~~result in any permanent change to~~ the ecosystem. These actions include, but are not limited to, small test plots for energy-related biomass or biofuels research. Such research may include the use of genetically engineered plants where the test plot of such plants and associated activities have been authorized by the U.S. Department of Agriculture, in accordance with applicable requirements (such as 7 CFR part 340), including the use of any required confinement measures and buffer zones.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. DOE proposes to clarify that this categorical exclusion includes field research in biomass and biofuels for proof-of-concept purposes, and thus proposes to identify such research and clarify conditions that should be verified in evaluating the applicability of the categorical exclusion to such proposals. Test plots involving use of regulated genetically-engineered plants are overseen by three U.S. agencies (U.S. Department of Agriculture (USDA), Food and Drug Administration, and Environmental Protection Agency). Their regulations specify numerous requirements (such as steps to properly confine the plants) which, when complied with, have been determined by these agencies to avoid the potential for significant environmental impacts. (See USDA regulations). USDA's authority is the broadest of the three agencies, and it will always be involved in the field testing of genetically-engineered plants. Also, USDA determines the size of buffer zones. In addition, the potential environmental impacts from field trials of genetically engineered organisms have been assessed numerous times by the USDA and found to result in no significant impacts. (See http://www.aphis.usda.gov/brs/biotech_ea_permits.html for a list of recent environmental assessments and FONSIs).
B3.9	~~Demonstration actions proposed under the Clean Coal Technology Demonstration Program, if the actions would not~~Projects to reduce emissions and waste generation at existing fossil or alternative fuel combustion or utilization facilities, provided that these projects would not have the potential to cause a significant increase in the quantity or rate of air emissions. ~~These demonstration actions~~For this category of actions, "fuel" includes coal, oil, natural gas, hydrogen, syngas, and biomass. Neither "fuel" nor "alternative fuel" herein includes nuclear fuels. Covered actions include, but are not limited to:	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. DOE experience over many years with projects that demonstrate ways to reduce emissions and waste generation at existing fossil energy facilities shows that these projects normally would not have significant environmental impacts. Generally, such projects demonstrate technologies that, if successfully deployed, could reduce environmental impacts nationwide. DOE has conducted environmental reviews and has substantial experience with "slip stream" tests of up to100 percent of the throughput at existing facilities for such projects that demonstrate lack of potential for significant environmental impacts. Slip stream tests at 100 percent often are needed to convincingly demonstrate pollution reduction technologies so that the technologies are likely to be implemented. Based on this experience, DOE proposes to delete the

(a) Test treatment of ~~20 percent or less of~~ the throughput product (solid, liquid, or gas) generated at an existing and fully operational ~~coal~~fuel combustion or ~~coal~~ utilization facility; (b) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that requires only minor modification to the existing structures at an existing ~~coal~~fuel combustion or ~~coal~~ utilization facility, for which the existing use remains essentially unchanged; ~~and~~ (c) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that involves no permanent change in the quantity or quality of ~~coal being~~fuel burned or used and involves no permanent change in the capacity factor of the ~~coal~~fuel combustion or ~~coal~~ utilization facility~~, other than for demonstration purposes of two years or less in duration.~~; and (d) Addition or modification of equipment for capture and control of carbon dioxide or other regulated substances, provided that adequate infrastructure is in place to manage such substances.	previous 20 percent limitation. Examples of EAs for such projects: • DOE/EA-1616: Carbon Research Center at Southern Company's Power System Development Facility Near Wilsonville, Alabama, FONSI (September 2008) The EA evaluated potential environmental impacts associated with a 60-month cooperative agreement between DOE and Southern Company Services, Inc. for the development of a Carbon Research Center project at Southern Company's Power System Development Facility near Wilsonville, Alabama, which would include the installation of components within the existing facility for the evaluation and development of carbon capture technologies. • DOE/EA-1498: Advanced Coal Utilization Byproduct Beneficiation Processing Plant, Ghent Power Station, Carroll County, Kentucky (January 2005), FONSI (December 2004). (FONSI was based on EA, but EA print production and distribution followed FONSI issue date.) This EA analyzed potential environmental impacts associated with the design, construction, and commercial operation of an advanced coal ash beneficiation processing demonstration plant at Kentucky Utilities Ghent Power Station in Carroll County, Kentucky. The beneficiation process would use fly ash, a waste product of coal-fired power plants, to manufacture concrete additives and related construction materials. • DOE/EA-1493: Greenidge Multi-Pollutant Control Project, AES Greenidge Stations, Dresden, New York (August 2004), FONSI (October 2004) This EA analyzed potential environmental impacts associated with the design, construction, and commercial operation of an integrated multi-pollutant emissions control system to be demonstrated at the AES Greenidge Station in Dresden, New York. • DOE/EA-1476: Toxecon Retrofit for Mercury and Multi-Pollutant Control, Presque Isle Power Plant, Michigan, FONSI (September 2003) This EA analyzed the potential impacts of a demonstration project utilizing TOXECON, a newly developed technology that may be useful in the reduction of mercury, particulate matter, sulfur dioxide, nitrogen oxides and hydrochloric acid emissions that are typical to coal-fired power plants. The 5-year demonstration project includes the construction and operation of an integrated emissions control system for use in three 90-watt boilers at Presque Isle Power Plant in Marquette, Michigan. Following demonstration, the plant may continue to operate using the new emissions control system. • DOE/EA-1449: Commercial Demonstration of Manufactured Aggregate

		Processing Technology Utilizing Spray Dryer Ash, King George County, Virginia (August 2002), FONSI (October 2002) The EA analyzed potential environmental impacts of design, construction, and operation of a Universal Aggregates, LLC demonstration manufacturing plant producing a lightweight aggregate from spray ash for use in masonry and concrete materials. The production of the aggregate would result in the reduction of emissions associated with coal-fired power plants. • DOE/EA-1080: Commercial Demonstration of the NOXSO SO2/NOX Removal Flue Gas Cleanup System, Indiana and Tennessee, FONSI (June 1995). This EA analyzed the potential impacts of design, construction and operation of an advanced flue gas treatment technology for the reduction of sulfur dioxide and nitrogen oxides emissions from two coal-fired power plants, Warrick Power Plant (Warrick County, Indiana) and Olin Charleston Plant (Bradley County, Tennessee). • DOE/EA-0405: Innovative Sulfur Dioxide Scrubbing System for Coal Burning Cement Kilns, Passamaquoddy Tribe, Thomaston, Maine (March 1990), FONSI (February 1990). (FONSI was based on EA, but EA print production and distribution followed FONSI issue date.) This EA analyzed potential impacts of a demonstration project using a new sulfur dioxide scrubbing system in coal-burning cement kilns for the Passamaquoddy Tribe Dragon Products Cement Plant located at Thomaston, Maine. • DOE/EA-0404: Innovative Clean Coal Technology Program - Coke Oven Gas Cleaning Demonstration Plant at the Bethlehem Steel Corp. Sparrows Point Plant, Baltimore County, Maryland, FONSI (December 1989). This EA analyzed the potential impacts of a cost-shared coke oven cleaning demonstration project at the Bethlehem Steel Corporation's Sparrows Point Plant in Baltimore County, Maryland. A major function of the coke oven cleaning process is the reduction of sulfur dioxide and nitrogen oxides emissions.
B3.10	Siting, construction, modification, operation, and decommissioning of ~~a~~ particle accelerators, including electron beam accelerators, with primary beam energy less than approximately 100 million electron volts (MeV~~,~~) and average beam power less than approximately 250 kilowatts (kW), and associated beamlines, storage rings, colliders, and detectors, for research and medical purposes (such as proton therapy), and isotope production, within or contiguous to ~~an already~~a	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. Accelerators in this category are small (some are “table-top”) and can be installed in existing laboratory facilities with no or minor modifications. Radiation exposure to workers, the public, and the environment would be limited by radiation shielding materials, distance, and operational practices. Exposure normally would be indistinguishable from that attributable to background radiation. Operation of particle

	previously disturbed or developed area (where active utilities and currently used roads are readily accessible), or internal modification of any accelerator facility regardless of energy, that does not increase primary beam energy or current. In cases where the beam energy exceeds 100 MeV, the average beam power must be less than 250 kW, so as not to exceed an average current of 2.5 milliamperes (mA).	accelerators within this category would result in negligible air emissions of radionuclides used in experiments; minimal ozone generation; activation of short-lived air activation products, such as isotopes of carbon and oxygen; and potential but short-lived activation of concrete and equipment within the laboratory. (Activation products result from interactions between radiation emitted by an accelerator and surrounding air, concrete, metals, and some other materials.) Scott Davis: two years serving as Program Manager in the DOE office of primary interest for accelerator safety (Office of Science; Office of Safety, Security, and Infrastructure; Environment, Safety and Health Division); 30 years of experience in radiological, nuclear and occupational safety; Physical Scientist and Certified Safety Professional; Bachelor of Science in Radiological Technology, University of Tennessee in Memphis (Health Science Center) and Masters Degree in Public Health, University of Tennessee, Knoxville.
B3.11	Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components~~),~~) under controlled conditions~~-~~. Covered actions ~~that would not involve source, special nuclear, or byproduct materials. Covered activities may~~ include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests. Covered actions would not involve source, special nuclear, or byproduct materials, except that encapsulated sources that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B3.12	Siting, construction ~~(or~~, modification~~)~~, operation, and decommissioning of microbiological and biomedical diagnostic, treatment and research facilities (excluding Biosafety Level-3 and Biosafety Level-4~~; reference:~~), in accordance with applicable requirements or best practices (such as Biosafety in Microbiological and Biomedical Laboratories, ~~3rd~~5th Edition, ~~May 1993~~Feb. 2007, U.S. Department of Health and Human	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	Services ~~Public Health Service~~, Centers ~~of~~for Disease Control and Prevention, and the National Institutes of Health ~~(HHS Publication No. (CDC) 93-8395)~~) including, but not limited to, laboratories, treatment areas, offices, and storage areas, within or contiguous to ~~an already~~a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Operation may include the purchase, installation, and operation of biomedical equipment~~,~~ (such as commercially available cyclotrons that are used to generate radioisotopes and radiopharmaceuticals, and commercially available biomedical imaging and spectroscopy instrumentation~~.~~).	
B3.13	Performing magnetic fusion experiments that do not use tritium as fuel, within existing facilities (including, but not limited to, necessary modifications).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
Proposed new categorical exclusion: B3.14	Siting, construction, modification, operation, and decommissioning of small-scale educational facilities (including, but not limited to, conventional teaching laboratories, libraries, classroom facilities, auditoriums, museums, visitor centers, exhibits, and associated offices) within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Operation may include, but is not limited to, purchase, installation, and operation of equipment (such as audio/visual and laboratory equipment) commensurate with the educational purpose of the facility.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. DOE has prepared several EAs that analyzed the impacts of constructing and operating small educational facilities and determined that these actions do not have the potential to cause significant environmental impacts: • DOE/EA-1444: Construction of New Office Building, Child-Care Facility, Parking Garage, and Storm Water Retention Pond, FONSI (September 2002). The EA evaluated the impacts of building a 3-level, parking garage with additional paved parking areas and a 48,000 square foot office building on an already-developed DOE site as well as the construction of a child-care center and a credit union office on an adjoining 5-acre parcel of land. • DOE/EA-1415: Proposed Conveyance of the American Museum of Science and Energy and Associated Property, Parcel G, and Parcel 279.01, FONSI (March 2007). The EA evaluated the environmental impacts resulting from the conveyance of a science museum to the City of Oak Ridge, TN, as well as the construction of associated office and retail space and buildings for light industrial purposes. DOE determined that the conveyance and the construction of the associated buildings would have no significant impacts. • DOE/EA-1412: Expansion of the Volpentest Hazardous Materials Management and Emergency Response Training and Education Center, Hanford Site, Richland, Washington, FONSI (November 2002). The EA evaluated the impacts of an Emergency Vehicle Operations training facility,

	including a one-mile, asphalt vehicle test course, a helipad, a 12,500 square foot parking area for equipment, and a 1,600 square foot area for earthmoving equipment training. • DOE/EA-1375 : Construction and Operation of a New Office Building and Related Structures at TA 3 within Los Alamos National Laboratory (June 2001), FONSI (July 2001) The EA evaluated the impacts of constructing a 275,000 square foot office building with an adjoining 600-seat lecture hall, and a 700-space parking structure on an already developed site. The office building would contain staff offices, records management space, and operations support space.
Proposed new categorical exclusion: B3.15 Siting, construction, modification, operation, and decommissioning of facilities for indoor small-scale research and development projects and small-scale pilot projects using nanoscale materials in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any biohazardous materials. Construction and modification activities would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. DOE proposes to define a class of actions specifically to include facilities for small-scale laboratory research projects involving nanoscale (atomic and molecular scale) materials. DOE has prepared several EAs that analyzed the impacts of constructing and operating facilities at which research on or using nanomaterials would be conducted, and has substantial experience conducting laboratory-scale experimentation with nanoscale materials. • DOE/EA 1457: Center for Integrated Nanotechnologies at Sandia National Laboratories(March 2003), FONSI (April 2003). The EA evaluated the impacts from the construction of a 90,000 square foot laboratory on an already developed site. The proposed facility would contain clean rooms for nanofabrication, physical and chemical characterization of nanomaterials, and lithography in addition to facilities for general-purpose chemistry, biology, electronic, and physics research on the electronic, magnetic, and optical properties of nanomaterials. • DOE/EA 1455: Enhanced Operations of the Advanced Photon Source at Argonne National Laboratory-East, Argonne, Illinois, FONSI (June 2003). The EA evaluated the impacts from the construction of a 48,000 square foot Center for Nanoscale Materials and an associated parking lot on an already developed DOE site. Research activities would include lithography, nanofabrication, and nanomaterials characterization. The facility would also include clean rooms as well as several offices and conference rooms. • DOE/EA 1441: Construction and Operation of the Molecular Foundry (February 2003), FONSI (March 2003). The EA evaluated the impacts from the construction of an 86,000 square foot nanofabrication and nanomaterials

	characterization facility and an associated utility plant on an already developed DOE site. The facility would include laboratories, equipment rooms, conference/seminar rooms and office space. • DOE/EA 1362: Oak Ridge National Laboratory Facilities Revitalization Project, FONSI (June 2001). The EA evaluated impacts from the 3,000 square-foot expansion of an existing laboratory, including two new clean rooms, to accommodate laboratory and process space for a Nanoscience Metrology and Instrumentation facility. The facility would support research for nanomaterials, nanostructures, and applications for the technologies. In addition, DOE has prepared the following guidance documents that describe practices appropriate to the management of environmental, safety and health concerns associated with laboratory-scale operations involving the design, synthesis, or characterization of engineered nanomaterials. Use of the documents enables DOE nanoscale laboratories to develop site-specific controls that protect workers and the environment. • Approach to Nanomaterial ES&H • Worker and Environmental Assessment of Potential Unbound Engineered Nanoparticle Releases (2009) • The Safe Handling of Unbound Engineered Nanoparticles, Contractor Requirements Document (DOE 2009) • Nanomaterials Safety Implementation Plan, Ames Laboratory (April 2010) DOE also used the following as guidance documents: • Nanomaterial Laboratory Safety, Boise State University (June 2010) • Approaches to Safe Nanotechnology, National Institute for Occupational Safety and Health (March 2008)
Proposed new categorical exclusion: B3.16 Small-scale, temporary surveying, site characterization, and research activities in salt water and freshwater environments, limited to: (a) Acquisition of rights-of-way, easements, and temporary use permits; (b) Data collection, environmental monitoring, and nondestructive research programs;	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. Other agencies have established categorical exclusions for relevant salt water and freshwater activities: Department of Navy categorical exclusion (32 CFR 775.6(e)(20)): Installation and operation of passive scientific measurement devices (e.g., antennae, tide gauges, weighted hydrophones, salinity measurement devices, and water quality measurement devices) where use will not result in changes in operations tempo and is consistent with applicable regulations;

(c) Resource evaluation activities including surveying and mapping, but excluding seismic activities other than passive techniques; (d) Collection of geological, paleontological, mineralogical, geochemical, biological, and geotechnical data and samples, but excluding large-scale vibratory coring techniques; (e) Installation of monitoring and recording devices; (f) Installation of equipment for flow testing of existing wells including equipment for fluid analysis; and (g) Ecological and environmental research provided that such activities would not have the potential to cause significant impacts on the ecosystem. These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the above activities would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity (such as protected areas and other areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally), or outside those areas if the activities would have the potential to cause significant impacts within those areas. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.	National Oceanic and Atmospheric Administration categorical exclusion (NOAA Administrative Order 216.6.03c.3(a, d, e)): (a) Research Programs. Programs or projects of limited size and magnitude or with only short-term effects on the environment and for which any cumulative effects are negligible. Examples include natural resource inventories and environmental monitoring programs conducted with a variety of gear (satellite and ground-based sensors, fish nets, etc.) in water, air, or land environs. Such projects may be conducted in a wide geographic area without need for an environmental document provided related environmental consequences are limited or short-term. (d) Administrative or Routine Program Functions. The following NOAA programmatic functions that hold no potential for significant environmental impacts qualify for a categorical exclusion: program planning and budgeting including strategic planning and operational planning; mapping, charting, and surveying services; ship support; ship and aircraft operations; fishery financial support services; grants for fishery data collection activities; basic and applied research and research grants, except as provided in Section 6.03b. (e) Real Estate Actions….various easement acquisitions…. Bureau of Ocean Energy Management, Regulation and Enforcement (formerly Minerals Management Service) categorical exclusion(s) (from DOI DM 516 Chapter 15, Section 15.4): A(1): Inventory, data, and information collection, including the conduct of environmental monitoring and nondestructive research programs. B(1): All resource evaluation activities including surveying, mapping, and geophysical surveying which do not use solid or liquid explosives. B(2): Collection of geologic data and samples including geologic, paleontologic, mineralogic, geochemical, and geophysical investigations which does not involve drilling beyond 50 feet of consolidated rock or beyond 300 feet of unconsolidated rock, including contracts therefor. B(4): Well logging, digital modeling. inventory of existing wells, and installation of recording devices in wells. B(5): Establishment and installation of any research/monitoring devices. C(15): Rights-of-ways, easements, temporary use permits, and any revisions thereto that do not result in a new pipeline corridor to shore.
B4. Categorical Exclusions Applicable to Power ~~Marketing Administrations and to All of DOE with Regard to Power~~ Resources	

B4.1	Establishment and implementation of contracts, policies, and marketing and allocation plans related to electric power acquisition or transmission that involve only the use of the existing transmission system and existing generation resources operating within their normal operating limits.~~, policies, allocation plans, or acquisition of excess electric power that does not involve: (1) the integration of a new generation resource, (2) physical changes in the transmission system beyond the previously developed facility area, unless the changes are themselves categorically excluded, or (3) changes in the normal operating limits of generation resources.~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.4	Power marketing services~~,~~ and power management activities (including, but not limited to, storage, load shaping, seasonal exchanges, ~~or~~ and other similar activities ~~if~~), provided that the operations of generating projects would remain within normal operating limits.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.5	Temporary adjustments to river operations to accommodate day-to-day river fluctuations, power demand changes, fish and wildlife conservation program requirements, and other external events, ~~if~~provided that the adjustments would occur within the existing operating constraints of the particular hydrosystem operation.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.6	Additions or modifications to electric power transmission facilities that would not have the potential to cause significant impacts~~affect the environment~~ beyond the previously disturbed or developed facility area (including, but not limited to, switchyard rock grounding upgrades, secondary containment projects, paving projects, seismic upgrading, tower modifications, load shaping projects (such as the installation and use of flywheels and battery arrays), changing insulators, and replacement of poles, circuit breakers, conductors, transformers, and crossarms~~.~~).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.7	Adding fiber optic cables to transmission facilities ~~structures~~ or burying fiber optic cable in existing transmission line or pipeline rights-of-way. Covered actions may include associated vaults and pulling and tensioning sites outside of rights-of-way in	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	nearby previously disturbed or developed areas.	
B4.8	New electricity transmission agreements, and modifications to existing transmission arrangements, to use a transmission facility of one system to transfer power of and for another system, ~~if~~provided that no new generation projects would be involved and no physical changes in the transmission system would be made beyond the previously disturbed or developed facility area.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.9	~~Grant or denial~~Granting or denying ~~of~~ requests for multiple uses of a transmission facility's rights-of-way~~, such as~~(including, but not limited to, grazing permits and crossing agreements~~, including~~ for electric lines, water lines, natural gas pipelines, communications cables, roads, and drainage culverts~~.~~).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.10	Deactivation, dismantling, and removal of electric ~~powerlines~~transmission facilities (including, but not limited to, electric transmission lines, substations, and switching stations~~,~~) and ~~other transmission facilities,~~abandonment and ~~right~~restoration of rights-of-way ~~abandonment~~ (including, but not limited to, associated access roads).	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.11	Construction or modification of electric power substations or interconnection facilities (including, but not limited to, switching stations and support facilities) that are not for the interconnection of a new generation resource into a Power Marketing Administration's transmission system, unless: (1) the new generation resource would be eligible for categorical exclusion under this part and (2) the new generation resource would be equal to or less than 50 average megawatts~~with power delivery at 230 kV or below, or modification (other than voltage increases) of existing substations and support facilities, that could involve the construction of electric powerlines approximately 10 miles in length or less, or relocation of existing electric powerlines approximately 20 miles in length or less, but not the integration of major new generation resources into a main transmission system~~.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.12	Construction of electric ~~powerlines~~transmission lines approximately 10 miles in length or less inside or outside of	Discussion of the proposed changes is provided in Section IV.E of the Preamble.

	previously disturbed or developed transmission line or pipeline rights-of-way, or approximately 20 miles in length or less inside of previously disturbed or developed transmission line or pipeline rights-of-way, that are not for the interconnection of a new generation resource into a Power Marketing Administration's transmission system, unless: (1) the new generation resource would be eligible for categorical exclusion under this part and (2) the new generation resource would be equal to or less than 50 average megawatts. ~~that are not for the integration of major new generation resources into a main transmission system.~~	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B4.13	Upgrading or rebuilding approximately 20 miles in length or less of existing electric transmission lines, which may involve minor relocations of small segments of the transmission lines, that is not for the interconnection of a new generation resource into a Power Marketing Administration's transmission system, unless: (1) the new generation resource would be eligible for categorical exclusion under this part and (2) the new generation resource would be equal to or less than 50 average megawatts.~~Reconstruction (upgrading or rebuilding) and/or minor relocation of existing electric powerlines approximately 20 miles in length or less to enhance environmental and land use values. Such actions include relocations to avoid right-of-way encroachments, resolve conflict with propertydevelopment, accommodate road/highway construction, allow for the construction of facilities such as canals and pipelines, or reduce existing impacts to environmentally sensitive areas.~~	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5	**Categorical Exclusions Applicable to Conservation, Fossil, and Renewable Energy Activities**	
B5.1 (a)	Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy~~-~~ efficiency that would not have the potential to cause significant changes~~do not increase~~ in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers),	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble. The following EAs and FONSIs support proposed B5.1(b): • DOE/EA-1774: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters, FONSI (March 2010) • DOE/EA-1748: Energy Conservation Program: Energy Conservation Standards for Small Electric Motors, FONSI (March 2010)

organizations (such as utilities), and governments (such as state ~~and~~ , local, and tribal) ~~governments~~. Covered actions include, but are not limited to~~:~~ weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings~~,~~; placement of timers on hot water heaters~~,~~; installation ~~of solar hot water~~or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of ~~efficient lighting,~~ drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings~~,~~; efficiency improvements for vehicles and transportation (such as fleet changeout); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing ~~or~~ , industrial, or building practices~~,~~; and small-scale energy efficiency and conservation ~~and renewable energy~~ research and development and small-scale pilot projects. ~~The~~ Covered actions ~~could involve~~include building renovations or new structures, provided that ~~in~~ they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. ~~These~~ Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix.

(b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not: (1) have the potential to cause a significant change in manufacturing infrastructure (such as construction of new manufacturing plants with considerable associated ground disturbance); (2) involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials); (3) have the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or (4)

- DOE/EA-1674: Energy Conservation Program: Energy Conservation Standards for Refrigerated Bottled or Canned Beverage Vending Machines, FONSI (August 2009)
- DOE/EA-1673: Energy Conservation Program for Certain Industrial Equipment: Energy Conservation Standards and Test Procedures for Commercial Heating, Air-Conditioning, and Water-Heating Equipment, FONSI (July 2009)
- DOE/EA-1664: Energy Conservation Standards: Energy Conservation Standards for Fluorescent and Incandescent Lamps, FONSI (June 2009)
- DOE/EA-1662: Energy Conservation Program: Energy Conservation Standards for Certain Consumer Products (Dishwashers, Dehumidifiers, Microwave Ovens, and Electric and Gas Kitchen Ranges and Ovens) and for Certain Commercial and Industrial Equipment (Commercial Clothes Washers), FONSI (April 2009)
- DOE/EA-1643 Energy Conservation Program for Commercial and Industrial Equipment: Commercial Refrigeration Equipment Energy Conservation Standard, FONSI (December 2008)
- DOE/EA-1637: Energy Conservation Program for Commercial and Industrial Equipment: Packaged Terminal Air Conditioner and Packaged Terminal Heat Pump Energy Conservation Standards (October 2008), FONSI (November 2008)
- DOE/EA-1530: Energy Conservation Standards for Residential Furnaces and Boilers (September 2007), FONSI (November 2007)
- DOE/EA-1565: Adopted Energy Conservation Standards for Distribution Transformers (July 2007), FONSI (November 2007)
- DOE/EA-1352: Proposed Energy Conservation Standards for Residential Central Air Conditioner and Heat Pumps, FONSI (January 2001)

  DOE/EA-1352 (Amended): Amended Energy Conservation Standards for Residential Central Air Conditioner and Heat Pumps, FONSI (May 2002)
- DOE/EA-1344: Proposed Energy Conservation Standards for Residential Clothes Washers (December 2000), FONSI (January 2001)
- DOE/EA-1138: Proposed Energy-Conservation Standards for Refrigerators, Refrigerator - Freezers, and Freezers, FONSI (April 1997)
- DOE/EA-0819: Energy Conservation Standards for Eight Types of Consumer Products: Room Air Conditioners, Water Heaters, Direct Heating Equipment,

	have the potential to cause a significant increase in energy consumption in a state or region.	Mobile Home Furnaces, Ranges and Ovens, Pool Heaters, Fluorescent Ballasts and Televisions, FONSI (December 1992) • DOE/EA-0386:Technical Support Document: Energy Conservation Standards for Consumer Products: Dishwashers, Clothes Washers, and Clothes Dryers (July 1989) FONSI (August 1989). • DOE/EA-0372: Technical Support Document: Energy Conservation Standards for Consumer Products: Refrigerators, Furnaces, and Television Sets, FONSI (November 1988) • DOE/EA-0296: Proposed Energy Conservation Standards for New Commercial and Multifamily Highrise Residential Buildings, FONSI (November 1986) • DOE/EA-0113: Energy Conservation Program for Consumer Products (products covered are: refrigerators and refrigerator/freezers, freezers, clothes dryers, water heaters, room air conditioners, home heating equipment, kitchen ranges and ovens, central air conditioners, and furnaces), FONSI (June 1980)
B5.2	Modifications to ~~oil, gas, and geothermal facility~~ existing pump and piping configurations (including, but not limited to, manifolds, metering systems, and other instrumentation ~~that~~ on such configurations conveying materials such as air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water). Covered modifications would not have the potential to cause significant changes to~~change~~ design process flow rates or ~~affect~~ permitted air emissions.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.3	Modification (but not expansion) or plugging and abandonment ~~(including plugging), which is not part of site closure, of crude oil storage access wells, brine injection wells, geothermal wells, and gas wells~~ of wells, provided that site characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers, and the actions are otherwise consistent with best practices and DOE protocols, including those that protect against uncontrolled releases of harmful materials. Such wells may include, but are not limited to, storage and injection wells for brine, carbon dioxide, coalbed methane, gas hydrate, geothermal, natural gas, and oil. Covered modifications would not be part of site closure.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

B5.4	Repair ~~or~~, replacement, upgrading, rebuilding, or minor relocation of ~~sections of a crude oil, produced water, brine, or geothermal pipeline, if the actions are determined by~~pipelines within existing rights-of-way, provided that the actions are in accordance with applicable requirements (such as Army Corps of Engineers ~~to be within the maintenance provisions of a DOE permit~~permits under section 404 of the Clean Water Act). Pipelines may convey materials including, but not limited to, air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.5	Construction and subsequent operation of short ~~crude oil, steam, geothermal, or natural gas~~(generally less than 20 miles in length) pipeline segments conveying materials (such as air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water) between ~~DOE~~existing source facilities and existing receiving facilities (such as facilities for use, reuse, transportation, storage, ~~or~~and refining ~~facilities within a single industrial complex, if~~), provided that the pipeline segments are within ~~existing~~previously disturbed or developed rights-of-way.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.6	Removal of oil and contaminated materials recovered in oil spill cleanup operations and disposal of these materials in accordance with applicable requirements (such as the National Oil and Hazardous Substances Pollution Contingency Plan) ~~(NCP and disposed of in accordance with local contingency plans in accordance with the NCP~~.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.7	Approvals or disapprovals of new authorizations or amendments of existing authorizations to import~~/~~ or export natural gas under section 3 of the Natural Gas Act that ~~does not~~ involve minor ~~new construction and only requires~~ operational changes~~,~~ (such as ~~an increase~~changes in natural gas throughput, ~~change in~~ transportation, ~~or~~and ~~change in~~ storage operations~~.~~) but not new construction.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.8	Approvals or disapprovals of new authorizations or amendments of existing authorizations to import~~/~~ or export natural gas under section 3 of the Natural Gas Act that ~~involving~~ involve ~~a~~ new	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	cogeneration powerplants (as defined in the Powerplant and Industrial Fuel Use Act of 1978, as amended) within or ~~adjacent~~ contiguous to an existing industrial complex and requiring generally less than 10 miles of new natural gas pipeline or 20 miles within previously disturbed or developed rights-of-way.	
B5.9	~~The g~~Grants or denials ~~or denial~~ of ~~any~~ temporary exemptions under the Powerplant and Industrial Fuel Use Act of 1978, as amended, for ~~any~~ electric powerplants.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.10	For existing electric powerplants, ~~The g~~grants or denials ~~or denial~~ of ~~any~~ permanent exemptions under the Powerplant and Industrial Fuel Use Act of 1978, as amended, ~~of any existing electric powerplant~~ other than ~~an~~ exemptions under ~~(1)~~ section 312(c) relating to cogeneration~~,~~ and ~~(2)~~ section 312(~~l) relating to scheduled equipment outages, (3) section 312(~~b) relating to certain state or local requirements~~, and (4) section 312(g) relating to certain intermediate load powerplants~~.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.11	For new electric powerplants, ~~The g~~grants or denials ~~or denial~~ of ~~a~~ permanent exemptions from the prohibitions of Title II of the Powerplant and Industrial Fuel Use Act of 1978, as amended, ~~for any new electric powerplant~~ to permit the use of certain fuel mixtures containing natural gas or petroleum.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B5.12	Workover (operations to restore production, such as deepening, plugging back, pulling and resetting lines, and squeeze cementing) of ~~an~~ existing wells (including, but not limited to, activities associated with brine, carbon dioxide, coalbed methane, gas hydrate, geothermal, natural gas, and oil~~oil, gas, or geothermal well~~) to restore ~~production when~~ functionality, provided that workover operations ~~will be~~are restricted to the existing wellpad and do not involve any new site preparation or earth-work that would have the potential to cause significant impacts on nearby~~adversely affect adjacent~~ habitat; that site characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers; and the actions are otherwise consistent with best practices and DOE protocols, including those that protect against uncontrolled releases of harmful materials.	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

Proposed new categorical exclusion: B5.13 Siting, construction, operation, plugging, and abandonment of experimental wells for the injection of small quantities of carbon dioxide (and other incidentally co-captured gases) in locally characterized, geologically secure storage formations at or near existing carbon dioxide sources to determine the suitability of the formations for large-scale sequestration, provided that (1) the characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers; (2) the wells are otherwise in accordance with applicable requirements, best practices, and DOE protocols, including those that protect against uncontrolled releases of harmful materials; and (3) the wells and associated drilling activities are sufficiently remote so that they would not have the potential to cause significant impacts related to noise and other vibrations. Wells may be used for enhanced oil or natural gas recovery or for secure storage of carbon dioxide in saline formations or other secure formations. Over the duration of a project, the wells would be used to inject, in aggregate, less than 500,000 tons of carbon dioxide into the geologic formation. Covered actions exclude activities in salt water and freshwater environments. (See B3.16 of this appendix for activities in salt water and freshwater environments.)	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. DOE has gained substantial experience with small-scale carbon sequestration, showing that these projects can be managed safely and would not have the potential to cause significant impacts. Information from small-scale projects is needed to provide data needed to ensure that commercial-scale projects can be conducted safely and in an environmentally sound manner. Based on experience with small-scale projects, DOE expects that the limitations in the proposed categorical exclusion (for example, that total amount of carbon dioxide injected for all wells under a given project would not exceed 500,000 tons over the duration of the project) will ensure that projects would not have significant impacts. Supporting environmental analyses include: • DOE/EA-1625, Southeast Regional Carbon Sequestration Partnership (SECARB) Phase III Early Test, Oklahoma (August 2009), FONSI (July 2009) (FONSI was based on EA, but EA print production and distribution followed FONSI issue date.) • DOE/EA-1626, Midwest Geological Sequestration Consortium (MGSC) Phase III Large-Scale Field Test, Decatur, Illinois (October 2008), FONSI (November 2008) • DOE/EA-1482, Pilot Experiment for Geological Sequestration of Carbon Dioxide in Saline Aquifer Brine Formations, Frio Formation, Liberty County, Texas, FONSI (October 2003) Further information about projects, supporting data, and the carbon sequestration program is available at: www.fossil.energy.gov/fred/feprograms.jsp?prog=Carbon+Sequestration. Program experts at DOE's National Energy Technology Laboratory have prepared a white paper on DOE's experience with Carbon Capture and Sequestration (CCS) field tests and environmental impacts during their operation, Experience from Geologic Carbon Dioxide Storage Field Projects Supported by DOE's Sequestration Program (September 2010). DOE's experience with CCS field tests has shown that there is no potential for significant impact associated with these activities. This white paper is supported by a list of the 20 small-scale and 9 large-scale field projects DOE has sponsored through the Regional Partnerships.
Proposed new categorical exclusion: B5.14 Conversion to, replacement of, or modification of combined heat and power or cogeneration systems (the sequential or	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble.

simultaneous production of multiple forms of energy, such as thermal and electrical energy, in a single integrated system) at existing facilities, provided that the conversion, replacement, or modification would not have the potential to cause a significant increase in the quantity or rate of air emissions and would not have the potential to cause significant impacts to water resources.	
Proposed new categorical exclusion: B5.15 Small-scale renewable energy research and development projects and small-scale pilot projects located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble.
Proposed new categorical exclusion: B5.16 The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. DOE and other Federal agency experience with "co-located" or "distributed" solar energy projects generally comprising 10 acres or less: • DOE/EA-1622: University of Nevada, Las Vegas Research Center Foundation Solar Technology Center, FONSI (January 2009). Land photovoltaic installations on 10 acres. • DOE/EA-1573: Three Site Development Projects at NREL- South Table Mountain, FONSI (July 2007). Various solar photovoltaic technology demonstrations, including a ground photovoltaic installation on 2 acres. • Federal Aviation Administration, Final EA/FONSI – Photovoltaic Energy System at Lihue Airport, Lihue, Island of Kauai, Hawaii (August 2008). A solar roof installment on 2.9 acres of existing parking lot. • Department of Labor, Job Corps, Preliminary FONSI (74 FR 45252; Sept. 1, 2009) and Final FONSI for the Edison Job Corps Center Solar Photovoltaic (PV) Project Located at the Edison Job Corps Center, 500 Plainfield Avenue, Township of Edison, NJ 08817 (74 FR 57196; Nov. 4, 2009). Approximately 2 acres of ground-mounted photovoltaic modules (1,620 modules in total) on

	undeveloped grass lawn surrounded by existing facilities. • Department of Labor, Job Corps, Preliminary FONSI (74 FR 45252; Sept. 1, 2009) and Final FONSI for the Solar PV Project Located at Westover Job Corps Center, 103 Johnson Drive, Chicopee, MA (74 FR 51797; Nov. 4, 2009). Approximately 1.5 acres of stationary, solar photovoltaic panels in previously developed area adjacent to the closest electrical terminal at the Westover Job Corps Center. • Department of Veterans Affairs, FONSI - Rooftop solar PV power at Calverton National Cemetery (August 2009). Project consists of ground mounted photovoltaic arrays at various locations on the Cemetery site and consists of photovoltaic arrays, inverters, and ancillary equipment to connect to existing building electrical system. • Department of Veterans Affairs, FONSI - Ground mounted solar photovoltaic power at San Joaquin National Cemetery (August 2009). Approximately 1.5 acres of stationary, solar photovoltaic panels in previously developed area to create a 150 to 200 kilowatt system adjacent to the closest electrical terminal at the Cemetery. • Department of Agriculture Categorical Exclusion: 7 CFR 1794.22 (a)(iii)(8) - Construction of distributed energy generation totaling 10 MW or less at an existing utility, industrial, commercial or educational facility site. Scientific and industry expert opinion regarding varying scales of solar photovoltaic technologies, including related environmental benefits and environmental impacts to various natural resources, is found in the following publication: • National Academy of Sciences, National Academy of Engineering, and National Research Council, Committee on America's Energy Future, *America's Energy Future: Technology and Transformation* (National Academies Press, Washington, DC: 2009).
Proposed new categorical exclusion: B5.17 The installation, modification, operation, and removal of commercially available small-scale solar thermal systems (including, but not limited to, solar hot water systems) located on or contiguous to a building, and if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. • DOE/EA-1683: DOE Loan Guarantee to Abengoa Solar, Inc. for the Solana Thermal Electric Power Project near Gila Bend, AZ, FONSI (May 2010) A 280 megawatt concentrating solar thermal power plant covering roughly 1,757 acres. • DOE/EA-1622: University of Nevada, Las Vegas Research Foundation, Solar Technology Center, FONSI (January 2009). 10 acre site with testing areas intended for research and development of various solar technologies, including

requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	concentrating solar (thermal) power.
Proposed new categorical exclusion: B5.18 The installation, modification, operation, and removal of commercially available small wind turbines, with a total height generally less than 200 feet (measured from the ground to the maximum height of blade rotation) that (1) are located within a previously disturbed or developed area; (2) are located more than 10 nautical miles from an airport or aviation navigation aid; (3) are located more than 1.5 nautical miles from National Weather Service or Federal Aviation Administration Doppler weather radar; (4) would not have the potential to cause significant impacts on bird or bat species; and (5) are sited or designed such that the project would not have the potential to cause significant impacts to persons (such as shadow flicker and other visual impacts, and noise). Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. (1) Support for wind turbine height less than 200 feet limitation: The stated limitation of "total height of generally less than 200 feet" is based, in part, on U.S. Department of Transportation, Federal Aviation Administration (FAA) regulations (14 CFR 77.13) that require any construction or alteration of more than 200 feet in height above the ground level to file a notice with the FAA for the completion of an aeronautical study and airspace determination. Similarly, FAA standards recommend obstruction marking or lighting for vertical structures greater than 200 feet. See FAA, Advisory Circular: Obstruction Marking and Lighting, Chapter 13 (2007). DOE and other Federal agency experience with wind turbines of less than 200 feet in height: • DOE/EA -1584: Sandpoint Wind Installation Project, FONSI (September 2009). Installation of two 500 kilowatt wind turbines standing at a total maximum height (ground to maximum blade rotation) of 194 feet. • DOE/EA-1280: Nome Alaska Wind Turbine, FONSI (November 2000). Installation of up to two wind turbines. Wind turbine models under consideration include a 225 kilowatt measuring at 154 feet total height (ground to maximum blade rotation), and 550 kilowatt turbine measuring at 199 feet total height (ground to maximum blade rotation). • DOE/EA-1245: Kotzebue Wind Project, FONSI (May 1998) Installation of ten turbines with maximum height (ground to maximum blade rotation) of 111.5 feet tall wind turbines to generate 0.66 megawatts of power. • Department of Labor, Job Corps, Preliminary FONSI (74 FR 45254; Sept. 1, 2009) and Final FONSI for a Small Wind Turbine Installation at Laredo (Texas) Job Corps Center (74 FR 212; Nov. 4, 2009). Construction of two, 10 kilowatt wind turbines with maximum height (ground to maximum blade rotation) of 151 feet located adjacent to existing Job Corps facilities. • Department of Labor, Job Corps, Preliminary FONSI (74 FR 45254; Sept. 1, 2009) and Final FONSI for a Small Wind Turbine Installation at Angell (Oregon) Job Corps Center (74 FR 212; Nov. 4, 2009) Construction of two, 10 kilowatt wind turbines with maximum height (ground to maximum blade

rotation) of 151 feet located adjacent to existing Job Corps facilities.

- Department of Labor, Job Corps, Preliminary FONSI (74 FR 45254; Sept. 1, 2009) and Final FONSI for a Small Wind Turbine Installation at Cassadaga (New York) Job Corps Center (74 FR 212; Nov. 4, 2009). Construction of two, 10 kilowatt wind turbines with maximum height (ground to maximum blade rotation) of 151 feet located adjacent to existing Job Corps facilities.

(2) Support for location wind turbine more than 10 nautical miles from an airport or aviation aid:

The stated limitation of "located more than 10 nautical miles from an airport or aviation navigation aid" is based on requirements in 49 U.S.C. 44718 and FAA Order 7400.2. The statute (49 U.S.C. 44718) requires that the Secretary of Transportation (via the FAA) conduct an aeronautical study for any structure that is constructed that may interfere with air commerce, more specifically, those that may obstruct navigable airspace or pose an interference with air navigation facilities and equipment. Such a study is intended to "decide the extent of any adverse impact on the safe and efficient use of the airspace, facilities, or equipment." (49 U.S.C. 44718 (b)(1)). FAA Order 7400.2 defines a "critical flight zone" in relation to navigable airspace and safety, as being airspace within 10 nautical miles (NM) in radius of an airport.

(3) Support for limitation regarding distance in nautical miles from radar:

http://www.roc.noaa.gov/WSR88D/WindFarm/TurbinesImpactOn.aspx?wid=dev

(4) Potential of wind turbines to impact avian and bat species or populations:

Impacts of wind turbines on birds and bats vary by region and by species, so turbine site selection is a key consideration to design small wind projects that would not have the potential for significant impacts to birds and bats due to strikes/collisions with turbine components. The reports below find that fatalities likely have greater impacts on bat and raptor (e.g., owls and eagles) populations than on most bird populations because of the characteristically long life spans and low reproductive rates of both bats and raptors and because of a relatively low abundance of raptors. Cumulative impacts to bat populations have a potential for significance due to a general region-wide decline of bats in the Eastern United States if initial project siting is not done appropriately (i.e., should be in accordance with industry best management practices).

- U.S. Fish and Wildlife Service Wind Turbine Guidelines Advisory Committee, Recommended Guidelines to the Secretary, March 4, 2010. These guidelines address: (1) proper evaluation of potential Wind Resource Areas (WRAs), (2) proper location and design of turbines and associated structures within WRAs

selected for development, and (3) pre- and post-construction research and monitoring to identify and/or assess impacts to wildlife. Such considerations and actions comprise examples of industry best management practices for siting and design of a wind turbine project that avoid significant impacts to birds and bats.

- Bureau of Land Management, Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM Lands in the Western United States (FES05-11), June 2005. Several impact areas are addressed in this programmatic FEIS, and DOE used findings of this EIS to support the identification of resource areas of particular concern with regard to wind turbines that were then incorporated into the proposed categorical exclusion language as limitations (i.e., concerning impacts to bird and bat populations and acting in accordance with local land use and zoning requirements). The BLM document also identifies considerations (i.e., best management practices) to be made during project siting and design.
- National Academy of Sciences, Committee on Environmental Impacts of Wind-Energy Projects, Environmental Impacts of Wind Energy Projects (The National Academies Press: Washington, D.C., 2007).

  Government Accountability Office, Wind Power: Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife (GAO-05-906), September 2005.

  Both the National Academy of Sciences (NAS) and the Government Accountability Office studies assess how wind turbines are sited at the local and state levels and associated considerations made during these processes that may be useful to reduce impacts to a variety of wildlife resources. However, the NAS study provides an overview of impacts of wind turbines on all natural resource areas, including impacts that may be experienced by humans.

DOE has experience with small wind projects that employed best management practices in siting and design that resulted in a proposal to DOE that posed no significant impacts to local and regional bird and bat populations.

For example, see:

- DOE/EA -1737: Environmental Assessment for DOE's Proposed Financial Assistance to Pennsylvania for Frey Farm Landfill Wind Energy Project, Manor Township, Lancaster, PA, FONSI (February 2010). Installation of two wind turbines in former landfill to generate approximately 3.6 megawatts of electricity for adjacent dairy facilities.
- DOE/EA-1648: White Earth Nation Wind Energy Demonstration Project,

FONSI (April 2009). Installation of single 750-kilowatt wind turbine with maximum height of 230 feet.

- DOE/EA-1516: Environmental Assessment for the Proposed Clipper Windpower, Inc. Low Wind Speed Turbine Demonstration Project, Carbon County, Wyoming, FONSI (January 2005). Three-year demonstration of a wind turbine designed to produce electricity at low speed with maximum output of 2.5 megawatts.

(5) Shadow flicker as impact to be avoided:

The categorical exclusion refers to shadow flicker as an impact to be avoided. Interposition of turbines between observers and the sun, particularly in the early and late hours of the day and during the winter season when sun angles are low, could produce a strobe-like effect from flickering shadows cast by the moving rotors. At its most severe, shadow flicker would be temporary and limited to daylight hours; it may be significant, however, because of its motion and frequency.

According to NAS (2007, above), if a turbine is located too close to a highway, the movement of the large rotor blades and possible resulting flicker can distract drivers, and flickering lights have been proven to be a risk to those suffering from epilepsy and are known to be a cause of migraine headaches.

BLM (2005, above) and DOE/EA-1737 (above) also have identified the potential for significant impacts from shadow flicker to public safety. The project evaluated in DOE/EA-1737 incorporates proper set-back distances of the placement of turbines from occupied residences and other buildings that reflect an example of a best management practice that can avoid significant impact from the onset of project design.

(6) Noise as impact to be avoided:

The categorical exclusion also refers to noise as an impact to people to be considered through siting and design of a project. Sound is a result of fluctuating air pressure. Noise is any unwanted, undesirable sound and can occur in different volumes and pitches depending on the type of source and the distance from a receptor. NAS (2007, above) indicates that noise from wind turbines is most critical within a half-mile of a project. Noise arises mainly from two sources: (1) mechanical noise caused by the gearbox and generator; and (2) aerodynamic noise caused by interaction of the turbine blades with the wind (generally heard as a "whooshing sound" as the blades of the turbine rotate). While most modern wind turbines have been designed to significantly reduce the noise of mechanical components (Colby, et al, 2009, below), aerodynamic noise (BLM, 2005 and

	NAS, 2007, both above) may be avoided by incorporating best management practices, such as proper set-back distances of the placement of turbines from occupied residences and buildings, or adjusting operation of the turbine at typically quiet times (e.g., night). • Colby, W. David; Robert Dobie; Geoff Leventhall; David M. Lipscomb; Robert J. McCunney; Michael T. Seilo; and Bo Søndergaard, "Wind Turbine Sound and Health Effects: An Expert Panel Review, " December 2009. Prepared for: American Wind Energy Association and Canadian Wind Energy Association. http://www.awea.org/newsroom/releases/AWEA_CanWEA_SoundWhitePaper_12-11-09.pdf. This is a white paper written by a scientific advisory panel, established by the American Wind Energy Association and Canadian Wind Energy Association, and comprised of acoustic engineers and scientists. The panel undertook an extensive review, analysis, and discussion of peer-reviewed literature on sound and health effects in general, and on sound produced by wind turbines. In addition, wind-energy developers are required to meet local standards and/or noise regulations for acceptable sound levels. Acceptability standards for noise vary state and locality, and may vary with time of day (e.g., nighttime standards are generally stricter).
Proposed new categorical exclusion: B5.19 The installation, modification, operation, and removal of commercially available small-scale ground source heat pumps to support operations in single facilities (such as a school and community center) or contiguous facilities (such as an office complex) (1) only where major associated activities (such as drilling and discharge) are regulated, and appropriate leakage and contaminant control measures would be in place; (2) that would not have the potential to cause significant changes in subsurface temperature; and (3) would be located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. DOE experience with direct use geothermal heat pumps: • DOE/EA-1571: Ohio State University, 4-H Center with Green Building Technology, FONSI (December 2006). Activities include design and construction of a hybrid geothermal/cooling tower, ventilation, and cooling system. • DOE/EA-1396: Small-Scale Geothermal Power Plant and Direct-Use Geothermal Application at AmeriCulture Inc., FONSI (August 2002). Activities include direct-use of geothermal source for heating an aquaculture facility. Other Federal agency experience with direct use geothermal heat pumps: • Department of Defense (DoD), Report to Congress: Ground-Source Heat Pumps at Department of Defense Facilities (January 2007). This DoD report concluded ground-source heat pumps can be a cost effective alternative in new

	construction and retrofitting of facilities. • Environmental Protection Agency, A Manual on Environmental Issues Related to Geothermal Heat Pump Systems (1997). This manual describes the key environmental issues, applicable regulations and permitting, and principles of construction and operation of ground source heat pumps. National Park Service (NPS) Categorical Exclusion (DO12 3.4.C.16): Installation of underground utilities in areas showing clear evidence of recent human disturbance or areas within an existing road prism or within an existing overhead utility right-of-way.
Proposed new categorical exclusion: B5.20 The installation, modification, operation, and removal of small-scale biomass power plants (generally less than 10 megawatts), using commercially available technology (1) intended primarily to support operations in single facilities (such as a school and community center) or contiguous facilities (such as an office complex); (2) that would not affect the air quality attainment status of the area and would not have the potential to cause a significant increase in the quantity or rate of air emissions and would not have the potential to cause significant impacts to water resources; and (3) would be located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. • DOE/EA-1605: Environmental Assessment for Biomass Cogeneration and Heating Facilities at the Savannah River Site, FONSI (August 2008). Proposed facilities include two wood-fired boilers with backup oil-fired boiler capabilities. The proposed facilities, sited on an abandoned borrow pit, would produce from 6 to 15 megawatts of electricity for use at the Savannah River Site. • DOE/EA-1573: Three Site Development Projects at NREL- South Table Mountain, FONSI (July 2007). This EA analyzed construction of a small biomass heating plant to replace the existing natural gas system. The facility would operate as the primary winter heat source to the NREL research and support facilities, would not affect the air quality attainment status, and would be located adjacent to the existing facilities. • DOE/EA-1568: Environmental Assessment for the Replacement Source of Steam for A-Area at the Savannah River Site, FONSI (October 2006). New facilities include a wood-fired boiler and a backup oil-fired boiler replacing a coal-fired boiler. The existing facility produced more steam than the site demanded. A newer and more efficient facility that would meet new air quality standards in 2007 was proposed adjacent to the existing facility.
Proposed new categorical exclusion: B5.21 The installation, modification, operation, and removal of commercially available methane gas recovery and utilization systems installed within a previously disturbed or developed area on or contiguous to an existing landfill or wastewater treatment plant that would not have the potential to cause a	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble.

significant increase in the quantity or rate of air emissions. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	
Proposed new categorical exclusion: B5.22 The installation, modification, operation, and removal of alternative fuel vehicle fueling stations (such as for compressed natural gas, hydrogen, ethanol and other commercially available biofuels) on the site of a current or former fueling station, or within a previously disturbed or developed area within the boundaries of a facility managed by the owners of a vehicle fleet. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. • DOE/EA-1620: Burbank Hydrogen Fueling Station Project Final Environmental Assessment, FONSI (August 2008). Removal and replacement of existing hydrogen fueling station with upgraded hydrogen fueling station; analysis also includes operation of the fueling station.
Proposed new categorical exclusion: B5.23 The installation, modification, operation, and removal of electric vehicle charging stations, using commercially available technology, within a previously disturbed or developed area. Covered actions are limited to areas where access and parking are in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble.
Proposed new categorical exclusion: B5.24 The installation, modification, operation, and removal of commercially available small-scale, drop-in, run-of-the-river hydroelectric systems that would (1) involve no water storage or water diversion from the stream or river channel where the system is installed and (2) not have the potential to cause significant impacts on water quality, temperature, flow, or volume. Covered systems would be located up-gradient of a	Discussion of the proposed categorical exclusion is provided in Section IV.E of the Preamble. This categorical exclusion was developed based on the input of DOE staff biologists and with the input of fish biologists, each having more than 20 years regulatory and fisheries management experience, and experience in areas of the country where hydroelectricity production is common. The term “run-of-the-river” as used in this categorical exclusion refers to hydroelectric systems that are fully dependent on the natural flow of the river at the point of system installation. These systems would have no water storage in an impoundment or

natural anadromous fish barrier and where there would not be the potential for significant impacts to threatened or endangered species. Covered actions would involve no major construction or modification of stream or river channels, and the hydroelectric systems would be placed and secured in the channel without the use of heavy equipment. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.	otherwise, and would involve no water diversion from the stream or river channel where the system is installed, either through a pipe, tunnel, unlined or lined canal or trench, or other conveyance. The amount of electricity produced by "run-of-the-river" systems in this categorical exclusion would be solely influenced by the naturally available water flow in the stream or river, which may fluctuate hourly, daily, and seasonally. The term "drop-in" as used in this categorical exclusion refers to systems that are prefabricated and placed into the river, rather than constructing a dam or other structure on-site. The term "small-scale" in this categorical exclusion means that these actions would involve no stream or river channel modification, and that the hydroelectric systems would be placed and secured in the channel without the use of heavy equipment. The limitations in the categorical exclusion define its scope so as to prevent changes in water flow rate or volume, water temperature, or sediment movement that would be substantial enough to result in direct, indirect, or cumulatively significant affects to fish, wildlife, habitat, and ecologically important processes. For example, impounding water behind a hydroelectric system can result in water flow changes that can affect the ability of adult anadromous fish or other aquatic species to access their spawning areas. Flow changes can also increase or reduce sediment flushing that: is important for the survival of some aquatic species' eggs; can alter the occurrence of in-channel or off-channel pool size where juveniles forage and take cover; can cause a change in water temperature that could affect egg, juvenile, or adult survivability; and can affect the downstream movement of juveniles, ultimately resulting in their being trapped due to natural, low seasonal flows. These direct effects can lead to indirect effects to other aquatic or terrestrial species, including birds that feed on directly affected species. Cumulative effects can occur at a lower elevation in a given hydrological system, either on the same stream or river, or on a main stem river supplied by affected streams or rivers, due to combined flow effects. To further ensure no significant effects occur, actions in this categorical exclusion would be implemented only upstream of a natural anadromous fish barrier (a waterfall that has historically prevented anadromous fish passage), because many anadromous fish are listed as threatened or endangered under the Federal Endangered Species Act or state equivalent. In regions of the United States where anadromous fish occur, much of the naturally accessible stream mileage is used by one or more species of anadromous fish for reproduction and juvenile rearing, or may be used as a species begins to recover and its population size and use of available habitat increases. The effects of small hydroelectric generation systems in these areas would have the potential to result in individually or cumulatively significant effects to threatened or

	endangered anadromous fish, due to physical injury of adults or juveniles (such as entrainment in turbines), or disruption or degradation of spawning areas. Stream and river mileage upstream of natural fish barriers would not present such concerns. This categorical exclusion was developed in part with input from environmental professionals with experience in areas of the United States where hydroelectricity production is common, including: • Kevin Maurice: 26 years research and regulatory experience, including 8 years endangered species research experience with a Federal Agency, and 16 years Federal regulatory and conservation work including Endangered Species Act consultations and habitat conservation plan development, dealing with effects to aquatic environments and species; Bachelor of Science in Forest Biology, with a dual wildlife and fisheries major, State University of New York, College of Environmental Science and Forestry. • Jon Hale: 25 years research, regulatory and applied biology experience, including 1 year of aquaculture experience and 24 years researching, assessing, and managing effects to fish and wildlife and their habitats (as a result of private and governmental actions, across the contiguous United States, Alaska, Hawaii, and Pacific islands, territories, and nations); Bachelor of Science in Marine Biology, Texas A&M University at Galveston.
Proposed new categorical exclusion: B5.25 Small-scale renewable energy research and development projects and small-scale pilot projects located in salt water and freshwater environments. Activities would be in accordance with, where applicable, an approved spill prevention, control, and response plan, and would incorporate appropriate control technologies and best management practices. Covered actions would not occur (1) within areas of hazardous natural bottom conditions or (2) within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity (such as protected areas and other areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may	Technical Support Memorandum and Appendices provided by ARPA-E.

	vary seasonally), or outside those areas if the activities would have the potential to cause significant impacts within those areas. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells, use of large-scale vibratory coring techniques, or seismic activities other than passive techniques.	
B6	**Categorical Exclusions Applicable to Environmental Restoration and Waste Management Activities**	
B6.1	Small-scale, short-term cleanup actions, under RCRA, Atomic Energy Act, or other authorities, less than approximately ~~5~~ 10 million dollars in cost ~~and 5 years duration~~, to reduce risk to human health or the environment from the release or threat of release of a hazardous substance other than high-level radioactive waste and spent nuclear fuel, including treatment (~~e.g.,~~such as incineration, encapsulation, physical or chemical separation, and compaction), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the action. These actions include, but are not limited to: (a) Excavation or consolidation of contaminated soils or materials from drainage channels, retention basins, ponds, and spill areas that are not receiving contaminated surface water or wastewater, if surface water or groundwater would not collect and if such actions would reduce the spread of, or direct contact with, the contamination; (b) Removal of bulk containers (~~for example~~such as~~,~~ drums and~~,~~ barrels) that contain or may contain hazardous substances, pollutants, contaminants, CERCLA-excluded petroleum or natural gas products, or hazardous wastes (designated in 40 CFR part 261 or applicable state requirements), if such actions would reduce the likelihood of spillage, leakage, fire, explosion, or exposure to humans, animals, or the food chain; (c) Removal of an underground storage tank including its	Discussion of the proposed changes is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

associated piping and underlying containment systems in ~~compliance with~~accordance with applicable requirements (such as RCRA, subtitle I; 40 CFR part 265, subpart J; and 40 CFR part 280, subparts F and G) if such action would reduce the likelihood of spillage, leakage, or the spread of, or direct contact with, contamination;

(d) Repair or replacement of leaking containers;

(e) Capping or other containment of contaminated soils or sludges if the capping or containment would not ~~affect~~unduly limit future groundwater remediation and if needed to reduce migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products into soil, groundwater, surface water, or air;

(f) Drainage or closing of man-made surface impoundments if needed to maintain the integrity of the structures;

(g) Confinement or perimeter protection using dikes, trenches, ditches, or diversions, or installing underground barriers, if needed to reduce the spread of, or direct contact with, the contamination;

(h) Stabilization, but not expansion, of berms, dikes, impoundments, or caps if needed to maintain integrity of the structures;

(i) Drainage controls (~~for example,~~such as run-off or run-on diversion) if needed to reduce offsite migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum or natural gas products or to prevent precipitation or run-off from other sources from entering the release area from other areas;

(j) Segregation of wastes that may react with one another or form a mixture that could result in adverse environmental impacts;

(k) Use of chemicals and other materials to neutralize the pH of wastes;

(l) Use of chemicals and other materials to retard the spread of the release or to mitigate its effects if the use of such chemicals would reduce the spread of, or direct contact with, the contamination;

(m) Installation and operation of gas ventilation systems in soil

	to remove methane or petroleum vapors without any toxic or radioactive co-contaminants if appropriate filtration or gas treatment is in place; (n) Installation of fences, warning signs, or other security or site control precautions if humans or animals have access to the release; and (o) Provision of an alternative water supply that would not create new water sources if necessary immediately to reduce exposure to contaminated household or industrial use water and continuing until such time as local authorities can satisfy the need for a permanent remedy.	
B6.2	The siting, construction, and operation of temporary (generally less than 2 years) pilot-scale waste collection and treatment facilities, and pilot-scale (generally less than ~~one~~ 1 acre) waste stabilization and containment facilities (including siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis~~) if~~), provided that the action~~:~~ (1) ~~S~~supports remedial investigations/feasibility studies under CERCLA, or similar studies under RCRA~~,~~ (such as RCRA facility investigations/corrective measure studies~~,~~) or other authorities~~,~~ and (2) would not unduly limit the choice of reasonable remedial alternatives (such as by permanently altering substantial site area or by committing large amounts of funds relative to the scope of the remedial alternatives).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B6.3	Improvements to environmental monitoring and control systems of an existing building or structure (~~for example,~~such as changes to scrubbers in air quality control systems or ion-exchange devices and other filtration processes in water treatment systems~~) if~~), provided that during subsequent operations (1) any substance collected by the environmental control systems would be recycled, released, or disposed of within existing permitted facilities and (2) there are applicable statutory or regulatory requirements or permit conditions for disposal, release, or recycling of any hazardous substance or CERCLA-excluded petroleum or natural gas products that are collected or released in increased quantity or that were not previously collected or released.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.

B6.4	Siting, construction ~~(or,~~ modification ~~or,~~ expansion~~)~~, operation, and decommissioning of an onsite facility for storing packaged hazardous waste (as designated in 40 CFR part 261) for 90 days or less or for longer periods as provided in 40 CFR 262.34 ~~(~~d), (e), or (f) (~~e.g.,~~such as accumulation or satellite areas).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B6.5	Siting, construction ~~(or,~~ modification ~~or,~~ expansion~~)~~, operation, and decommissioning of an onsite facility for characterizing and sorting previously packaged waste or for overpacking waste, other than high-level radioactive waste, ~~if~~provided that operations do not involve unpacking waste. These actions do not include waste storage (covered under B6.4, B6.6, B6.10 of this appendix, and C16 of appendix C) or the handling of spent nuclear fuel.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
~~B6.7~~ ~~Under the Low-Level Radioactive Waste Policy Amendments Act of 1985 (5(c)(5)), granting of a petition qualified under 10 CFR 730.6 for allocation of commercial disposal capacity for an unusual or unexpected volume of commercial low-level radioactive waste or denying such a petition when adequate storage capacity exists at the petitioner's facility.~~ B6.7 [Reserved]		Discussion of the proposed change is provided in Section IV.E of the Preamble.
B6.10	Siting, construction ~~(or,~~ modification~~)~~, expansion, operation, and decommissioning of a small upgraded or replacement facility (less than approximately 50,000 square feet in area) ~~at a DOE site~~ within or contiguous to ~~an already~~a previously disturbed or developed area (where active utilities and currently used roads are readily accessible) for storage of waste that is already at the site at the time the storage capacity is to be provided. These actions do not include the storage of high-level radioactive waste, spent nuclear fuel or any waste that requires special precautions to prevent nuclear criticality. (See also B6.4, B6.5, B6.6 of this appendix, and C16 of appendix C.)	Discussion of the proposed change is provided in Section IV.E of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
B7	**Categorical Exclusions Applicable to International Activities**	
B7.2	Approval of import or export of small quantities of special nuclear materials or isotopic materials in accordance with	Recurring proposals for subpart D are described in Section IV.B of the Preamble.

applicable requirements (such as the Nuclear Non-Proliferation Act of 1978 and the "Procedures Established Pursuant to the Nuclear ~~Non~~ Non-Proliferation Act of 1978" (43 FR 25326, June 9, 1978)).	
Appendix C	
~~C2 Rate increases for products or services marketed by DOE, except for electric power, power transmission, and other products or services provided by the Power Marketing Administrations, and approval of rate increases for non-DOE entities, that exceed the change in the overall price level in the economy (inflation), as measured by the GNP fixed weight price index published by the Department of Commerce, during the period since the last rate increase for that product or service.~~ C2 [Reserved]	Discussion of the proposed changes is provided in Section IV.F of the Preamble.
C4 Upgrading or rebuilding more than approximately 20 miles in length of existing electric transmission lines; or construction of electric transmission lines (1) more than approximately 10 miles in length outside previously disturbed or developed transmission line or pipeline rights-of-way or (2) more than approximately 20 miles in length within previously disturbed or developed transmission line or pipeline rights-of-way. ~~Reconstructing (upgrading or rebuilding) existing electric powerlines more than approximately 20 miles in length or constructing new electric powerlines more than approximately 10 miles in length.~~	Discussion of the proposed changes is provided in Section IV.F of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
C7 Establishment and implementation of contracts, policies, and marketing and allocation plans related to electric power acquisition or transmission ~~, or allocation plans for the allocation of electric power~~ that ~~do not~~ involve (1) the interconnection of, or acquisition of power from, ~~addition of~~ new generation resources ~~greater~~ that are equal to or less than 50 average megawatts and that would not be eligible for categorical exclusion under this part~~.~~; (2) ~~major~~ changes in the normal	Discussion of the proposed changes is provided in Section IV.F of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

	operating limits of generation resources ~~greater~~ equal to or less than 50 average megawatts~~,~~; or (3) service to discrete new loads of less than10 average megawatts ~~or more~~ over a ~~12~~ 12-month period. ~~This applies to power marketing operations and to siting, construction, and operation of power generating facilities at DOE sites.~~	
C8	Large-scale activities undertaken to protect cultural resources (such as fencing, labeling, and flagging) or to protect, restore, or improve fish and wildlife habitat, fish passage facilities (such as fish ladders and minor diversion channels), or fisheries.~~Protection, restoration, or improvement of fish and wildlife habitat, fish passage facilities, and fish hatcheries if the proposed action may adversely affect an environmentally sensitive resource.~~	Discussion of the proposed changes is provided in Section IV.F of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
C11	Siting, construction ~~(~~or modification~~)~~, operation, and decommissioning of ~~a~~ low- or medium-energy (~~but greater than~~when the primary beam energy exceeds approximately 100 million electron volts~~MeV primary beam energy~~and the average beam power exceeds approximately 250 kilowatts or where the average current exceeds 2.5 milliamperes) particle acceleration facilities~~y~~, including electron beam acceleration facilities, and associated beamlines, storage rings, colliders, and detectors for research and medical purposes, within or contiguous to ~~an already~~a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).	Discussion of the proposed changes is provided in Section IV.F of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
C12	Siting, construction, and operation of energy system ~~prototypes~~ demonstration actions (including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy, but excluding nuclear). ~~pilot projects.~~ For purposes of this category, "demonstration actions" means actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment. Demonstration actions frequently follow research and development and pilot projects that are directed at establishing proof of concept.	Discussion of the proposed changes is provided in Section IV.F of the Preamble.

C13	Approvals or disapprovals of ~~an application~~authorizations to import~~/~~ or export natural gas under section 3 of the Natural Gas Act involving minor new construction ~~(other than a cogeneration powerplant),~~ (such as adding new connections, looping, or compression to an existing natural gas ~~pipeline~~ or liquefied natural gas pipeline, or converting an existing oil pipeline to a natural gas pipeline using the same right-of-way~~.~~).	Discussion of the proposed changes is provided in Section IV.F of the Preamble.
C15	Siting, construction (or expansion), and operation of research and development incinerators for any type of waste and of any other incinerators that would treat nonhazardous solid waste (as designated in 40 CFR ~~Part~~ 261.4(b)).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
C16	Siting, construction, ~~(or~~ modification to increase capacity~~)~~, operation, and decommissioning of packaging and unpacking facilities (~~that may include~~such as characterization operations) and large storage facilities (greater than approximately 50,000 square feet in area) for waste, except high-level radioactive waste, generated onsite or resulting from activities connected to site operations. These actions do not include storage, packaging, or unpacking of spent nuclear fuel. (See also B6.4, B6.5, B6.6, and B6.10 of appendix B.)	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
Appendix D		
D1	Strategic Systems, as defined in DOE Order 430.1, "Life-Cycle Asset Management" or its successor, and designated by the Secretary.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
~~D5~~	~~Main transmission system additions (that is, additions of new transmission lines) to a Power Marketing Administration's main transmission grid.~~ D5 [Reserved]	Discussion of the proposed changes is provided in Section IV.G of the Preamble. The following documents illustrate that impacts from electric transmission facilities and lines may be mitigated to be non-significant. Therefore, the level of NEPA review for transmission facilities and lines that are not categorically excluded is at least an EA level, but does not necessarily warrant an EIS level. • DOE/EIS-0389: Trinity Public Utilities District Direct Interconnection Project, Record of Decision (ROD) (January 2008), Mitigation Action Plan (MAP). The EIS analyzed impacts from improvements to power system reliability in Trinity County, California, by Western's action to remove about 5.3 miles of

existing 12-kV distribution line, and construct, operate, and maintain about 16 miles of new 60-kV transmission line, a three-way switching structure and associated equipment, and a new switchyard. The EIS identified best management practices and mitigation measures, all of which were committed to in the ROD and Western's Mitigation Action Plan (MAP). The ROD stated that, with implementation of those requirements and measures, all identified potential impacts would be reduced to less than significant levels.

- DOE/EIS-0323-S: Sacramento Area Voltage Support Project, ROD (May 2008), MAP. This EIS analyzed construction of a new double-circuit, 230-kilovolt (kV) transmission line, approximately 31 miles long, between Western's O'Banion Substation and the area just south of the Sacramento Municipal Utility District's (SMUD) Elverta Substation and reconstruction of SMUD's existing 230 kV/115 kV transmission line between SMUD's Elverta and Natomas substations into a double-circuit 230 kV line. The ROD stated that Western has proactively developed Environmental Protection Measures (EPMs) to protect sensitive resources in the field and the EPMs would be implemented as part of the Project. Western developed 104 EPMs to reduce environmental consequences associated with construction and operation activities. Western determined environmental consequences based on the assumption that all EPMs would be fully implemented. These EPMs ensure that environmental harm from building the Project will be avoided or minimized. In addition to EPMs already developed, Western would incorporate mitigation measures identified during consultation with appropriate agencies. All recommended mitigation measures from applicable air districts would be applied to the project. Therefore, no significant direct, indirect, or cumulative effects would result from any of the alternatives analyzed in the EIS.
- DOE/EIS-0294: Sutter Power Project, ROD (May 1999), MAP. This EIS analyzed the direct interconnection of Calpine Corporation's (Calpine) proposed Sutter Power Project (SPP), a geothermal facility, with Western's electric transmission system. These facilities include a natural gas pipeline, new switching station, and approximately 4 miles of new 230-kilovolt (kV) transmission line. As the ROD stated, Western has determined that no significant environmental impacts will result from the construction, operation, and maintenance of the SPP or its ancillary facilities. With the 165 mitigation measures adopted, the Project will not have a significant effect on any portion of the human environment.
- DOE/EA-1425: BPA/Raymond-Cosmopolis Transmission Line Rebuild

		Project, FONSI (August 2003), MAP. The EA analyzed the rebuild of, and addition of fiber optic cable to, the Raymond–Cosmopolis 115-kV, 18.3 mile long transmission line, located in Pacific and Grays Harbor Counties in Washington. Based on the analysis in the EA and the mitigation that will be implemented to reduce adverse impacts, there would be no significant impacts to the following: land use, geology and soil, vegetation, wildlife, water quality, wetlands and floodplains, visual quality, air quality, socioeconomics, cultural resources, and health and safety. The MAP includes some measures that are essential to render the impacts of the proposed action not significant and other measures that will decrease impacts that did not reach the level to be considered significant.
~~D6~~	~~Integrating transmission facilities (that is, transmission system additions for integrating major new sources of generation into a Power Marketing Administration's main grid).~~ D6 [Reserved]	See explanation for D5, above.
D7	Establishment and implementation of contracts, policies, and marketing and allocation plans ~~or~~related to electric power acquisition or transmission ~~allocation plans for the allocation of electric power~~ that involve (1) the interconnection of, or acquisition of power from, ~~addition of~~ new generation resources greater than 50 average megawatts~~,~~; (2) ~~major~~ changes in the normal operating limits of generation resources greater than 50 average megawatts~~,~~; or (3) service to discrete new loads of 10 average megawatts or more over a ~~12~~ 12-month period. ~~This applies to power marketing operations and to siting, construction, and operation of power generating facilities at DOE sites.~~	Discussion of the proposed changes is provided in Section IV.G of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
D8	Approvals or disapprovals ~~or disapproval~~ of ~~an applications~~authorizations to import or ~~/~~export natural gas under section 3 of the Natural Gas Act involving ~~major new natural gas pipeline~~ construction of major new natural gas pipelines or related facilities~~,~~ (such as ~~construction of new liquid~~ liquefied natural gas ~~(LNG)~~ terminals~~,~~ and regasification or storage facilities)~~,~~ or ~~a~~ significant expansions and modifications of ~~an~~ existing pipelines or related ~~facility or LNG terminal, regasification, or storage facility~~facilities~~.~~).	Discussion of the proposed changes is provided in Section IV.G of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.

D9	Approvals or disapprovals ~~or disapproval~~ of ~~an application~~authorizations to import or ~~/~~export natural gas under section 3 of the Natural Gas Act involving ~~a significant~~ major operational changes~~,~~ (such as a major increase in the quantity of ~~liquid~~ liquefied natural gas imported or exported~~.~~).	Discussion of the proposed changes is provided in Section IV.G of the Preamble. Recurring proposals for subpart D are described in Section IV.B of the Preamble.
D10	Siting, construction, operation, and decommissioning of major treatment, storage, and disposal facilities for high-level waste and spent nuclear fuel, including geologic repositories, but not including onsite replacement or upgrades of storage facilities for spent nuclear fuel at DOE sites where such replacement or upgrade ~~will~~ would not result in increased storage capacity.	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
D11	Siting, construction ~~(~~ or expansion~~)~~, and operation of ~~a~~ disposal ~~facility~~ facilities for transuranic (TRU) waste and TRU mixed waste (TRU waste also containing hazardous waste as designated in 40 CFR part 261).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.
D12	Siting, construction, and operation of incinerators, other than research and development incinerators or incinerators for nonhazardous solid waste (as designated in 40 CFR ~~part~~ 261.4(b)).	Recurring proposals for subpart D are described in Section IV.B of the Preamble.