

# Memorandum

DATE: November 12, 1997  
REPLY TO  
ATTN OF: Office of NEPA Policy and Assistance: Daniel: 6-4600  
SUBJECT: Environmental Impact Statement Checklist  
TO: Secretarial Officers and Heads of Field Offices

This memorandum transmits a Department of Energy (DOE) Environmental Impact Statement Checklist to assist DOE employees and contractors in meeting the requirements of the National Environmental Policy Act (NEPA). A draft of the EIS Checklist was distributed for review and comment on June 11, 1997, and was discussed at the DOE NEPA Community Meeting in Albuquerque, NM, on June 25, 1997. We greatly appreciate the comments and suggestions we received on the draft. The Office of NEPA Policy and Assistance prepared the checklist in consultation with the Office of General Counsel.

Although there is no requirement to use this checklist, we believe it is a useful tool that may provide cost- and time-saving benefits in the preparation and review of DOE environmental impact statements. Nevertheless, a checklist approach has certain inherent limitations, as discussed on page 1 of both this EIS Checklist and the Environmental Assessment Checklist (issued August 1994). Some NEPA practitioners may find this checklist has limited utility for the highly variable, analytical process of environmental analysis, while others may find this checklist useful to remind them, in a consistent format, of applicable requirements and recommendations. When this checklist is used, it should be only one tool among many.

Practitioners may modify this checklist as they desire to suit particular needs. Accordingly, the Office of NEPA Policy and Assistance will shortly provide copies of this checklist in electronic format to DOE NEPA Compliance Officers, who may distribute copies further as they see fit. In any modified versions, however, the discussion on page 1 should be retained as an integral part of the checklist. We ask further that those who modify the checklist identify themselves on the checklist to establish ownership and accountability.

Comments on this checklist may be directed to Jim Daniel, Leader, Defense/Nuclear Unit, Office of NEPA Policy and Assistance at (202) 586-9760.



Peter N. Brush  
Acting Assistant Secretary  
Environment, Safety and Health

Attachment

cc: Distribution

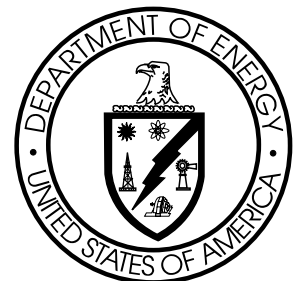
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# **ENVIRONMENTAL IMPACT STATEMENT CHECKLIST**

**U.S. Department of Energy  
Office of Environment, Safety and Health  
Office of NEPA Policy and Assistance**

**November 1997**



# DOE ENVIRONMENTAL IMPACT STATEMENT CHECKLIST

## PREFACE

The Department of Energy (DOE) Office of NEPA Policy and Assistance has developed the attached checklist as an aid in preparing and reviewing DOE Environmental Impact Statements (EISs), prepared pursuant to the National Environmental Policy Act (NEPA). Checklist questions are based on NEPA, the Council on Environmental Quality (CEQ) NEPA Regulations (40 CFR Parts 1500-1508), DOE NEPA Regulations (10 CFR Part 1021), the DOE Office of Environment, Safety and Health's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" ("Recommendations"), other CEQ and DOE guidance, and related federal environmental, safety, and health laws and regulations.

The checklist consists of two parts: List 1 – General, and List 2 – Specific Resources. Abbreviations, acronyms, and references can be found at the end of List 2. While the questions in List 1 follow CEQ's recommended format for EISs, other formats may be used if DOE determines there is a compelling reason to do so (40 CFR 1502.10). Both lists provide columns for "yes," "no," and not applicable ("N/A") responses. If desired, notes on document adequacy and other comments can also be entered. The questions are phrased so that a "yes" answer is preferable to a "no" answer. Not all questions will apply to all EISs; the checklist should be adapted according to the particular circumstances. Consider also the use of the "sliding scale" approach (see "Recommendations").

Use of this checklist is optional. Modification of this checklist is encouraged to suit the needs of a particular office or program. In particular, users may wish to revise or add to the resource questions in List 2. In all modified versions, however, the title page discussion (page 1) should be retained as an integral part of the checklist. Further, those who modify the checklist should identify themselves on the checklist to establish ownership and accountability.



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## DOE ENVIRONMENTAL IMPACT STATEMENT CHECKLIST

**Document Title:**

**Reviewed By:**

**Document Number:**

**Office/Phone:**

**Document Date:**

**Date:**

Attached is a checklist to aid in preparing and reviewing DOE Environmental Impact Statements (EISs), prepared pursuant to the National Environmental Policy Act (NEPA). Like any checklist, it has both value and limits.

On one hand, a checklist may help EIS preparers and reviewers to:

- avoid overlooking required or recommended items;
- identify needed analyses and discussions;
- provide a record of an internal review.

On the other hand, NEPA analysis cannot be reduced to a single formula or checklist. Each DOE proposal presents unique circumstances and potential impacts. This checklist should be applied carefully because:

- a single checklist cannot be comprehensive or complete for all circumstances;
- it does not supersede legal requirements or applicable guidance;
- it alone cannot ensure that the EIS will be adequate under, and in full compliance with, NEPA and associated federal laws and regulations;
- addressing generic items in a checklist format may not lead to a sufficiently rigorous analysis of potential impacts of a proposed action in all cases;
- checklist items are not necessarily of equal importance or weight.

This EIS checklist is not intended to promote the rote generation of standardized documentation. It should not be relied upon as the only way to build quality into a DOE EIS. Like other tools of this type, it does not replace good judgment or sound analysis.

**DOE ENVIRONMENTAL IMPACT STATEMENT CHECKLIST<sup>1</sup>**

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
<b>1.1.0 COVER SHEET</b>					
1.1.1 Does the cover sheet include: a list of responsible agencies, including the lead agency and any cooperating agencies? the title of the proposed action and its location (state(s), county(ies), other jurisdiction)? the name(s), address(es), and telephone number(s) of a person (or persons) to contact for further information (on the general DOE NEPA process and on the specific EIS)? the EIS designation as draft, final, or supplemental?  a one-paragraph abstract of the EIS? for a draft EIS, the date by which comments must be received? [40 CFR 1502.11]					
1.1.2 Is the cover sheet one page in length? [40 CFR 1502.11]					
<b>1.2.0 SUMMARY</b>					
1.2.1 Does the summary describe: the underlying purpose and need for agency action? the proposed action? each of the alternatives? the preferred alternative, if any? the principal environmental issues analyzed and results? [Recommendations, p.3]					
1.2.2 Does the summary highlight key differences among the alternatives? [Recommendations, p.3]					
1.2.3 Does the summary stress: the major conclusions? areas of controversy (including issues raised by agencies and the public)? the issues to be resolved (including the choice among alternatives)? [40 CFR 1502.12]					

<sup>1</sup> See list of Abbreviation and Acronyms, p.22.  
See list of References, p.23-25.

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.2.4 Are the discussions in the Summary consistent with the EIS text or appendices?					
1.2.5 Does the summary adequately and accurately summarize the EIS? [40 CFR 1502.12; Recommendations, p.3] <sup>2</sup>					
<b>1.3.0 PURPOSE AND NEED FOR ACTION</b>					
1.3.1 Does the EIS specify the underlying purpose and need to which DOE is responding in proposing the alternatives including the proposed action? [40 CFR 1502.13]					
1.3.2 Does the statement of purpose and need relate to the broad requirement or desire for <i>DOE</i> action, and not to the need for one specific proposal or the need for the EIS? [Recommendations, p.4]					
1.3.3 Does the statement of purpose and need adequately explain the problem or opportunity to which DOE is responding? [Recommendations, p.5]					
1.3.4 Is the statement of purpose and need written so that it (a) does not inappropriately narrow the range of reasonable alternatives, or (b) is not too broadly defined as to make the number of alternatives virtually limitless? [Recommendations, p.5]					
<b>1.4.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES</b>					
1.4.1 Does the EIS clearly describe the proposed action and alternatives? [Recommendations, p.6]					
1.4.2 Is the proposed action described in terms of the <i>DOE</i> action to be taken (even a private action that has been federalized or enabled by funding)? [Recommendations, p.8]					
1.4.3 Does the proposed action exclude elements that are more appropriate to the statement of purpose and need? [Recommendations, p.8]					
1.4.4 Does the EIS identify the range of reasonable alternatives that satisfy the agency's purpose and need? [Recommendations, p.10]					
1.4.5 Does the EIS "rigorously explore and objectively evaluate" all reasonable alternatives that encompass the range to be considered by the decision maker? [40 CFR 1502.14(a); Recommendations, p.9]					

<sup>2</sup> "Recommendations" refers to guidance entitled "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" issued by the Assistant Secretary for Environment, Safety and Health, May 1993).

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.4.6a For a <i>draft</i> EIS, does the document indicate whether a preferred alternative(s) exists, and, if so, is it identified? [40 CFR 1502.14(e)]					
1.4.6b For a <i>final</i> EIS, is the preferred alternative identified? [40 CFR 1502.14(e)]					
1.4.7 Does the EIS include the no action alternative? [40 CFR 1502.14(d); Recommendations, p.11]					
1.4.8 Is the no action alternative described in sufficient detail so that its scope is clear and potential impacts can be identified? [Recommendations, p.11]					
1.4.9 Does the no action alternative include a discussion of the legal ramifications of no action, if appropriate? [Recommendations, p.11]					
1.4.10 As appropriate, does the EIS identify and analyze reasonable technology, transportation, and siting alternatives, including those that could occur off-site? [Recommendations, p.10]					
1.4.11 Does the EIS include reasonable alternatives outside of DOE's jurisdiction? [40 CFR 1502.14(c); Recommendations, p.10]					
1.4.12 For alternatives that were eliminated from detailed study, including those that appear obvious or were identified by the public, does the EIS explain fully and objectively why they were found to be unreasonable? [40 CFR 1502.14(a); Recommendations, p.10]					
1.4.13 For each alternative analyzed in detail (including the no action alternative), is the depth of analysis approximately the same, allowing reviewers to evaluate their comparative merits? [40 CFR 1502.14(b); Recommendations, p.10]					
1.4.14 Are the proposed action and alternatives described in sufficient detail so that potential impacts can be identified? [Recommendations, p.7]					
1.4.15 Are all phases of the proposed action and alternatives described (e.g., construction, operation, and post-operation/decommissioning)? [Recommendations, p.7]					
1.4.16 Are environmental releases associated with the proposed action and alternatives quantified, including both the rates and durations? [Recommendations, p.7]					
1.4.17 As appropriate, are mitigation measures included in the description of the proposed action and alternatives? [40 CFR 1502.14(f); Recommendations,					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
p.8]					



LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.4.18 Are cost-effective waste minimization and pollution prevention activities included in the description of the proposed action and alternatives? [Recommendations, p.6]					
1.4.19 As appropriate, are environmentally and economically beneficial landscape practices included in the description of the proposed action and alternatives? [60 FR 40837]					
1.4.20 Are the descriptions of the proposed action and alternatives written broadly enough to encompass future modifications? [Recommendations, p.8]					
1.4.21 Does the proposed action comply with CEQ regulations for interim actions? [40 CFR 1506.1]					
1.4.22 Does the EIS take into account relationships between the proposed action and other actions to be taken by the agency in order to avoid improper segmentation? [Recommendations, p.12]					
<b>1.5.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT</b>					
1.5.1 Does the EIS succinctly describe the environment of the area(s) to be affected or created by the proposed action and alternatives? [40 CFR 1502.15]					
1.5.2 Does the EIS <i>identify either the presence or absence</i> of the following within the area potentially affected by the proposed action and alternatives: floodplains? [EO 11988; 10 CFR 1022]					
wetlands? [EO 11990; 10 CFR 1022; 40 CFR 1508.27(b)(3)]					
threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species? [16 USC 1531; 40 CFR 1508.27(b)(9)]					
prime or unique farmland? [7 USC 4201; 7 CFR 658; 40 CFR 1508.27(b)(3)]					
state or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance? [40 CFR 1508.27(b)(3)]					
wild and scenic rivers? [16 USC 1271; 40 CFR 1508.27(b)(3)]					
natural resources (e.g., timber, range, soils, minerals, fish, migratory birds, wildlife, water bodies, aquifers)? [40 CFR 1508.8] <i>(continued)</i>					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
property of historic, archaeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks)? [EO 11593; 16 USC 470; 36 CFR 800; 40 CFR 1508.27(b)(3) and (8)]					
Native Americans' concerns? [EO 13007; 25 USC 3001; 16 USC 470; 42 USC 1996]					
minority and low-income populations (including a description of their use and consumption of environmental resources)? [EO 12898]					
1.5.3 Does the description of the affected environment provide the necessary information to support the impact analysis, including cumulative impact analysis? [40 CFR 1502.15; Recommendations, p.14]					
1.5.4 Are the descriptions of the affected environment substantially consistent with current site baseline studies (e.g., descriptions of plant communities, wildlife habitat, and cultural resources)?					
1.5.5 Is the discussion appropriately limited to information that is directly related to the scope of the proposed action and alternatives? [40 CFR 1502.15; Recommendations, p.14]					
1.5.6 Is the extent of each component of the affected environment appropriately described with respect to potential impacts (e.g., the affected environment for transportation impacts may be more extensive than that for groundwater impacts)? [Recommendations, p.14]					
1.5.7 Does the EIS avoid useless bulk and verbose descriptions of the affected environment and concentrate on important issues? [40 CFR 1502.15]					
<b>1.6.0 ENVIRONMENTAL EFFECTS</b>					
1.6.1 Does the EIS adequately identify the direct and the <i>indirect</i> impacts of the proposed action and alternatives and discuss their significance? [40 CFR 1502.16(a) and (b); Recommendations, p.17]					
1.6.2 Does the EIS adequately analyze both short-term and long-term effects?					
1.6.3 Does the EIS analyze both beneficial and adverse impacts? [40 CFR 1508.27(b)(1)]					
1.6.4 Does the EIS discuss reasonably foreseeable impacts					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
of cumulative actions with regard to both the proposed action and alternatives? [40 CFR 1508.25(a)(2) and Recommendations, p.17]					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
<p>1.6.5 Does the EIS discuss the potential direct, indirect, and cumulative effects to the following, as identified in Question 1.5.2:</p> <p>floodplains? [EO 11988; 10 CFR 1022]</p> <p>wetlands? [EO 11990; 10 CFR 1022; 40 CFR 1508.27(b)(3)]</p> <p>threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species? [16 USC 1531; 40 CFR 1508.27(b)(9)]</p> <p>prime or unique farmland? [7 USC 4201; 7 CFR 658; 40 CFR 1508.27(b)(3)]</p> <p>state or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance? [40 CFR 1508.27(b)(3)]</p> <p>wild and scenic rivers? [16 USC 1271; 40 CFR 1508.27(b)(3)]</p> <p>natural resources (e.g., timber, range, soils, minerals, fish, migratory birds, wildlife, water bodies, aquifers)? [40 CFR 1508.8]</p> <p>property of historic, archaeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks)? [EO 11593; 16 USC 470; 36 CFR 800; 40 CFR 1508.27(b)(3) and (8)]</p> <p>Native Americans' concerns? [EO 13007; 25 USC 3001; 16 USC 470; 42 USC 1996]</p> <p>minority and low-income populations to the extent that such effects are disproportionately high and adverse? [EO 12898]</p>					
<p>1.6.6 Does the EIS discuss:</p> <p>possible conflicts with land use plans, policies, or controls? [40 CFR 1502.16(c)]</p>					
<p>energy requirements and conservation potential of</p>					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
various alternatives and mitigation measures? [40 CFR 1502.16(e)]					
natural or depletable resource requirements and conservation potential of the proposed action and alternatives? [40 CFR 1502.16(f)] <i>(continued)</i>					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
urban quality, historic, and cultural resources, and the design of the built environment, including the reuse and conservation potential of the proposed action and alternatives? [40CFR 1502.16(g)]					
the means to mitigate adverse impacts? [40 CFR 1502.16(h)]					
1.6.7 Does the EIS discuss: any unavoidable, adverse environmental effects? the relationship between short-term uses of the environment and long-term productivity? any irreversible or irretrievable commitments of resources? [40 CFR 1502.16]					
1.6.8 Do the discussions of environmental impacts include (as appropriate): human health effects? [Recommendations, p20] effects of accidents? [Recommendations, p27] transportation effects? [Recommendations, p25]					
1.6.9 Does the EIS discuss the potential effects of released pollutants, rather than just identifying the releases? [Recommendations, p.19]					
1.6.10 Does the EIS avoid presenting a description of severe impacts (e.g., from accidents), without also describing the likelihood/probability of such impacts occurring? [Recommendations, p.20]					
1.6.11 Are the methodologies used for impact assessment generally accepted/recognized in the scientific community? [40 CFR 1502.22 and 1504.24]					
1.6.12 Does the EIS quantify environmental impacts where possible? [Recommendations, p.18]					
1.6.13 Are impacts analyzed using a graded approach; i.e., proportional to their potential significance? [Recommendations, pp.16 and 17]					
1.6.14 Does the EIS avoid presenting bounding impact estimates that obscure differences among alternatives? [Recommendations, p.31]					
1.6.15 Are sufficient data and references presented to allow validation of analysis methods and results? [Recommendations, p.19]					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.6.16a If information related to significant adverse effects is incomplete or unavailable, does the EIS state that such information is lacking?					
1.6.16b If this information is essential to a choice among alternatives and the costs of obtaining it are not exorbitant, is the information included?					
1.6.16c If this information cannot be obtained, does the EIS include: (1) a statement that the information is incomplete or unavailable, (2) the relevance of the information to evaluating significant effects, (3) a summary of credible scientific evidence, and (4) an evaluation based on theoretical approaches? [40 CFR 1502.22]					
1.6.17 As appropriate, does the EIS identify important sources of uncertainty in the analyses and conclusions?					
<b>1.7.0 OVERALL CONSIDERATIONS/INCORPORATION OF NEPA VALUES</b>					
1.7.1 Does the EIS identify <i>all reasonably foreseeable</i> impacts? [40 CFR 1508.8 and Recommendations, p.17]					
1.7.2 Do the conclusions regarding potential impacts follow from the information and analyses presented in the EIS? [Recommendations, p.30]					
1.7.3 Does the EIS avoid the implication that compliance with regulatory requirements demonstrates the absence of environmental effects? [Recommendations, p.29]					
1.7.4 To the extent possible, does the EIS assess reasonable alternatives and identify measures to restore and enhance the environment and avoid or minimize potential adverse effects? [40 CFR 1500.2(f)]					
1.7.5 Does the EIS identify best management practices associated with the proposed action or with mitigation measures that would help avoid or minimize environmental disturbance, emissions, and other adverse effects?					
1.7.6 Does the EIS avoid the appearance of justifying decisions that have already been made? [40 CFR 1502.5 and Recommendations, p.38]					
1.7.7 Are all assumptions conservative, and are analyses and methodologies generally accepted/recognized by the scientific community? [40 CFR 1502.22 and 1502.24]					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.7.8 Does the EIS show that the agency “has taken a ‘hard look’ at environmental consequences”? [Kleppe v. Sierra Club, 427 US 390, 410 (1976)]					
1.7.9 Does the EIS present the potential environmental effects of the proposal and the alternatives in comparative form, sharply defining the issues and providing a clear basis for choice? [40 CFR 1502.14 and Recommendations, p.3]					
<b>1.8.0 FORMAT, GENERAL DOCUMENT QUALITY, USER-FRIENDLINESS</b>					
1.8.1 Is the EIS written precisely and concisely, using plain language, and defining any technical terms that must be used? [10 CFR 1021.301(b); Recommendations, p.36]					
1.8.2 Is information in tables and figures consistent with information in the text and appendices?[Recommendations, p.35]					
1.8.3 Is the metric system of units used (with English units in parentheses) to the extent possible? [DOE G 1430.1D; Recommendations, p.35]					
1.8.4 Are the units consistent throughout the document? [Recommendations, p.35]					
1.8.5 Are technical terms defined using plain language, where necessary? [10 CFR 1021.301(b); Recommendations, p.36]					
1.8.6 If scientific notation is used, is an explanation provided? [Recommendations, p35]					
1.8.7 If regulatory terms are used, are they consistent with their regulatory definitions? [Recommendations, p.37]					
1.8.8 Does the EIS use conditional language (i.e., “would” rather than “will”) in describing the proposed action and alternatives and their potential consequences? [Recommendations, p.39]					
1.8.9 Are graphics and othervisual aids used whenever possible to simplify the EIS? [Recommendations, p.34]					
1.8.10 Are abbreviations and acronyms definedthe first time they are used?					
1.8.11 Is the use of abbreviations and acronymsminimized to the extent practical?					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.8.12 Does the EIS make appropriate use of appendices (e.g., for material prepared in connection with the EIS and related environmental reviews, substantiating material official communications, and descriptions of methodologies)? [40 CFR 1502.18 and 1502.24; Recommendations, p.33]					
1.8.13 Do the appendices support the content and conclusions contained in the main body of the EIS? [Recommendations, p.33]					
1.8.14 Is there a discussion of the relationship between this EIS and related DOE NEPA documents?					
1.8.15 Is the issue date (month and year of approval) on the cover?					
<b>1.9.0 OTHER REGULATORY REQUIREMENTS</b>					
1.9.1 Unless there is a compelling reason to do otherwise, does the EIS include a: table of contents? index? list of agencies, organizations, and persons to whom copies of the EIS were sent? [40 CFR 1502.10]					
1.9.2 Does the EIS identify all federal permits, licenses, and other entitlements that must be obtained in implementing the proposal? [40 CFR 1502.25(b)]					
1.9.3. Does the EIS identify methodologies used in the analyses, include references to sources relied upon for conclusions, and provide documentation or references to documentation for methodologies? [40 CFR 1502.24]					
1.9.4 If a cost-benefit analysis has been prepared, is it incorporated by reference or appended to the EIS? [40CFR 1502.23]					
1.9.5 If this EIS adopts, in whole or in part, a NEPA document prepared by another federal agency, has DOE independently evaluated the information? [40CFR 1506.3]					
1.9.6 Does the EIS appropriately use incorporation by reference, i.e.: is the information up to date? is the information summarized in the EIS? are cited references publicly available? [40 CFR 1502.21; Recommendations, pp.14 and 37]					



LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.9.7 Does the EIS contain a list of preparers and their qualifications? [40 CFR 1502.17 and Recommendations, p.32]					
1.9.8 Does the EIS include a contractor disclosure statement? [40 CFR 1506.5(c); 10 CFR 1021.310]					
1.9.9 Is DOE listed as the preparer on the title page of the EIS and has DOE evaluated all information and accepted responsibility for the contents? [40 CFR 1506.5 and Recommendations, p.32]					
<b>1.10.0 PROCEDURAL CONSIDERATIONS</b>					
1.10.1 Did DOE notify the host state and host tribe, and other affected states and tribes, of the determination to prepare the EIS? [10 CFR 1021.301(c)]					
1.10.2 Did DOE publish a Notice of Intent in the Federal Register, allowing reasonable time for public comment? [10 CFR 1021.311(a) and 40 CFR 1501.7]					
1.10.3 Is a Floodplain/Wetlands Assessment required, and if so, has a Notice of Involvement been published in the Federal Register? [10 CFR 1022.14]					
1.10.4 In addition to EPA's Notice of Availability, did DOE otherwise publicize the availability of the draft EIS, focusing on potentially interested or affected persons? [40 CFR 1506.6]					
1.10.5 Did DOE actively seek the participation of low-income and minority communities in the preparation and review of the EIS? [EO 12898 Effective Public Participation guidance, p.1]					
1.10.6 Is the administrative record for this EIS being maintained contemporaneously, and does it provide evidence that DOE considered all relevant issues?					
1.10.7 To the fullest extent possible, have other environmental review and consultation requirements been integrated with NEPA requirements? [40 CFR 1502.25]					
<b>1.11.0 DRAFT EIS CONSIDERATIONS</b>					
1.11.1 Has DOE considered scoping comments from other agencies and the public? [10 CFR 1021.311(e)]					
1.11.2 Does the draft EIS demonstrate that DOE considered possible connected actions, cumulative actions, and similar actions? [40 CFR 1508.25(a)]					

LIST 1: GENERAL	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
1.11.3 If the draft EIS identifies a preferred alternative(s), does the document present the criteria and selection process? [40 CFR 1502.14(e)].					
1.11.4a Does the draft EIS demonstrate adequate consultation with appropriate agencies to ensure compliance with sensitive resource laws and regulations?					
1.11.4b Does the document contain a list of agencies and persons consulted?					
1.11.4c Are letters of consultation (e.g., SHPO, USFWS) appended? [40 CFR 1502.25 and Recommendations, p.15]					
<b>1.12.0 FINAL EIS CONSIDERATIONS</b>					
1.12.1 Does the final EIS discuss at appropriate points responsible opposing views not adequately addressed in the draft EIS and indicate DOE's responses to the issues raised? [40 CFR 1502.9 (b)]					
1.12.2a Is the preferred alternative identified? [40 CFR 1502.14(e)]					
1.12.2b Does the document present the criteria and selection process for the preferred alternative?					
1.12.3 Does the final EIS demonstrate, through appropriate responses, that all substantive comments from other agencies, organizations, and the public were objectively considered, both individually and cumulatively (i.e., by modifying the alternatives, developing new alternatives, modifying and improving the analyses, making factual corrections, or explaining why the comments do not warrant agency response)? [40 CFR 1503.4]					
1.12.4 Are all substantive comments (or summaries thereof) and DOE responses included in the final EIS? [40 CFR 1503.4(b)]					
1.12.5 Are any changes to the draft EIS clearly marked or otherwise identified in the final EIS?					
1.12.6 Is the final EIS suitable for filing with EPA, i.e., does it have a new cover sheet?					
does it include comments and responses?					
does it include any revisions or supplements to the draft? [40 CFR 1503.4 and 1506.9]					

LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
<b>2.1.0 WATER RESOURCES AND WATER QUALITY</b>					
2.1.1 Does the EIS discuss potential effects of the proposed action and alternatives: on surface water quantity under normal operations? under accident conditions? on surface water quality under normal operations? under accident conditions?					
2.1.2 Does the EIS assess the effect of the proposed action and alternatives on the quantity, quality, location, and timing of stormwater runoff (e.g., will new impervious surfaces create a need for stormwater management or pollution controls)?					
2.1.3 Would the proposed action or alternatives require a stormwater discharge permit?					
2.1.4 Does the EIS evaluate whether the proposed action or alternatives would be subject to: water quality or effluent standards? National Primary Drinking Water Regulations? National Secondary Drinking Water Regulations?					
2.1.5 Does the EIS state whether the proposed action or alternatives: would include work in, under, over, or having an effect on navigable waters of the United States? would include the discharge of dredged or fill material into waters of the United States? would include the deposit of fill material or an excavation that alters or modifies the course, location, condition, or capacity of any navigable waters of the United States? would require a Rivers and Harbors Act (Section 10) permit or a Clean Water Act (Section 402 or Section 404) permit? would require a determination under the Coastal Zone Management Act? If so, is such determination included in the draft EIS?					

<b>LIST 2: SPECIFIC RESOURCES</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>EIS PAGE</b>	<b>ADEQUACY EVALUATION AND COMMENTS</b>
2.1.6 Does the EIS discuss potential effects of the proposed action and alternatives: on groundwater quantity under normal operations? under accident conditions? on groundwater quality under normal operations? under accident conditions?					
2.1.7 Does the EIS consider whether the proposed action or alternatives may affect any municipal or private drinking water supplies?					
2.1.8 Does the EIS evaluate the incremental effect of effluents associated with the proposed action and alternatives in terms of cumulative water quality conditions?					
2.1.9 If the proposed action may involve a floodplain, does the document discuss alternative actions to avoid or minimize impacts and preserve floodplain values?					
<b>2.2.0 GEOLOGY AND SOILS</b>					
2.2.1 Does the EIS describe and quantify the land area proposed to be altered, excavated, or otherwise disturbed?					
2.2.2 Is the description of the disturbed area consistent with other sections (e.g., land use, habitat area)?					
2.2.3 Are issues related to seismicity sufficiently characterized, quantified, and analyzed?					
2.2.4 If the action involves disturbance of surface soils, are appropriate best management practices (e.g. erosion control measures) discussed?					
2.2.5 Have soil stability and suitability been adequately discussed?					
2.2.6 Does the EIS consider whether the proposed action may disturb or cause releases of pre-existing contaminants or hazardous substances in the soil?					
<b>2.3.0 AIR QUALITY</b>					
2.3.1 Does the EIS discuss potential effects of the proposed action on ambient air quality: under normal operations?					
under accident conditions?					

LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
2.3.2 Are potential emissions quantified to the extent practicable (amount and rate of release)?					
2.3.3 Does the EIS evaluate potential effects to human health and the environment from exposure to radiation emissions?					
2.3.4 Does the EIS evaluate potential effects to human health and the environment from exposure to hazardous chemical emissions?					
2.3.5 When applicable, does the EIS evaluate whether the proposed action and alternatives would: be in compliance with the National Ambient Air Quality Standards? conform to the State Implementation Plan? potentially affect any area designated as Class I under the Clean Air Act? be subject to New Source Performance Standards? be subject to National Emissions Standards for Hazardous Air Pollutants? be subject to emissions limitations in an Air Quality Control Region?					
2.3.6 Does the EIS evaluate the incremental effect of emissions associated with the proposed action and alternatives in terms of cumulative air quality?					
<b>2.4.0 WILDLIFE AND HABITAT</b>					
2.4.1 If the EIS identifies potential effects of the proposed action and alternatives on threatened or endangered species and/or critical habitat, has consultation with the USFWS or NMFS been concluded?					
2.4.2 Does the EIS discuss <i>candidate</i> species?					
2.4.3 Are <i>state</i> -listed species identified, and if so, are results of state consultation documented?					
2.4.4 Are potential effects (including cumulative effects) analyzed for fish and wildlife other than threatened and endangered species and for habitats other than critical habitat?					
2.4.5 Does the EIS analyze the impacts of the proposed action on the biodiversity of the affected ecosystem, including genetic diversity and species diversity?					

LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
2.4.6 Are habitat types identified and estimates provided by type for the amount of habitat lost or adversely affected?					
2.4.7 Does the EIS consider measures to protect, restore, and enhance wildlife and habitat?					
<b>2.5.0 HUMAN HEALTH EFFECTS</b>					
2.5.1 Have the following potentially affected populations been identified: involved workers? non-involved workers? the public? [Recommendations, p.21] minority and low-income communities (as appropriate)? [EO 12898]					
2.5.2 Does the EIS establish the period of exposure (e.g., 30 years or 70 years) for exposed workers and the public? [Recommendations, p.21]					
2.5.3 Does the EIS identify all potential routes of exposure? [Recommendations, p.21]					
2.5.4 When providing quantitative estimates of impacts, does the EIS use current dose-to-risk conversion factors that have been adopted by cognizant health and environmental agencies? [Recommendations, p.22]					
2.5.5 When providing quantitative estimates of health effects due to radiation exposure, are collective effects expressed in estimated numbers of fatal cancers or cancer incidences? [Recommendations, p.22]					
2.5.6 Are maximum individual effects expressed as the estimated maximum probability of fatality or cancer incidences for an individual? [Recommendations, p.22]					
2.5.7 Does the EIS describe assumptions used in the health effects analysis and the basis for health effects calculations? [Recommendations, p.22]					
2.5.8 As appropriate, does the EIS analyze radiological impacts under <i>normal operating conditions</i> for: <i>Involved workers</i> population dose and corresponding latent cancer fatalities					
maximum individual dose and corresponding cancer risk <i>(continued)</i>					

LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
<i>Non-involved workers</i> population dose and corresponding latent cancer fatalities					
maximum individual dose and corresponding cancer risk					
<i>Public</i> population dose and corresponding latent cancer fatalities					
maximum individual dose and corresponding cancer risk [Recommendations, p.21]					
2.5.9 Does the EIS identify a reasonable spectrum of potential accident scenarios that could occur over the life of the proposed action, including the maximum reasonably foreseeable accident? [Recommendations, p.27]					
2.5.10 Does the EIS identify failure scenarios from both natural events (e.g., tornadoes, earthquakes) and from human error (e.g., forklift accident) [Recommendations, p.27]					
2.5.11 As appropriate, does the EIS analyze radiological impacts under <i>accident conditions</i> for:					
<i>Involved workers</i> population dose and corresponding latent cancer fatalities					
maximum individual dose and corresponding cancer risk					
<i>Non-involved workers</i> population dose and corresponding latent cancer fatalities					
maximum individual dose and corresponding cancer risk					
<i>Public</i> population dose and corresponding latent cancer fatalities					
maximum individual dose and corresponding cancer risk [Recommendations, p.21]					
2.5.13 Does the EIS discuss toxic and carcinogenic health effects from exposure to hazardous chemicals: for involved workers?					
for non-involved workers?					

LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
for the public? <i>(continued)</i>					



LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
under routine operations? under accident conditions? [Recommendations, p.25]					
2.5.14 Does the EIS adequately consider physical safety issues for involved and non-involved workers?					
<b>2.6.0 TRANSPORTATION</b>					
2.6.1 If transportation of hazardous or radioactive waste or materials is part of the proposed action, or if transportation is a major factor, are the potential effects analyzed (including to a site, on-site, and from a site)? [Recommendations, p.25]					
2.6.2 Does the EIS analyze all reasonably foreseeable transportation links (e.g., overland transport, port transfer, marine transport, global commons)? [EO12114; Recommendations, p.26]					
2.6.3 Does the EIS avoid relying exclusively on statements that transportation will be in accordance with all applicable state and federal regulations and requirements? [Recommendations, p.26]					
2.6.4 Does the EIS discuss routine and reasonably foreseeable transportation accidents? [Recommendations, p.26]					
2.6.5 Are the estimation methods used for assessing radiological impacts of transportation among those generally accepted/recognized within the scientific community? [Recommendations, p.26]					
2.6.6 Does the EIS discuss the annual, total, and cumulative impacts of all DOE and non-DOE transportation, to the extent such transportation can be estimated, on specific routes associated with the proposed action? [Recommendations, p.26]					
2.6.7 Have transportation analyses adequately considered potential disproportionately high and adverse impacts to minority and low-income populations? [EO 12898]					
<b>2.7.0 WASTE MANAGEMENT AND WASTE MINIMIZATION</b>					
2.7.1 Are pollution prevention and waste minimization practices applied in the proposed action and alternatives (e.g., is pollution prevented or reduced at the source when feasible; would waste products be recycled when feasible; are by-products that cannot be prevented or recycled treated in an environmentally safe manner when feasible; is disposal only used as a last resort)? [Recommendations, p.6]					

<b>LIST 2: SPECIFIC RESOURCES</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>EIS PAGE</b>	<b>ADEQUACY EVALUATION AND COMMENTS</b>
2.7.2 If waste would be generated, does the EIS examine the human health effects and environmental impacts of managing that waste, including waste generated during decontaminating and decommissioning?					
2.7.3 Are waste materials characterized by type and estimated quantity, where possible?					
2.7.4 Does the EIS identify RCRA/CERCLA issues related to the proposed action and alternatives?					
2.7.5 Does the EIS establish whether the proposed action and alternatives would be in compliance with federal or state laws and guidelines affecting the generation, transportation, treatment, storage, or disposal of hazardous and other waste?					
<b>2.8.0 SOCIOECONOMIC CONSIDERATIONS</b>					
2.8.1 Does the EIS consider potential direct, indirect, and cumulative effects on: land use patterns? consistency with applicable land use plans, including site comprehensive plans; and any special designation lands (e.g., farmlands, parks, wildlife conservation areas)? compatibility of nearby uses?					
2.8.2 Does the EIS consider possible changes in the local population due to the proposed action?					
2.8.3 Does the EIS consider potential economic impacts, such as effects on jobs and housing?					
2.8.4 Does the EIS consider potential effects on public water and wastewater services, stormwater management, community services, and utilities?					
2.8.5 Does the EIS evaluate potential noise effects of the proposed action and the application of community noise level standards?					
2.8.6 Does the EIS state whether the proposed action and alternatives could have disproportionately high and adverse impacts to minority or low-income populations? [EO 12898]					

LIST 2: SPECIFIC RESOURCES	YES	NO	N/A	EIS PAGE	ADEQUACY EVALUATION AND COMMENTS
<b>2.9.0 CULTURAL RESOURCES</b>					
2.9.1 Was the State Historic Preservation Officer consulted?					
2.9.2 Was a cultural resources survey conducted for both archaeological and historical resources, including historic Cold War properties (while maintaining confidentiality by not disclosing locations for sensitive sites)?					
2.9.3 Does the EIS discuss potential access conflicts and other adverse impacts to Native American sacred sites (while maintaining confidentiality by not disclosing locations)? [EO 13007]					
2.9.4 Does the EIS include a provision for mitigation in the event unanticipated archaeological materials (e.g., sites or artifacts) are encountered?					
2.9.5 Does the EIS address consistency of the proposed action with any applicable or proposed cultural resources management plan?					

## ABBREVIATIONS AND ACRONYMS

CEQ	President's Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	United States Code of Federal Regulations
DOE	U.S. Department of Energy
EIS	Environmental Impact Statement
EO	Executive Order
FR	Federal Register
N/A	not applicable
NEPA	National Environmental Policy Act
NMFS	United States National Marine Fisheries Service
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Officer
US	United States
USC	United States Code
USFWS	United States Fish and Wildlife Service

## REFERENCES

### Legislation

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Archeological and Historic Preservation Act (16USC § 469).

American Indian Religious Freedom Act (42USC § 1996).

Clean Air Act (42USC § 7401).

Clean Water Act (Federal Water Pollution Control Act) (33USC § 1251).

Coastal Zone Management Act (16 USC § 1451).

Comprehensive Environmental Response, Compensation, and Liability Act (42USC § 9601).

Endangered Species Act (16USC § 1531).

Farmland Protection Policy Act (7USC § 4201).

National Environmental Policy Act (42USC § 4321).

National Historic Preservation Act (16USC § 470).

Native American Graves Protection and Repatriation Act (25USC § 3001).

Noise Control Act (42USC § 4901).

Resource Conservation and Recovery Act (42USC § 6901).

Rivers and Harbors Act (33USC § 401).

Safe Drinking Water Act (42USC § 300f).

Toxic Substances Control Act (15USC § 2601).

Wild and Scenic Rivers Act (16USC § 1271).

### Regulations

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Advisory Council on Historic Preservation, Protection of Historic and Cultural Properties (36 CFR Part 800).

Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40CFR Part 1500).

U.S. Department of Agriculture, Regulations for Implementing the Farmland Protection Policy Act (7 CFR Part 658).

U.S. Department of Energy, National Environmental Policy Act Implementing Procedures

(DOE NEPA Regulations) (10CFR Part 1021).

U.S. Department of Energy, Regulations for Compliance with Floodplain/Wetlands Environmental Review Requirements (10CFR Part 1022).

U.S. Environmental Protection Agency, Clean Air Act Implementing Regulations (40 CFR Part 50).

U.S. Environmental Protection Agency, Criteria and Standards for the National Pollutant Discharge Elimination System (40 CFR Part 125).

U.S. Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).

U.S. Environmental Protection Agency, National Primary Drinking Water Regulations (Safe Drinking Water Act) (40 CFR Part 141).

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U.S. Environmental Protection Agency, Prevention of Significant Deterioration for Particulate Matter (40 CFR Parts 51 and 52).

U.S. Nuclear Regulatory Commission, Standards for Protection against Radiation (10CFR Part 20).

### **Executive Orders**

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Executive Order 11593, Protection and Enhancement of the Cultural Environment (May 13, 1971; 3 CFR (1971-1975)).

Executive Order 11988, Floodplain Management (May 24, 1977; 42 FR 2695).

Executive Order 11990, Protection of Wetlands (May 24, 1977; 42 FR 2696).

Executive Order 12114, Environmental Effects Abroad of Major Federal Actions (January 4, 1979; 44 FR 1957, Jan. 9, 1979).

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994; 59 FR 7629, Feb. 16, 1994).

Executive Order 13007, Protection and Accommodation of Access to Indian Sacred Sites (May 24, 1996; 61 FR 26771, May 29, 1996).

### **Department of Energy Directives**

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DOE O 451.1A, National Environmental Policy Act Compliance Program (June 5, 1997).

DOE G 1430.1D, Scientific and Technical Information Management (June 30, 1994).

DOE O 5400.1, General Environmental Protection Program (November 9, 1988).

DOE O 5400.5, Radiation Protection of the Public and the Environment (February 8, 1990).

DOE O 5820.2A, Radioactive Waste Management (September 26, 1988).



## **Council on Environmental Quality Guidance**

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Forty Most-Asked Questions Concerning the Council on Environmental Quality's National Environmental Policy Act Regulations (46FR 18026, March 23, 1981; amended 51FR 15618, April 25, 1986).

Considering Cumulative Effects Under the National Environmental Policy Act (January 1997).

## **Department of Energy Guidance**

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Guidance Related to Analysis of Impacts to Workers in National Environmental Policy Act Documentation (memorandum from the Assistant Secretary for Office of Environment, Safety and Health, June 10, 1988).

Recommendations on Alternative Actions for Analysis in Site-Wide NEPA Documents (memorandum from the Assistant Secretary for Environment, Safety and Health, May 26, 1992).

Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements (sometimes referred to as the "Green Book") (issued by the Assistant Secretary for Environment, Safety and Health, May 1993).

Secretarial Policy Statement on the National Environmental Policy Act (issued by the Secretary of Energy, June 13, 1994).

Environmental Assessment Checklist (issued by the Assistant Secretary for Environment, Safety and Health, August 1994).

Effective Public Participation under the National Environmental Policy Act (issued by Assistant Secretary for Environment, Safety and Health December 1994).

## **Environmental Protection Agency Guidance**

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Office of the Federal Environmental Executive; Guidance for Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federal Landscaped Grounds (60 FR 40837, August 10, 1995).