

IG-00-030

**AUDIT
REPORT**

**COMPLIANCE WITH THE NATIONAL
ENVIRONMENTAL POLICY ACT**

March 31, 2000



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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Acronyms

CFR	Code of Federal Regulations
FAR	Federal Acquisition Regulation
NEPA	National Environmental Policy Act
NPG	NASA Procedures and Guidelines
OIG	Office of Inspector General
R&D	Research and Development

W

March 31, 2000

TO: A/Administrator

FROM: W/Inspector General

SUBJECT: INFORMATION: Compliance With the National Environmental Policy Act
Report Number IG-00-030

The NASA Office of Inspector General (OIG) has completed an audit of Compliance with the National Environmental Policy Act of 1969 (NEPA).¹ We found that 11 (85 percent) of 13 mission-related programs and projects² (programs/projects) reviewed did not consider environmental impacts as required by NEPA and NASA guidance. All nine of the reviewed construction of facilities projects³ considered environmental impacts as required by NEPA. We also found that NASA's environmental planning, oversight, guidance, and training related to NEPA compliance were inadequate. Consequently, mission-related programs/projects totaling about \$3 billion were potentially exposed to increased costs, project delays, missed opportunities for preferable alternatives and/or public involvement, and adverse public perception and reaction. Also, because of the potential impact of NEPA noncompliance, we believe that NASA should report NEPA noncompliance for mission-related programs/projects to the Internal Control Council as a potential material management control weakness⁴ to be included in NASA's

¹ The intent of NEPA is to protect the environment by requiring Federal agencies to gather information about the environmental consequences of proposed actions (see the Note), assess the environmental impacts of those actions, and consider alternatives that avoid or reduce adverse environmental impact. A key part of NEPA is keeping the public informed. (Note: Actions are new and continuing activities, including programs and projects; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals. Major Federal actions are potentially subject to Federal control and responsibility.)

Deliberative process information omitted.

annual Federal Manager's Financial Integrity Act statement of assurance. We plan to perform a follow-up audit to ensure action is sufficient to provide reasonable assurance of NEPA compliance

Background

NASA is responsible for evaluating in the early planning stages the environmental impacts of proposed programs/projects. Sound management controls over program/project formulation and implementation processes are needed to ensure that environmental impacts are appropriately considered and NEPA requirements are met. To ensure compliance with the NEPA, NASA established a multiple-step NEPA process. The process starts with an environmental evaluation of each program/project proposal to assess potential environmental impacts. If NASA determines that the proposed program/project falls into a category that does not have a significant environmental impact, then NASA must prepare a record of environmental consideration to document the determination. However, if the environmental evaluation determines that significant environmental impacts may exist, then NASA must prepare an environmental assessment⁵ and/or an environmental impact statement.

Recommendations

NASA management should report NEPA noncompliance for mission-related programs/projects as a potential material control weakness and improve controls over environmental management for NASA's mission-related activities. Specifically, NASA should revise internal guidance, ensure environmental management planning is performed, improve oversight of NEPA compliance during program/project formulation, and educate employees in the specific NEPA requirements.

Management Response and OIG Evaluation

Overall, management stated that the audit report exaggerates the nature and scope of NEPA violations for the 13 programs/projects reviewed, although management agreed that a number of deficiencies existed. Management agreed, that training, guidance, and managerial controls related to NEPA are inadequate to ensure NEPA compliance for existing and future programs/projects.

Management's planned corrective actions for greater Program Management Council oversight, increased environmental coverage in program/project management guidance, revisions to NASA's NEPA and facilities guidance, and increased NEPA training are responsive to our recommendations. However, management's responses to recommendations for reporting NEPA noncompliance as a potential material management control weakness, requiring environmental management planning, and bringing existing programs/projects into NEPA compliance are nonresponsive. We maintain that because Agency managers were not aware of and, therefore, had not considered NEPA requirements at a program/project's earliest planning phase, our finding accurately portrays the extent of noncompliance. This is the case even if in hindsight, environmental impacts may be of a limited nature.

⁵An environmental assessment is a concise public document that includes a brief discussion of the need for the proposal, alternatives to the proposal, and the environmental impacts of the proposed action and alternatives.

Although management agrees with our position that environmental considerations need to be factored into the overall program/project plan, management did not agree to modify governing NASA policy guidance. We have requested that management reconsider its position on recommendations to (1) report NEPA noncompliance as a potential material management control weakness until training, guidance, and management controls are in place; (2) require environmental management planning; and (3) bring existing programs/projects into NEPA compliance.

Details on the status of the recommendations are in the finding section of the report.

[Original signed by]

Roberta L. Gross

Enclosure

Final Report on Audit of Compliance with the National Environmental Policy Act

**FINAL REPORT
AUDIT OF COMPLIANCE WITH
THE NATIONAL ENVIRONMENTAL POLICY ACT**

W

March 31, 2000

TO: J/Associate Administrator for Management Systems

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of Compliance with the National
Environmental Policy Act Redacted Report*
Assignment Number A9902100
Report Number IG-00-030

The subject final report is provided for your use and comments. Please refer to the Executive Summary for the overall audit results. Our evaluation of your response is incorporated into the body of the report. We consider management's proposed, corrective actions responsive for recommendations 3 through 7 and 9. We request that management reconsider its position on recommendations 1, 2, and 8 and provide additional comments by May 1, 2000. Management's actions are sufficient to close recommendation 6 for reporting purposes. All other recommendations will remain open for reporting purposes until agreed-to corrective actions are completed. Please notify us when action has been completed on the recommendations, including the extent of testing performed to ensure corrective actions are effective.

If you have questions concerning the report, please contact Mr. Chester Sipsock, Program Director, Environmental and Financial Management Audits, at (216) 433-8960, or Mr. James Richards, Auditor-in-Charge, at (321) 867-4841. We appreciate the courtesies extended to the audit staff. The final report distribution is in Appendix H.

[Original signed by]

Russell A. Rau

Enclosure

cc:

B/Chief Financial Officer

B/Comptroller

G/General Counsel

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NASA Office of Inspector General

IG-00-030
A9902100

March 31, 2000

Compliance with the National Environmental Policy Act

Executive Summary

Background. The National Environmental Policy Act of 1969 (NEPA), one of the first major Federal environmental laws enacted in the United States, is the national charter that established environmental goals and policies for the protection, maintenance, and enhancement of the environment. NEPA mandates that all Federal agencies consider the effects of their actions⁶ on the environment as early as possible and requires Federal agencies (1) to gather information about the environmental consequences of proposed actions, (2) consider the environmental impacts of those actions to assist in making environmental decisions, (3) consider alternatives that avoid or reduce adverse environmental impact, and (4) keep the public informed. In short, NEPA requires Federal agencies to examine and disclose the potential environmental impact of proposed actions before commencing those actions.

NASA is responsible for evaluating in the early planning stages the environmental impacts of proposed programs and projects (programs/projects). The NEPA requirements necessitate implementation of sound management controls over program/project formulation and implementation processes to ensure that environmental impacts are appropriately considered and NEPA requirements are met. To ensure compliance with the NEPA, NASA established the multiple-step process shown in Appendix B. The process starts with an environmental evaluation of each program/project proposal to assess potential environmental impacts. If NASA determines that the proposed program/project falls into a category that does not have a significant environmental impact, then NASA must prepare a record of environmental consideration to document the determination. However, if the environmental evaluation determines that significant environmental impacts may exist, then NASA must prepare an environmental assessment⁷ and/or an environmental impact statement.

A glossary defining terms used in this report is in Appendix C.

*We have redacted portions of this report due to references to deliberative process information. The redacted passages do not affect the validity of this report or management's response.

⁶Actions are new and continuing activities, including programs and projects; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals. Major Federal actions are potentially subject to Federal control and responsibility.

⁷An environmental assessment is a concise public document that includes a brief discussion of the need for the proposal, alternatives to the proposal, and the environmental impacts of the proposed action and alternatives.

Objectives. The overall objective of the audit was to determine whether NASA guidance ensures compliance with NEPA. The specific objectives were to assess whether NASA guidance fulfills NEPA requirements and whether managers evaluated programs/projects in compliance with NEPA and NASA guidance. The objectives, scope, and methodology are described further in Appendix A.

Results of Audit. Eleven (85 percent) of 13 mission-related programs/projects⁸ reviewed did not consider environmental impacts as required by NEPA and NASA guidance. All nine of the reviewed construction of facilities projects⁹ considered environmental impacts as required by NEPA; however, two did not fully comply with NASA draft guidance for implementing NEPA. We also found NASA's environmental planning, oversight, guidance, and training to be inadequate. Consequently, programs/projects valued at about \$3 billion were potentially exposed to increased costs, project delays, missed opportunities for preferable alternatives and/or public involvement, and adverse public perception and reaction. Due to the extent of NEPA noncompliance for mission-related programs/projects, we consider this deficiency to be a potential material control weakness¹⁰ reportable in accordance with NASA Procedures and Guidelines (NPG) 1200.1, "Management Accountability and Control, Audit Liaison, and Audit Followup," dated January 23, 1997.

Recommendations. NASA management should report NEPA noncompliance for mission-related programs/projects as a potential material control weakness¹¹ and improve controls over environmental management in NASA's mission-related activities. Specifically, NASA should revise internal guidance, ensure environmental management planning is performed, improve oversight of NEPA compliance during program/project formulation, and train employees in the specific NEPA requirements.

Management's Response. Management nonconcurred with recommendations to report NEPA noncompliance as a potential material management control weakness, require environmental management planning, and bring programs/projects into NEPA compliance. Management concurred with recommendations for greater Program Management Council oversight, increased environmental coverage in program/project management guidance,

Deliberative process information omitted.

¹⁰A material weakness is a deficiency that the NASA Administrator determines to be significant enough to be reported outside the Agency. This designation requires a judgment by Agency managers as to the relative risk and significance of deficiencies.

¹¹Potential material control weaknesses are reported to the Agency's Internal Control Council and not directly to Congress.

revisions to NASA's NEPA and facilities guidance, and increased NEPA training. Management partially concurred with the recommendation for adding three Council on Environmental Quality requirements to NASA guidance. Management agreed that NEPA training, guidance, and managerial controls to ensure NEPA compliance for existing and future programs/projects are inadequate. However, management took exception to the characterization that programs/projects totaling about \$3 billion are at risk for litigation, stating that the audit report exaggerated the nature and scope of NEPA violations for the 13 programs/projects reviewed. Management stated that the programs/projects committed technical, trivial violations of NASA requirements rather than violations of NEPA and Council on Environmental Quality regulations. Management also took exception to statements regarding lack of effective NEPA guidance. The complete text of management's response is in Appendix F. Details on management's general comments and our evaluation are in Appendix G.

Evaluation of Response. Management's response and planned corrective actions for greater Program Management Council oversight, increased environmental coverage in program/project management guidance, revisions to NASA's NEPA and facilities guidance, and increased NEPA training are responsive. However, management's responses were not responsive for recommendations to report NEPA noncompliance as a potential material management control weakness, require environmental management planning, and bring programs/projects into NEPA compliance are nonresponsive. We do not agree that program/project managers violated only NASA requirements. We maintain that because Agency managers were not aware of NEPA requirements to consider environmental impacts at the earliest planning phase of a program/project, our finding of noncompliance is not exaggerated, but clearly a violation of environmental law. We also maintain that environmental considerations must be factored into the program/project plans at the earliest opportunity, which was not being done.

The report factually stated that 11 programs/projects were not in compliance with NEPA. Those programs/projects, which had a total value of about \$3 billion, could have experienced increased costs, schedule delays, or missed opportunities. We did not state that the reported programs/projects were at high risk of litigation, but that failure to perform timely consideration of environmental impacts could result in litigation. Finally, we recognized the efforts to revise environmental guidance through issuance of the draft NPG. However, as evidenced by the number of program/project managers who were unaware of NEPA requirements, NASA must continue to improve Agency guidance to ensure compliance with NEPA and other environmental laws.

NEPA noncompliance should be reported as a potential material management control weakness until guidance, training, and management controls are in place. We maintain that environmental management planning should be required, and programs/projects should be reviewed and brought into NEPA compliance. We request that management reconsider its position, and provide additional comments.

Introduction

In 1994, the NASA Administrator issued “NASA's Environmental Excellence for the Twenty-First Century.” This document establishes NASA's overall strategy for environmental issues and states that environmental excellence is a way of life that must be ingrained as part of the Agency’s culture. NASA must seek solutions that are environmentally safe in designing and fabricating spacecraft, launching shuttles, or conducting basic research.

The statutory and regulatory framework for NEPA can be found in: Public Law 91-190, which contains mandates and policy statements; the Council on Environmental Quality regulations in Title 40, Code of Federal Regulations (CFR), Parts 1500-1508, which contain definitions of key terms and directions on NEPA compliance; and the Federal agency-specific regulations and guidelines. Details on the law and CFR are in Appendix D.

NASA requires that environmental factors shall be a significant consideration at every step in program/project development and execution and shall include an analysis of environmental impacts and alternatives. NASA Strategic Enterprises and Program Offices are accountable for all environmental consideration and are ultimately responsible for full environmental compliance. The Associate Administrator for the Office of Management Systems is responsible for the Agency’s environmental management activities, such as developing NASA’s guidance on complying with NEPA and providing technical advice on NEPA implementation. The Office of Management Systems’ Environmental Management Division is responsible for implementing the Associate Administrator’s environmental management activities. Details on the Agency’s NEPA guidance are in Appendix D.

NASA Centers have responsibility for ensuring that the NEPA process is integrated into their organizations’ planning processes. Each NASA Center has an environmental office that evaluates activities for environmental impact, develops and approves required environmental decision documents, and advises Center personnel on NEPA.

The Program Management Councils¹² are responsible for reviewing proposed programs/projects and overseeing implementation according to NASA policies, including those related to NEPA.

¹²A complete definition of Program Management Councils is in Appendix C.

Finding and Recommendations

NEPA Compliance for Programs and Projects

Eleven (85 percent) of 13 reviewed mission-related programs/projects¹³ did not comply with NEPA requirements or NASA guidance. Of the nine construction of facilities projects¹⁴ reviewed, 100 percent complied with NEPA requirements; however, two did not fully comply with NASA guidance. The noncompliance exists because NASA's management controls for environmental compliance are inadequate in the following areas: planning, oversight, guidance, and training. NEPA noncompliance related to programs/projects totaling about \$3 billion could result in increased costs, schedule delays, missed opportunities for preferable alternatives and/or public involvement, and adverse public perception. Due to the extent of NEPA noncompliance for mission-related programs/projects, we consider this deficiency to be a potential material control weakness reportable to the Agency's Internal Control Council.

NASA's Procedures for Implementing NEPA

NASA procedures for implementing NEPA are contained in various regulations, guidelines, and handbooks. Title 14, CFR, Subpart 1216.3 (CFR 1216.3), "Procedures for Implementing NEPA," last amended October 7, 1991, requires managers to consider in the early planning phase the potential environmental effects of all proposed activities. The CFR 1216.3 addresses management's responsibilities and identifies criteria for the three levels of NEPA consideration (categorical exclusion,¹⁵ environmental assessment, and environmental impact statement); requirements for documentation; and procedures for requesting deviations from the CFR 1216.3. The CFR 1216.3 and draft NPG 8840, "NASA Procedures and Guidelines for Implementing NEPA and Executive Order 12114," most recent version dated October 26, 1999, provide criteria for specific activities normally requiring environmental assessments or environmental impact statements as well as activities that are excluded from Agency and CFR requirements.

NASA's Environmental Management Division directed environmental employees to follow the draft NPG 8840 in implementing NEPA. NPG 8840 has been under development and in draft for 4 years. During the course of this audit, the Agency placed a

Deliberative process information omitted.

¹⁵A categorical exclusion is a category of actions that do not have a significant effect on the human environment. Neither an environmental assessment nor an environmental impact statement is required if a proposed action is a categorical exclusion.

greater emphasis on issuance of the guidance in final form. The draft NPG 8840 provides NASA's overall environmental planning process and standard procedures for implementing NEPA.

NPG 8820.2B, "Facility Project Implementation Handbook," dated April 25, 1997, is NASA's project management guidance for facility planning, budgeting, construction, and environmental compliance. The handbook's planning chapter describes how to incorporate NEPA into the facility planning process. The handbook addresses preparing the environmental evaluation, assessment, and impact statement; identifying categorical exclusions; and issuing a finding of no significant impact¹⁶ and a record of decision.¹⁷ The handbook encourages early participation by the Centers' environmental offices in the environmental review process.

NPG 7120.5A, "NASA Program and Project Management Processes and Requirements," dated April 3, 1998, provides guidance on implementing NEPA for aerospace program/project managers. However, the NEPA coverage consists of only three statements referencing the NEPA law, the environmental office contacts that managers must make, and the NEPA statement that should be included in project plans (see details in Appendix D).

Status of NEPA Compliance at Three NASA Centers

We reviewed the process for implementing NEPA and tested a total of 13 mission-related and a total of 9 construction of facilities programs/projects at the John H. Glenn Research Center at Lewis Field (Glenn), John F. Kennedy Space Center (Kennedy), and George C. Marshall Space Flight Center (Marshall). A complete list of programs and projects reviewed is in Appendix E.

Mission-Related Programs and Projects. Of the 13 programs/projects reviewed at Glenn and Marshall, 11 (85 percent) did not comply with either the NEPA requirements or NASA guidance because the managers did not consider and document environmental impacts. Seven of the managers did not consider environmental impacts because they were unaware of the NEPA requirements. The remaining four managers, although aware of NEPA and NASA guidance, did not perform environmental evaluations or prepare

¹⁶A finding of no significant impact is a document a Federal agency prepares if its environmental assessment determines that the proposed action will have no significant environmental impact.

¹⁷A record of decision is a document a Federal agency prepares to record the decision it made based on an environmental impact statement.

records of environmental consideration as required. The four cases of noncompliance were
Deliberative process information omitted.

- **Deliberative process information omitted.** program manager did not know whether an environmental evaluation had been performed during program
Deliberative process information omitted. The program plan included a statement that there was no known environmental impact associated with the program; however, this statement was obtained from the contractor, and the Center has no documentation to support it.
- The project **Deliberative process information omitted.** did not perform the evaluation because he mistakenly believed that the contractor's response to a Non-Advocate Review¹⁸ question satisfied NEPA requirements. The contractor responded **Deliberative process information omitted.** would have no additional environmental **Deliberative process information omitted.** The project manager had no evidence of an evaluation.
- **Deliberative process information omitted.**¹⁹ mistakenly determined that performing environmental evaluations was inappropriate at the program level. Both managers are responsible for overseeing multiple projects that fall under their programs. Therefore, the program managers believed it was the project manager's responsibility to perform an environmental evaluation. However, NEPA requires that Federal agencies consider environmental impacts on all actions, and NASA guidance requires that program managers evaluate all new programs for NEPA compliance.

Deliberative process information omitted.

The two managers who complied with the NEPA were responsible for the Chandra X-ray Observatory program (Chandra)²⁰ and the X-33 Advanced Technology Demonstrator Vehicle program (X-33).²¹ The contractor for the Chandra program performed the environmental evaluation and documented that the program would have no significant environmental impact. The program manager for the X-33 was aware of NEPA requirements and upon realizing the potential environmental impacts of the X-33, coordinated with the manager of the Marshall Environmental Engineering Department. As a result, Marshall prepared the NEPA required environmental assessment and environmental impact statement.

In addition to reviewing programs and projects, we reviewed the Center's process for implementing NEPA. We had concerns about whether Glenn's existing controls for evaluating NEPA for mission-related activities would ensure compliance with NEPA. For example, managers did not evaluate programs/projects early enough or at the appropriate level. Glenn performed the NEPA evaluation in coordination with its safety permit²² process. The safety permit process was initiated during the project's implementation phase rather than the formulation/planning phase as required. Waiting until the implementation phase is too late to initially assess for NEPA because any changes to the program/project due to a NEPA action could increase costs and cause delays. Also, the NEPA evaluation is implemented at the task level rather than the program/project level. Because the NEPA consideration is tied to the safety permit process, Glenn does not have sufficient controls to ensure that NEPA is considered early enough and at the appropriate program/project level. In addition, Glenn may not have factored environmental considerations and environmentally preferable alternatives into the acquisition strategy.

Construction of Facilities Projects. All nine of the reviewed construction of facilities projects complied with the NEPA requirements. However, two did not fully comply with NASA guidance in CFR 1216.3, draft NPG 8840, and NPG 8820.2B. Specifically, the guidance requires that managers for major construction of facilities projects prepare an environmental assessment²³ or obtain a deviation from NEPA requirements. Neither of the two managers prepared an environmental assessment because the environmental management offices at their respective Centers concluded that the projects would have no environmental impact. At Marshall, the environmental management office performed a preliminary environmental survey

Deliberative process information omitted.

²²A safety permit is a license issued to operate a facility or piece of equipment within the constraints listed on the permit. All managers of proposed test operations must request a safety permit.

²³An environmental assessment is required for each major construction of facilities project, which is defined in NPG 8820.2B as a construction project valued in excess of \$750,000; or a repair, rehabilitation, or modification project valued in excess of \$1,000,000.

that concluded the project would have no environmental impact. At Kennedy, the environmental management office reviewed the environmental checklist²⁴ received from the project manager and concluded that the project would have no environmental impact.

The CFR 1216.305(b) cites seven “specific NASA actions normally requiring an environmental assessment” but does not explicitly identify when one should be performed. Even though the two projects had no environmental impact, the Headquarters NEPA Coordinator²⁵ agreed that to fully comply with NASA guidance, each manager should have obtained a deviation from NEPA requirements as required by CFR 1216.3 and the draft NPG 8840. These circumstances clearly demonstrate the need for revised guidance for environmental assessments, which is discussed in more detail in the Environmental Guidance section later in this report.

The nine projects that were in compliance with Federal requirements can be attributed to greater controls over the construction of facilities projects. Specifically, NASA has included detailed guidance in NPG 8820.2B on how to implement NEPA. Further, environmental managers coordinate efforts with the facilities managers for all construction projects. For example, the facilities offices include the environmental office in the facilities budgeting process, obtain an environmental staff member as part of the team, invite environmental staff to project meetings, and maintain a working relationship with the environmental offices. Conversely, the lack of detailed guidance and coordination between mission-related and environmental managers has contributed to the lack of NEPA compliance for Agency programs/projects.

Controls Over NEPA Implementation

NASA’s noncompliance with NEPA demonstrates the need to improve environmental management controls. Specifically, NASA has not emphasized the need for environmental management planning to ensure compliance with environmental law, NASA oversight and guidance addressing NEPA is inadequate, and NASA has not trained most program/project managers on the NEPA requirements. An effective system of management controls, as explained below, could better ensure that NASA complies with NEPA.

Environmental Management Plan. An environmental management plan is an effective management tool that allows managers to identify, assess, and mitigate risks, delays, and costs associated with a program/project at the earliest opportunity. NASA does not specifically require the preparation of an environmental management plan. Accordingly, program/project managers have not taken sufficient measures to consider and minimize potential adverse impacts to both the environment and the Agency.

²⁴An environmental checklist is a form, a portion of which is in checklist format, that summarizes the purpose and physical characteristics of a proposed project. The Center environmental management offices review each completed checklist to determine whether the project is categorically excluded or requires the preparation of an environmental assessment or environmental impact statement.

²⁵The NEPA Coordinator is an official of the Office of Management Systems’ Environmental Management Division.

NASA has performed various studies showing that poor planning and definition of requirements results in cost growth and greater technical risk. Consequently, a major theme of NPG 7120.5A is that NASA require and allow time for managers to adequately plan at the beginning of each new program/project. While NPG 7120.5A addresses safety, mission success, risk management, and acquisition planning, it does not fully and completely address the benefits of environmental planning. Environmental management plans would help to ensure that program/project proposals are subjected to the NEPA process at the earliest planning phase and that environmental considerations and alternatives are part of the Agency's acquisition strategy. Also, an environmental management plan would be a good tool to document and track NEPA compliance and to facilitate oversight of NEPA compliance by the Program Management Councils.

The Federal Acquisition Regulation (FAR) and the NASA FAR Supplement also do not require preparation of environmental management plans as part of the acquisition planning process. However, the FAR, Part 7, "Acquisition Planning," requires that acquisition plans address all applicable environmental issues associated with an acquisition, including the need for an environmental assessment or environmental impact statement, proposed resolution of environmental issues, and any environmentally related requirements to be included in solicitations and contracts. FAR, Part 23.7, "Contracting for Environmentally Preferable and Energy-Efficient Products and Services," requires that agencies implement cost-effective contracting programs favoring environmentally preferable products and services. In addition, the NASA FAR Supplement, Part 1807, further emphasizes the value of an acquisition strategy and specifically states that NPG 7120.5 shall be an integral part of acquisition planning for programs/projects. In our opinion, managers can more fully comply with NPG 7120.5A by performing comprehensive environmental management planning that addresses how a program/project will fulfill the full range of environmental requirements. Environmental planning should also specify how the program/project manager would monitor environmental compliance and the role of NASA managers, the Program Management Councils, and the contractors.

Oversight Responsibilities. NASA's oversight of program/project formulation and implementation processes has not adequately covered NEPA compliance. This is evident by the noncompliance of the programs/projects noted in this report.

As part of its strategic management planning and implementation of NPG 7120.5A, NASA formed Program Management Councils to oversee program/project management. The Associate Administrator for Management Systems is a member of the Agency Program Management Council. The Program Management Councils are responsible for reviewing proposed programs and assessing existing programs/projects to evaluate cost, schedule, and technical content to ensure that NASA is meeting its commitments specified in program commitment agreements,²⁶ program plans, and project plans. Thus, NASA has focused its

²⁶A program commitment agreement is a contract between the NASA Administrator and the cognizant

oversight efforts on schedules, cost, and technical performance and not on other NPG 7120.5A requirements, such as environmental compliance.

Additionally, program managers are responsible for overseeing projects that fall under their programs. However, in some cases, program managers are relying on project managers to evaluate and document environmental consideration. As noted in this report, none of the seven projects reviewed complied with NEPA. This noncompliance indicates that project managers are not evaluating potential environmental impacts as required by NEPA, and that the program managers are not providing environmental oversight as required by NASA guidance.

Although NASA has established management councils to oversee NASA's programs/projects, the majority of programs/projects we reviewed are not complying with NEPA and other Agency environmental guidance. We concluded that the current oversight has not provided the necessary emphasis on the NEPA requirement to consider and document potential environmental impacts.

NASA Guidance. Guidance in the Agency NPG's and the CFR needs to be changed to ensure that NASA employees comply with NEPA.

Deliberative process information omitted.

Enterprise Associate Administrator for implementation of a program.

****Deliberative process information omitted.****

Facility Project Guidance. NPG 8820.2B provides thorough coverage of NEPA and coordination of projects with NASA environmental offices. The handbook is an important control that helps ensure that construction of facilities project managers comply with NEPA. However, some NASA procedures have changed since the issuance of NPG 8820.2B, and the handbook is now outdated. NPG 8820.2B needs to be updated to reflect current policies and procedures. Specifically, the NPG requires that the NASA Form 1509, Brief Project Document, contain a statement describing the completion of the NEPA process but does not provide specific guidance on the content and structure of the statement. Subsequent to issuance of the NPG, the Facilities Engineering Division developed specific instructions for preparing the NASA Form 1509, and those instructions should be incorporated into the revised NPG. Six of the nine construction of facilities projects reviewed did not comply with the Facilities Engineering Division requirements for completing the NASA Form 1509.

NASA Guidance in the CFR. CFR 1216.3 needs to be revised because it is too broad and does not provide clear guidance to NASA employees. The NASA Environmental Management Division plans to revise CFR 1216.3 and estimates the revision will take from 2 to 4 years to complete. The CFR 1216.3 requires revisions in the following areas:

- The definition of what constitutes a categorical exclusion omits the key criterion, which is lack of significant environmental impact. This omission could lead program/project managers to erroneously conclude that an action falling into one of the categorical exclusion categories is excluded even if the managers deem that there is a significant environmental impact.
- The eight specific categorical exclusions are vaguely worded and broad in scope. For example, one of the categories is "research and development activities in space science other than specific spacecraft development and flight projects." Such wording is of limited assistance when a program/project manager is faced with a decision as to which activities within space science are categorically excluded. In contrast, categorical exclusions at other Federal agencies are more precisely stated and are usually narrower in scope.²⁷

²⁷The Department of Energy (Energy) lists 103 categorical exclusions in 10 CFR Part 1021, Appendixes A and B. Energy lists 15 categorical exclusions applicable to general agency actions and 88 applicable to specific

- The CFR cites actions that normally require an environmental assessment, but does not define “normally.” The two major construction of facilities projects that did not fully comply with the NASA guidance demonstrate the need for revised procedures regarding the requirements for preparing an environmental assessment. The two construction project managers did not perform an assessment because there was no environmental impact, while other managers performed an assessment for all major construction projects regardless of impact. The lack of definition for “normally” has resulted in various interpretations of the requirement for an assessment.
- Criteria for whether to perform an environmental assessment on construction of facilities projects are based on the project’s dollar value. However, experience has shown that high-dollar projects, in some cases, can have little or no environmental impact whereas low-dollar or no-cost projects can have significant environmental impact. Therefore, dollar value is not an effective criterion for environmental impact. The two major construction of facilities projects that did not fully comply with the NASA guidance also demonstrate the need for revised procedures for using dollar value as a factor for performing an environmental assessment. Although the CFR required an environmental assessment for both projects because of dollar value, neither had an environmental impact.

Environmental Guidance. Although NASA has updated its environmental guidance through the issuance of the draft NPG 8840, the revision has been in process for 4 years. We identified a total of 125 requirements in the NEPA law and the Council on Environmental Quality regulations. Only three Council requirements were not covered in the draft NPG 8840:

- Agencies must designate a person to be responsible for overall review of agency NEPA compliance.
- Draft environmental impact statements must list all Federal permits, licenses, and other entitlements prior to implementing the activity proposal.
- An agency may adopt a Federal draft or final environmental impact statement provided that it meets Council standards.

Promptly revising NASA’s guidance would strengthen environmental management controls and help ensure that Agency managers comply with NEPA.

agency actions. Some examples of Energy categorical exclusions are: routine administrative, financial, and personnel actions; transfer of property; information gathering, data analysis, documentation preparation, dissemination; improvements to cooling water systems within existing buildings and structures; installation of fencing with no adverse effect; and noise abatement.

Training on NEPA Requirements. The majority of the program/project managers had not received NEPA training. Of the 11 mission-related program/project managers that did not comply with NEPA, 10 stated that they had not received training in NEPA.

NASA Headquarters environmental and enterprise managers have not yet established a formal training program that includes adequate coverage of NEPA requirements and the potential impacts of noncompliance. However, officials from the Environmental Management Division have contacted and briefed several Headquarters and Enterprise officials regarding the NEPA requirements. Also, Center environmental managers have provided some NEPA training to Center personnel but not enough to ensure NEPA awareness. For example, Kennedy has no formal environmental training program but offers environmental leadership presentations, which include coverage of the NEPA requirements, to Kennedy senior managers on an annual basis. Glenn has offered environmental training sessions that included NEPA requirements; however, the training has not been provided in the last few years, and for the most part, attendees were not managers of mission-related activities. Marshall has provided some NEPA training to specific groups at the Center but does not have a formal training program that covers NEPA.

While Glenn, Kennedy, and Marshall are providing some NEPA training, a formal NASA-wide environmental management training program would be a more effective means of ensuring that all program/project managers are aware and knowledgeable of the NEPA requirements. Further, the training program should be available at the Centers. NASA's Environmental Management Division is developing a curriculum for a formal training program.

Adverse Effects of Noncompliance

Management controls are essential not only to ensure compliance with environmental laws and regulations, but also to identify and mitigate adverse environmental impacts, risks, and costs to Agency programs/projects. The Agency's lack of compliance with the NEPA law and/or NASA guidance, as shown in 13 (59 percent) of the 22 programs/projects reviewed, can have adverse environmental impacts in addition to potentially violating Federal laws and NASA guidance. Specifically, noncompliance can result in:

- Unnecessary program/project delays or stoppages and increased cost. Failure to complete all of the NEPA procedural requirements is a primary cause for adverse judicial judgments. In the event of a court challenge, time is lost and resources are expended dealing with court actions, and program/project schedules may be delayed or put on hold until the NEPA procedural steps are completed. In addition, the Agency could incur added costs for documentation efforts, potential contract modifications, and other costs associated with revising a program/project.
- Lost opportunities to consider other reasonable alternatives and their environmental impacts early in the project planning phase. This occurs when NEPA compliance occurs too late or when hard commitments are made that limit choices for

alternatives or essentially drive the Agency to choose a particular alternative. Failure to include reasonable alternatives in an environmental impact statement is one of the most common bases for litigation.

- Limited public involvement. Public involvement is a key element of NEPA compliance. Failure to obtain and consider the views of the public hinders full and fair consideration of the environmental impacts of proposed actions and alternatives in those cases in which a significant environmental impact exists.

NASA benefited from complying with NEPA on the X-33 Advanced Technology Demonstrator program. As a result of preparing an environmental impact statement, Marshall identified the potential for snow avalanches at nearby ski areas and took steps to reduce the risk of injury and damage. Also, Marshall identified an endangered tortoise that may have been negatively impacted and was able to establish procedures to mitigate harm to the tortoise.

Under NEPA, three NASA missions²⁸ have been challenged in court over the last 10 years by anti-nuclear groups opposed to the launching of nuclear materials for outer space missions. NASA succeeded in all three cases because it complied with the NEPA requirements and, as a result, prepared sound environmental impact statements and records of decision. However, NASA has 13 programs/projects valued at about \$3 billion that are not in compliance with NEPA.

When Federal agencies have not followed the NEPA requirements, plaintiffs have increased costs of projects and delayed them for years. For example, plaintiffs successfully delayed and increased the cost of two federally-funded construction projects (Federal Highway Administration and the Army Corp of Engineers), a road construction project and a water reservoir project, because the project managers did not properly prepare the environmental impact statements. Plaintiffs often use environmental impact statement reviews performed by the Environmental Protection Agency to support their noncompliance claims in court.

²⁸ The three missions that the anti-nuclear groups challenged were *Galileo*, *Ulysses*, and *Cassini*.

Recommendations, Management’s Response, and Evaluation of Response

Management provided extensive comments on the report which we address in Appendix G.

The Associate Administrator for Management Systems should:

- 1. Report NEPA noncompliance for mission-related programs/projects to the Internal Control Council as a potential material management control weakness to be included in NASA’s annual Federal Manager’s Financial Integrity Act statement of assurance.**

Management’s Response. Nonconcur. Management stated that the report exaggerates the nature and scope of NEPA noncompliance and violations of the Council on Environmental Quality and NASA regulations. However, management agreed that NEPA guidance, training, and managerial controls are inadequate. Management would concur with a recommendation to report “non-trivial” NEPA violations for mission-related programs/projects. The complete text of management’s comments is in Appendix F.

Evaluation of Response. Management’s comments are nonresponsive to the recommendation. Consideration of environmental impacts in the early planning phase of NASA’s programs/projects is the core concept of NEPA. We maintain that because NASA managers did not comply with this concept, the reported NEPA noncompliance and violation of the Council on Environmental Quality regulations are not exaggerated. We also maintain that future violations should be reported to the Internal Control Council, but consider the present state of noncompliance, including the inadequate guidance, training, and controls, to be a potential material control weakness until corrected. We, therefore, request that management reconsider its position and provide additional comments.

- 2. Establish a requirement in NPG 7120.5A for environmental management planning to facilitate acquisition management and mitigate adverse impacts, risks, and costs to Agency programs and projects.**

Management’s Response. Nonconcur. Management stated that such a recommendation implies the need for a formal environmental management plan. While a formal plan cannot be justified, there should be a requirement to factor environmental considerations into program/project planning to ensure better decision making and to mitigate potential adverse environmental, risk, and cost impacts. Management will advocate to the Program Management Council Working Group that managers demonstrate a commitment to integrating environmental planning into program/project planning.

Evaluation of Response. The planned action is nonresponsive to the recommendation. We do not consider a separate environmental management plan essential. Rather, including requirements in the revised program plan would be sufficient. Management agrees that NASA should establish a requirement to factor environmental considerations into program/project planning, but does not concur with the recommendation to include this requirement in NPG 7120.5A. We believe that considering environmental factors is, in essence, environmental management planning. Therefore, we maintain our position that NPG 7120.5A be modified and request that management reconsider its position and provide additional comments.

3. Require Program Management Councils to provide sufficient oversight to ensure programs and projects comply with environmental laws and Agency guidance.

Management's Response. Concur. Management will advocate that progress in fulfilling environmental mandates be a required element for reporting to the Program Management Councils. Further, management will develop a process to increase NEPA awareness, set schedules for satisfying NEPA requirements, and establish controls to ensure adherence to those schedules.

Evaluation of Response. The actions planned are responsive to the recommendation. The recommendation is considered resolved but will remain undispositioned and open until the agreed-to corrective actions are completed.

4. Increase NEPA and environmental management coverage in the revised NPG 7120.5 through coordination with the Program Management Council Working Group and the Environmental Management Division.

Management's Response. Concur. Management will advocate that program/project formulation schedules include environmental compliance. The Environmental Management Division recently provided input to improve environmental coverage in NPG 7120.5A. The Environmental Management Division will request that the Program Management Council Working Group consider additional input in light of the Office of Inspector General (OIG) report.

Evaluation of Response. The action planned is responsive to the recommendation. The recommendation is considered resolved but will remain undispositioned and open until the agreed-to corrective action is completed.

5. Expedite the revision of CFR 1216.3, providing more in-depth coverage for categorical exclusions and removing dollar thresholds on categorical exclusions.

Management's Response. Concur. Management agrees that a new regulation would make NEPA compliance more efficient, leading to long-term savings in resources and time needed to conduct effective environmental planning. The Environmental Management Division had already identified that the recommended revisions would materially enhance NEPA compliance and will advocate the need for additional resources to revise current regulations.

Evaluation of Response. The action planned is responsive to the recommendation. The recommendation is considered resolved but will remain undispositioned and open until the agreed-to corrective action is completed.

6. Add the three omitted Council on Environmental Quality requirements to the draft NPG 8840, and expedite issuance of the final version.

Management's Response. Partially Concur. Management nonconcurred with adding the first of the three Council requirements, stating that the draft NPG 8840 already addressed it. However, management will post the name of the NASA NEPA coordinator on the Headquarters' environmental Web site and develop a list of NEPA contacts at each NASA installation.

Management concurred with adding the second Council requirement, stating that corrective action had already been completed.

Management nonconcurred with adding the third Council requirement stating that additional guidance on "adoption" is not warranted at this time. Further, a hyperlink to the Council regulations will be added when the NPG is placed on the NASA Online Directives Information System. Finally, although adding language to the draft NPG this late in the revision process will materially delay final issuance, management will consider additional adoption mandates during development of new NEPA regulations.

Evaluation of Response. Management's comments are responsive to the recommendation. Regarding the first council requirement, the current language in the draft NPG combined with plans to identify Agency NEPA points of contact on the Headquarters Web site satisfies the intent of our recommendation. In relation to the third council requirement, there are plans to include a hyperlink to the Council regulations; therefore, we agree that delaying final issuance of the draft NPG 8840 is not warranted. We further agree that additional adoption mandates should be considered during future revisions to the NPG. The recommendation is considered resolved and closed for reporting purposes.

7. Revise the NPG 8820.2B to include the Facilities Engineering Division's instructions for completing the NASA Form 1509, including the required statement indicating completion of the NEPA review.

Management's Response. Concur. The Facilities Engineering Division, in coordination with the Environmental Management Division, will amend the NPG 8820.2B to reflect the NASA Form 1509 instructions and other changes that would more effectively and efficiently ensure environmental compliance. An interim solution will be in place by August 1, 2000, pending revisions to the NPG.

Evaluation of Response. The actions planned are responsive to the recommendation. The recommendation is considered resolved but will remain undispositioned and open until the agreed-to corrective actions are completed.

8. Direct Center Directors to bring the programs/projects identified in Appendix E into compliance with NEPA.

Management's Response. Nonconcur. The Environmental Management Division stated that 12 of the 13 programs/projects were either technical, trivial violations due to a lack of documentation or fully in compliance. Management was unable to obtain information on one project.

Management stated that eight trivial violations occurred because four managers did not document either a categorical exclusion or a record of consideration, two managers misinterpreted NASA guidelines, and one manager did not perform an environmental assessment. Management will document each of the files to correct seven of the violations and will evaluate whether adopting an Air Force environmental assessment is an appropriate remedy for the remaining violation.

For the four programs/projects that were in compliance, management stated that two were either addressed in or fell within the scope of the International Space Station environmental impact statement, and two were so broad in scope that a meaningful consideration of NEPA at the program level was impossible.

Evaluation of Response. Management's comments are nonresponsive to the recommendation. We disagree that six of the mission-related programs/projects were trivial (lack of documentation) violations of NEPA. Our finding related to the lack of early consideration of the potential environmental impacts which resulted in these deficiencies. We found that management had not, in most cases, considered and/or evaluated environmental impacts during the programs/projects planning phase, as required by NEPA. For example, management states that three of the violations were trivial because managers did not document that the programs/projects met the criteria for a categorical exclusion. Our review showed that those three managers were not aware of NEPA requirements or the criteria for categorical exclusions. In another example, management agrees that one manager did not perform an environmental assessment as required. Although a subsequent review by the Office of General Counsel may show that NASA can adopt the Air Force's environmental assessment, the program manager did not properly consider NEPA-related risks to NASA at the onset of the program. We, therefore, conclude the process needs improvement and maintain that the

reported examples are not trivial violations of NEPA but are indications of the effect of the problem.

We agree that the two construction of facilities project managers considered NEPA, but misinterpreted NASA guidance for obtaining a waiver for the NEPA process. Accordingly, our report states that all the construction of facilities projects were in compliance with NEPA, and only two were not in full compliance with NASA guidance. Those two violations were included in the report to illustrate that NASA guidance is unclear and inadequate.

Management's response indicates that four of the programs/projects were in full compliance with NEPA. For example, management's response stated that two of the program/projects fell within the scope of the International Space Station environmental impact statement. Although an environmental evaluation performed after the initial planning stage may verify that the programs/projects fell within an existing environmental impact statement, neither of the program managers was aware of NEPA requirements or that their program/project may fall within the scope of an existing impact statement. We will evaluate the compliance of the remaining two programs/projects given that sufficient documentation to support management's position of compliance was provided.

"After-the-fact" evaluations by the Environmental Management Division may show that the programs/projects did not have significant environmental impacts and that Agency managers need only document records of consideration. However, we maintain that because of inadequate planning, oversight, guidance, and training, NASA did not comply with the intent of NEPA by considering environmental impacts at the earliest planning phase of a program/project. We, therefore, request that management reconsider its position and provide additional comments.

9. Review current environmental training programs with the Associate Administrators for each Strategic Enterprise and the NASA Environmental Management Division, and establish programs that provide adequate NEPA coverage.

Management's Response. Concur. The Environmental Management Division is developing an environmental training module, which includes NEPA, for new program/project managers. Further, the Division is advocating a comprehensive educational program addressing NEPA and other environmental planning for NASA senior staff, program/project managers, and a mandatory course for at least one environmental staff member at the NASA installations.

Evaluation of Response. The actions planned are responsive to the recommendation. The recommendation is considered resolved but will remain undispositioned and open until agreed-to corrective actions are completed.

Appendix A. Objectives, Scope, and Methodology

Objectives

The overall objective of the audit was to determine whether NASA guidance ensures compliance with NEPA. The specific objectives were to assess whether NASA:

- guidance fulfills NEPA requirements and
- managers evaluated programs/projects in compliance with the NEPA requirements and NASA guidance.

Scope and Methodology

We limited our review to programs and projects at three Centers: Glenn, Kennedy, and Marshall. We reviewed Federal laws and regulations related to NEPA. We also reviewed Agency regulations, guidance, and processes and discussed the overall NEPA process with the Headquarters and Center environmental management officials.

To accomplish the first objective, we reviewed the NASA guidance and NEPA requirements described in Appendix D. We then compared CFR 1216.3 and draft NPG 8840 to the NEPA law and Council regulations. We performed the comparison by cross-referencing those documents and noting inaccuracies or omissions in the draft NASA guidance. We also assessed the adequacy of NEPA coverage in NPG 7120.5A and NPG 8820.2B. In addition, we obtained information from other Federal agencies (Department of Energy, Department of Defense, and the Environmental Protection Agency) related to categorical exclusions, environmental management plans, and court cases.

To accomplish the second objective, we interviewed key management and environmental personnel, reviewed and summarized the NEPA process, and examined relevant documentation. Relevant documentation included environmental checklists and other evaluations, records of environmental consideration, environmental assessments, findings of no significant impact, environmental impact statements, and program/project plans. We developed universes of FY 1999 active mission-related programs/projects and FY's 1999 and 2000 construction of facilities projects at each Center we reviewed and tested a random sample of programs/projects for compliance with the NEPA requirements and NASA guidance. We interviewed the program/project managers and environmental management staff, and examined relevant documentation to determine whether the managers evaluated programs/projects in compliance with NEPA requirements and NASA guidance.

Use of Computer-Processed Data. We did not rely on computer-processed data during our audit.

Audit Universe and Sample. We developed our universes of mission-related programs/projects from listings already developed by the Centers and Enterprises. We used criteria for program/project designation in accordance with NPG 7120.5A for determining whether an activity was a program or project. We compared the listings of programs/projects to other information obtained from Center officials and resolved any discrepancies.

We developed our universes of construction of facilities projects from FY's 1999 and 2000 program operating plan budgets at each Center. We excluded environmental compliance and restoration projects from the universe because they are environment-related and are usually managed by the Center's environmental management office.

From each universe, we randomly selected samples for testing using random number tables. The chart below shows the universes, sample sizes, and budgets of programs/projects reviewed at the three Centers.

Universe and Sample Sizes of Programs and Projects Reviewed

Universe Description	Sample Budget (\$ millions)	Sample/Universe Size		
		Glenn	Kennedy	Marshall
Mission-related programs	\$5,366	0/0 ¹	0/0 ²	6/6 ³
Mission-related projects	\$674	4/22	0/0 ⁴	3/133
Construction of facilities projects	\$43	3/14	4/49	2/42
Totals	\$6,083	7/36	4/49	11/181

¹We excluded the Glenn Propulsion Systems program from the universe because the program provided only administrative services for projects underneath it and had no mission-related duties.

²We excluded two Kennedy programs, Expendable Launch Vehicle Mission Support and Payload Carriers, from the universe because the programs originated before NEPA was enacted and thus did not require compliance.

³We excluded the Marshall Microgravity Research program from the universe because the program provided only administrative services for projects underneath it and had no mission-related duties.

⁴We excluded two Kennedy projects, Checkout and Launch Control System and Test, Control, and Monitor System, from the universe because the projects were categorically excluded and did not require a record of environmental consideration according to the draft NPG 8840 and the NASA NEPA coordinator. Both projects involve the development and installation of mission-related computer systems and equipment.

Management Controls Reviewed

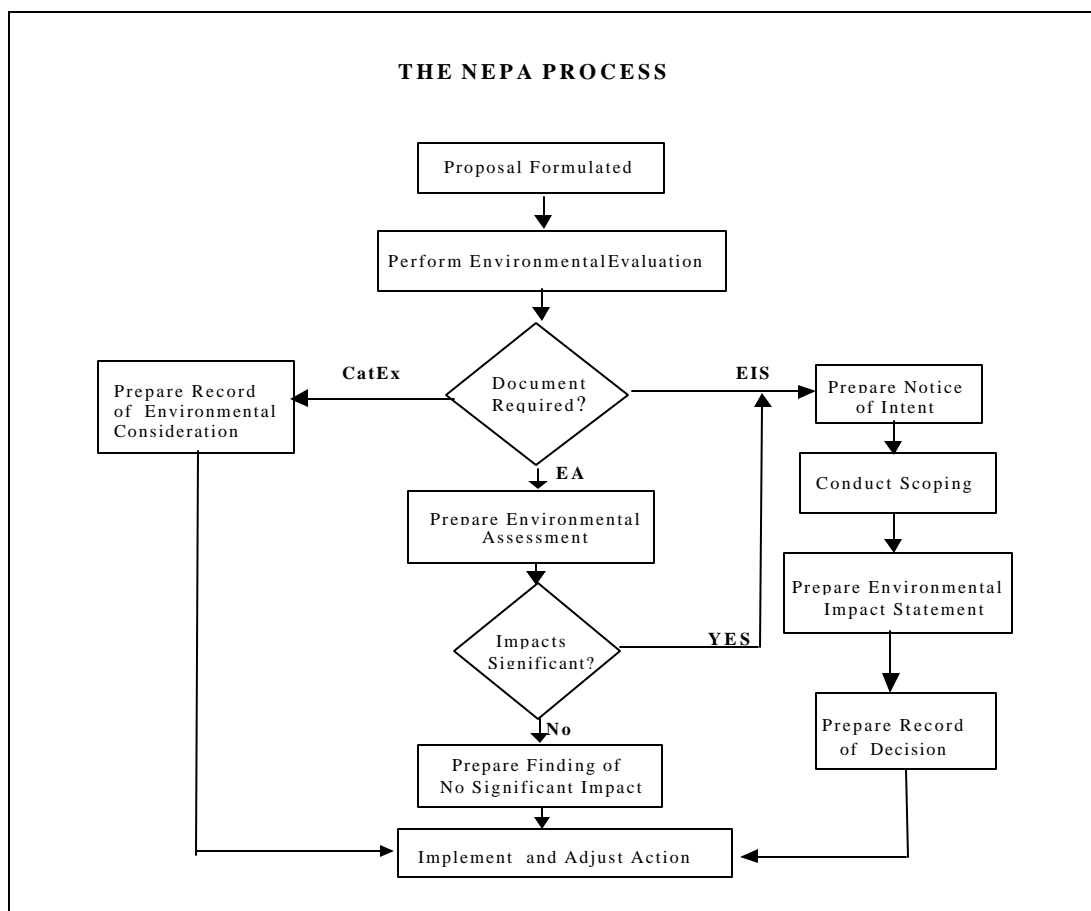
We reviewed management controls related to identifying and analyzing proposed programs/projects for environmental impact. Specifically, we reviewed NASA guidance for implementing NEPA and the processes developed at the three Centers. We considered management controls to be a potential material control weakness as discussed in the finding.

Audit Field Work

We conducted field work from March 1999 to January 2000 at Glenn, Kennedy, and Marshall. We performed the audit in accordance with generally accepted government auditing standards.

Appendix B. NASA's NEPA Process

NEPA requirements and NASA guidance require that all Agency activities consider environmental impacts in the earliest planning phase. NASA's NEPA process in draft NPG 8840 is illustrated below. Once a program or project proposal is formulated, the Agency managers, in coordination with the applicable Headquarters or Center environmental management offices, should perform an environmental evaluation to assess potential environmental impacts. The environmental evaluation could result in one of three outcomes: categorical exclusion (CatEx), environmental assessment (EA), or environmental impact statement (EIS).



Appendix C. Glossary

Acquisition Planning. The process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling an agency need in a timely manner and at a reasonable cost. Planning includes developing the overall strategy for managing the acquisition.

Actions. New and continuing activities, including programs and projects; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals.

Categorical Exclusion. A category of actions that do not have a significant effect on the human environment; therefore, neither an environmental assessment nor an environmental impact statement is required.

Construction of Facilities. A congressional appropriation that funds contractual services for the repair, rehabilitation, and modification of existing facilities; construction of new facilities, acquisition of related collateral equipment; environmental compliance and restoration activities; design of facilities projects; and advanced planning related to future facility needs.

Environmental Assessment. A concise public document that briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. The document includes a brief discussion of the need for the proposal, alternatives, the environmental impacts of the proposed action and alternatives.

Environmental Compliance and Restoration Project. A construction of facilities project that addresses (a) the construction or modification of facilities as required for environmental compliance, (b) the cleanup and remediation of hazardous substance contaminated sites, or (c) a single environmental study.

Environmental Evaluation. The process of making the initial evaluation of the environmental effects of a proposed action including alternative proposals.

Environmental Impact Statement. A detailed statement that documents the environmental analyses of major Federal actions that have a significant impact on the quality of the environment. The statement discloses information to the public, assists agency officials in making decisions, and provides full and fair discussions of significant environmental impacts and available alternatives that would minimize environmental impact.

Finding of No Significant Impact. A document prepared by a Federal agency briefly presenting the reasons an action will not have a significant effect on the human environment and for which an environmental impact statement, therefore, will not be prepared. The document includes the environmental assessment, or a summary of it, on which the finding is based.

Formulation Process. A process that defines a program or project concept and results in an implementation plan to meet mission objectives or technology goals as specified in the NASA and Enterprise Strategic Plans.

Life-Cycle Cost. The total of the direct, indirect, recurring, nonrecurring, and other related expenses incurred in the design, development, verification, production, operation, maintenance, support, and retirement of a system over its planned lifespan.

Major (Discrete) Construction of Facilities Project. A construction of facilities project valued in excess of \$750,000; repair, rehabilitation, and modification in excess of \$1 million; and land acquisition and emergency repair at any cost.

Minor Construction of Facilities Project. A construction of facilities project in excess of \$200,000 but not exceeding \$750,000 or repair, rehabilitation, and modification in excess of \$200,000 but not exceeding \$1 million.

Program. A major activity within an Enterprise having defined goals, objectives, requirements, and phased funding levels and consisting of one or more projects.

Program Management Councils. The Agency Program Management Council is the senior management group responsible for reviewing, recommending approval of proposed programs, and overseeing their implementation according to Agency policies. Governing Program Management Councils are forums composed of Headquarters and Center senior managers who assess program/project planning and implementation and provide oversight and direction.

Project. A significant activity within a program having defined goals, objectives, requirements, life-cycle cost estimates, a beginning, and an end.

Proposal. The development stage of a program/project when an agency has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated.

Record of Decision. A concise public record prepared by a Federal agency at the time it makes a decision that is based on an environmental impact statement. The record states

Appendix C

the decision, identifies all alternatives considered by the agency, and states whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted.

Appendix D. Laws and Regulations

This appendix describes the laws, regulations, and guidance related to NEPA and this audit.

Public Law 91-190, “The National Environmental Policy Act of 1969,” as amended.

NEPA was the first major Federal environmental law enacted and is the basic national charter for protecting the environment. The purposes of NEPA are:

To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

The intent of NEPA is to protect the environment. By requiring Federal agencies to gather information about the environmental consequences of proposed actions and consider the environmental impacts of those actions, agencies make wiser environmental decisions and keep public citizens informed. Federal agencies’ must establish procedures that:

- Develop methods and procedures that will ensure that the environment is considered in decisionmaking along with economic and technical considerations.
- Include an environmental impact statement in every major Federal proposal significantly affecting the quality of the human environment.

40 CFR, Parts 1500-1508, “Council on Environmental Quality NEPA Regulations,” last amended April 25, 1986. The Council on Environmental Quality, a council within the Executive Office of the President, establishes regulations and reports to the President on the nation's environmental status. The Council identifies the implementing NEPA regulations for all Federal agencies by defining the levels of and timeframe for NEPA consideration and the requirements for documentation. The core focus of the regulations is that agencies integrate the NEPA process with other planning at the earliest possible time to ensure that decisions reflect environmental values, avoid delays, and prevent potential conflicts. The regulations also emphasize paperwork reduction, work delay reduction, agency coordination, and public involvement.

Appendix D

14 CFR, Subpart 1216.3, “Procedures for Implementing the National Environmental Policy Act,” last amended October 7, 1991. Subpart 1216.3 contains NASA's procedures for implementing NEPA and supplements the Council's regulations. The procedures apply to all NASA activities that may have an impact on the quality of the environment. Subpart 1216.3 states that potential environmental effects must be considered, along with technical, economic, and other factors, in the earliest planning phase.

The procedural requirements of NEPA involve three levels: the categorical exclusion, the environmental assessment, and the environmental impact statement. NASA activities may be categorically excluded from the requirements to prepare either an environmental assessment or an environmental impact statement if actions are:

. . . sub-elements of an approved broad-based level-of-effort NASA science and technology program (basic research, applied research, development of technology, ongoing mission operations), facility program, or institutional program; and . . . managed relatively independently of other related sub-elements by means of separate task orders, Research and Technology Operating Plans. . . .

Specific NASA activities that normally require an environmental assessment or are categorically excluded are summarized in the following table.

**Environmental Assessments versus Categorical Exclusions
As Defined in CFR 1216.3**

Program/Activity	Environmental Assessment Normally Required	Categorically Excluded¹
Space Science	Specific spacecraft development and flight projects.	Research and Development (R&D) activities ² other than specific spacecraft development and flight projects.
Space and Terrestrial Applications	Specific spacecraft development and flight projects.	R&D activities ³ other than specific spacecraft development and flight projects.
Aeronautics & Space Technology & Energy Technology Applications	Specific experimental projects.	R&D activities ⁴ other than experimental projects.
Space Transportation Systems	Development and operation of new space transportation systems and advance development of new space transportation and spacecraft systems.	R&D activities in space transportation systems engineering and scientific and technical support operations, routine transportation operations, and advance studies.
Other Space Related	Reimbursable launches of non-NASA spacecraft or payloads.	R&D activities in space tracking and data systems.
Facilities	Major construction of facilities projects.	Facility planning and design funding. Minor construction of new facilities including rehabilitation, modification, and repair.
Institutional (Operations at a NASA Installation)	Actions to alter ongoing operations at a NASA Installation that could lead, either directly or indirectly, to natural or physical environmental effects.	Continuing operations of a NASA installation at a level of effort or altered operations, provided the alterations result in only social and/or economic effects but not natural or physical environmental effects.

¹These categories are excluded from the requirements for an environmental assessment or environmental impact statement. Although an action may be categorically excluded from the need for an environmental assessment or impact statement, the activity is not excluded from the environmental evaluation requirement.

²Examples of these activities include Physics and Astronomy Research and Analysis, Planetary Exploration Mission Operations, and Data Analysis.

³Examples of these activities include Resource Observations Applied Research and Data Analysis and Technology Utilization.

⁴Examples of these activities include Research and Technology Base and Systems Technology Programs.

Appendix D

The Federal Acquisition Regulation, Part 7, “Acquisition Planning.” The FAR defines the acquisition requirements for Federal agencies. Section 7.105(b)(16) requires that the acquisition plan:

Discuss all applicable environmental and energy conservation objectives associated with the acquisition, the applicability of an environmental assessment or environmental impact statement, the proposed resolution of environmental issues, and any environmentally-related requirements to be included in solicitations and contracts.

The acquisition plan links the work to the objectives; identifies decision milestones; and addresses all the technical, business, management, and other significant considerations, including risks.

The NASA FAR Supplement, Part 1807, “Acquisition Planning.” Part 1807.105(a)(2) states that NPG 7120.5 shall be an integral part of acquisition planning for programs/projects subject to the NPG requirements. If the NPG does not apply, the acquisition plan shall clearly state that fact. If the NPG does apply, the acquisition plan shall specify whether all required NPG 7120.5 documentation is current and approved. All draft or final solicitations must clearly identify the program or project of which they are a part.

NASA Policy Directive 8800.16, “NASA Environmental Management,” September 6, 1995.

The Directive states that compliance with environmental regulations and NASA policy is the responsibility of every NASA employee. Because administration of this policy is a management responsibility, NASA Strategic Enterprises and Program Offices are accountable for all environmental considerations and are ultimately responsible for full environmental compliance.

Draft NPG 8840, “NASA Procedures and Guidelines for Implementing the National Environmental Policy Act and Executive Order 12114,” most recent version dated October 26, 1999. The NPG is a draft that is in final review. Once approved, it will replace NASA Handbook 8800.11, dated February 1988. The NPG serves as a practical reference and source of guidance for NASA managers in ensuring that their programs, projects, and activities are carried out in compliance with the letter and spirit of NEPA and Executive Order 12114.

NPG 7120.5A, “NASA Program and Project Management Processes and Requirements,” April 3, 1998. NPG 7120.5A covers the formulation, approval, implementation, and evaluation of aerospace programs and projects. The NPG addresses the NEPA requirements as follows:

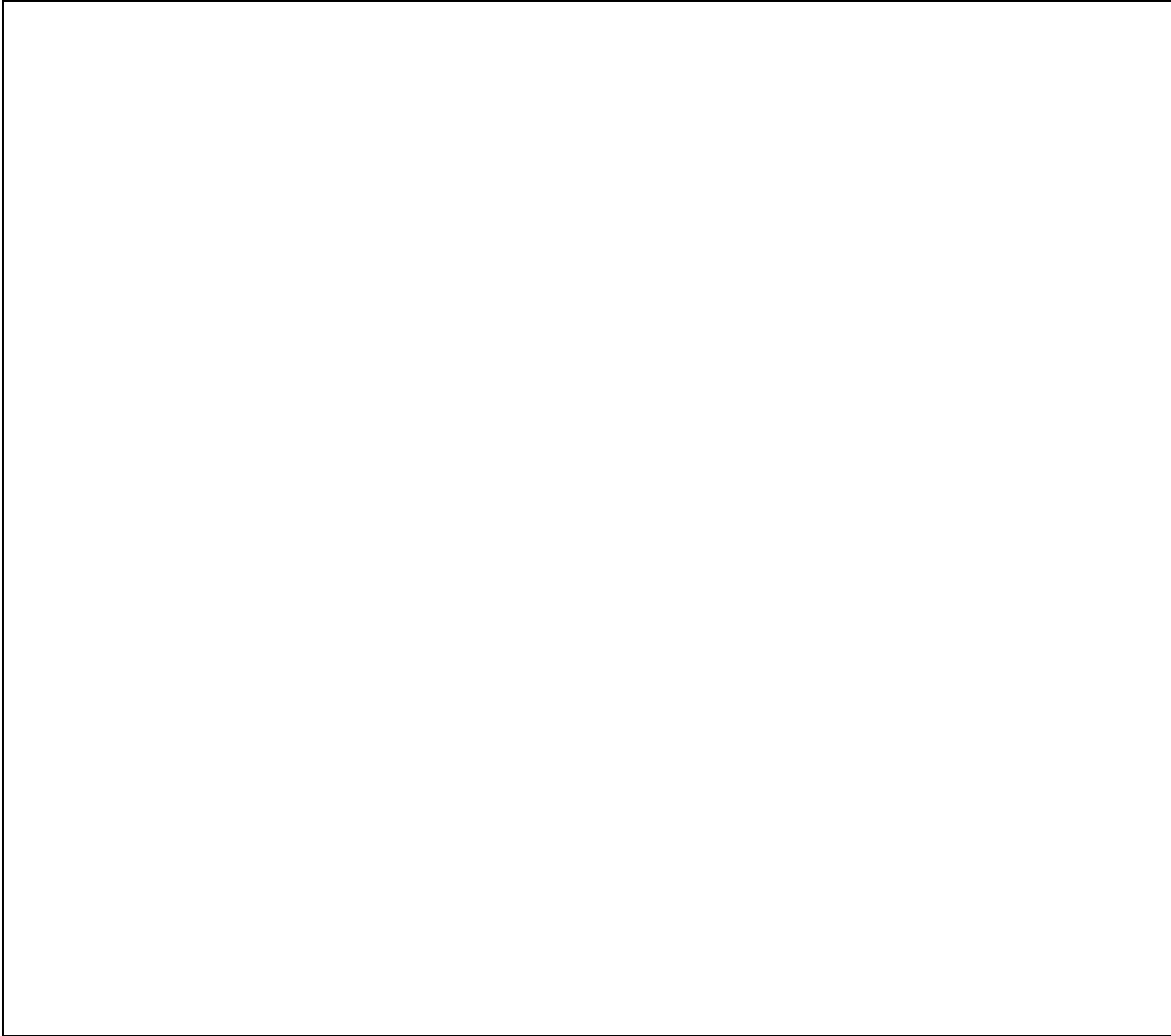
- (a) The National Environmental Policy Act requires NASA program/project managers to consider environmental impacts in the planning of Agency programs and projects that may have a significant impact on the quality of the human environment, consider alternatives to their proposed actions, and ensure compliance with other relevant environmental statutes, regulations, and Executive orders.

- (b) NASA program and project managers shall contact the environmental functional offices to ensure implementation of NEPA requirements in accordance with NASA's policy and procedures (14 CFR Part 1216, NPG 8840, and Executive Order 12114).

In addition, Appendix E.4 of the NPG states that, "The required environmental assessment and environmental impact statement for the project should be identified with the schedule for their accomplishments."

NPG 8820.2B, "Facility Project Implementation Handbook," April 25, 1997. NPG 8820.2B is NASA's project management guidance for facility planning, budgeting, design, construction, environmental compliance, and activation. The handbook's planning chapter explains how to incorporate NEPA into the facility planning process. The handbook further addresses preparing the environmental evaluation, assessment, and impact statements; identifying categorical exclusions; and issuing a finding of no significant impact and a record of decision.

****Deliberative process information omitted.****



Appendix F. Management's Response

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001



Reply to Atty: of

JE

MAR 23 2000

TO: W/Assistant Inspector General for Auditing
FROM: J/Associate Administrator for Management Systems
SUBJECT: Office of Inspector General (OIG) Draft Audit
Report on "Compliance with the National
Environmental Policy Act" dated February 14, 2000

Our responses to the recommendations contained in the subject OIG draft report follow. Evaluation of the National Environmental Policy Act (NEPA) compliance status of the 13 mission-related programs/projects and 9 construction of facilities projects reviewed by the OIG has been coordinated by this office with Glenn Research Center, Kennedy Space Center, and Marshall Space Flight Center. We appreciate being afforded an opportunity to have my staff exchange ideas with OIG staff during preparation of this response. Their constructive interaction allowed resolution of several issues and better understanding of each party's position.

We have included as an enclosure: (a) recommended editorial changes; and (b) items of concern as to the accuracy of statements made or conclusions reached in the body of the report. The enclosure has been edited to delete items that OIG staff has already indicated will be changed. Before addressing the specific recommendations made in the OIG draft report, there are three overarching themes of the report to which NASA takes great exception:

1. The characterization at various points that there are \$3 billion of NASA programs/projects at risk for failure to comply with NEPA is unfair, inflammatory, and unsupported by the facts.
2. There are several statements that NASA lacks effective NEPA guidance. For the past 18 months NASA Centers have

See Appendix G,
OIG Comment 1

See Appendix G,
OIG Comment 2

See Appendix G,
OIG Comment 3

2

been told to essentially ignore NHB 8800.11, which was outdated and ineffective. Instead, they were told to use draft NPG 8840 as de facto guidance prior to its issuance. The OIG draft report finds that draft NPG 8840 covers virtually all of the relevant elements of NEPA guidance. It has been our understanding that NASA Centers have been operating in that de facto fashion.

3. There is an implication that NASA presently has high litigation exposure. The facts of the situation for the programs/projects reviewed in no way support that assertion.

Our office would be happy to work with the OIG to modify the text to more accurately reflect the underlying facts and supportable conclusions.

Recommendation #1: Report NEPA noncompliance for mission-related programs/projects to the Internal Control Steering Committee as a potential material management control weakness to be included in NASA's annual Federal Manager's Financial Integrity Act statement of assurance.

Response #1: Non-concur. We take issue both with the specific wording of the recommendation and the basis on which the recommendation is made. As pointed out in our detailed response to **Recommendation #8** below, we believe that the OIG draft report exaggerates the nature and scope of violations of NEPA and the implementing Council on Environmental Quality (CEQ) and NASA regulations that may exist in the programs/projects reviewed. However, the OIG draft report correctly points out that there are inadequate NEPA training, guidance, and managerial controls in place to ensure that the requirements of NEPA are met for both existing and future NASA programs/projects and other activities. Provided that the supporting language of the OIG draft report is modified to reflect the actual factual situation, we would concur with a recommendation slightly modified from that presented. Specifically, we would concur with a recommendation identical to **Recommendation #1**, except that it would begin with "Report the potential for non-trivial NEPA and CEQ regulations violations for mission-related programs/projects ...".

Recommendation #2: Establish a requirement in NPG 7120.5A for environmental management planning to facilitate

acquisition management and mitigate adverse impacts, risks, and costs to Agency programs and projects.

Response #2: Non-concur. We believe that the recommendation can too easily be interpreted as establishing a certain minimum need for a formal environmental management plan. Such a universal formal requirement can not be justified. There should be a requirement in NPG 7120.5A to factor environmental considerations into program/project management planning to facilitate better decision making and mitigate potential adverse environmental impacts, risks, and costs. The program/project management plan should objectively demonstrate a commitment to identifying and taking into account environmental concerns in a timely manner. We will advocate such an approach to integrating environmental considerations into program/project planning to the Program Management Council Working Group (PMCWG). See **Response #4** for related discussion.

Recommendation #3: Require Program Management Councils to provide sufficient oversight to ensure programs and projects comply with environmental laws and Agency guidance.

Response #3: Concur. We will advocate that progress in fulfilling environmental mandates be a required element for program/project manager reports to Program Management Councils. However, such a requirement alone will not ensure timely compliance at the working level with NEPA and other environmental planning mandates. We will work with the NASA Strategic Enterprises, other relevant NASA Headquarters (HQS) Offices, and NASA Centers to develop a process that: (a) at an early date will identify to the program/project manager the environmental requirements that must be met; (b) establish a schedule for satisfying such requirements in a timely manner; and (c) establish management controls that will detect failure to adhere to such schedule which may adversely affect the program/project.

Recommendation #4: Increase NEPA and environmental management coverage in the revised NPG 7120.5 through coordination with the PMCWG and the Environmental Management Division (HQS EMD).

Response #4: Concur. We will advocate that program and project formulation schedules include an element for environmental compliance with separate timelines for NEPA and other environmental requirements applicable in a given situation (e.g., Endangered Species Act, National Historic Preservation Act, environmental permits, etc.). We agree that the PMCWG, in conjunction with HQS EMD, needs to carefully reexamine NPG 7120.5A to ensure that the document gives appropriate and sufficiently emphasized guidance on environmental issues to program/project managers. We recently provided comments to the PMCWG to improve NPG 7120.5A. Our suggestions included establishing specific references to NPG 8840. However, this was done before we studied the implications of the OIG draft report. We will advocate that the PMCWG reopen the comment period on NPG 7120.5A in light of the OIG draft report.

Recommendation #5: Expedite the revision of CFR 1216.3, providing more in-depth coverage for categorical exclusions and removing dollar thresholds on categorical exclusions.

Response #5: Concur. The NASA NEPA Coordinator has long recognized that new NASA NEPA regulations would make the Agency's compliance more efficient, streamlined, and less ambiguous, leading to major long-term savings in resources and time needed to conduct effective environmental planning. We had already identified that a different approach to categorical exclusions and a deemphasis on or elimination of cost as a major deciding factor in NEPA process selection would materially enhance the efficiency of NASA's NEPA compliance. Revision of 14 CFR Subpart 1216.3 is a priority proactive initiative of the HQS EMD after issuance of NPG 8840. However, expediting issuance of a successor to the present 14 CFR Subpart 1216.3 with a fresh approach will necessitate additional staff and other resources. We will advocate the need for such additional resources.

Recommendation #6: Add the three omitted Council on Environmental Quality requirements to the draft NPG 8840, and expedite issuance of the final version.

Response #6: Partially concur.

Non-concur with recommendation on including in NPG 8840 designation of person responsible for overall review of NEPA compliance. 14 CFR 1216.303(a) specifies that the

Associate Administrator for Management or designee is responsible for ensuring that environmental factors are properly considered in all NASA planning and decision making. This authority has been delegated to the HQS EMD and a specific individual has been formally designated as the Agency's NEPA Coordinator. This delegation and designation are well known throughout NASA, among other Federal Agencies, and to the Council on Environmental Quality. We believe NPG 8840 sufficiently indicates where these responsibilities lie and no change is warranted. However, we will post the name of the NASA NEPA Coordinator on the NASA HQS environmental website and develop and display on the website a list of the NEPA points of contact for each major NASA installation.

Concur with recommendation concerning listing of licenses and permits. NPG 8840 has been changed to reflect the requirement of 40 CFR 1502.25(b) that Draft Environmental Impact Statements must list all Federal permits, licenses, and other entitlements prior to implementing the proposal.

Non-concur with the recommendation that NPG 8840 provide additional guidance on "adoption". Such a change is unwarranted at this time. 40 CFR 1506.3 is quite clear on the ground rules for adoption. NPG 8840 covers the most common form of "adoption" situation under "Cooperative Arrangements". When NPG 8840 is issued and placed on NODIS, there will be a hyperlink to the CEQ regulations. Moreover, adding additional language on adoption, at this very late stage of the NPG 8840 process, will materially delay issuance of the NPG. However, we will reexamine the need for additional "adoption" mandates and procedures during development of new NASA NEPA regulations.

The final NPG package will soon be prepared for signature and issuance. We anticipate that the NPG 8840 package will go forward by the end of April 2000 for signature.

Recommendation #7: Revise NPG 8820.2B to include the Facilities Engineering Division's instructions for completing the NASA Form 1509, including the required statement indicating completion of NEPA review.

Response #7: Concur. At the appropriate opportunity, HQS FED will amend the NPG to reflect the above letter and will consult with HQS EMD as to other changes, taking into account the OIG draft report, that would more effectively

and efficiently ensure environmental compliance. Because there are many major NPG 8820 issues pending, unrelated to NEPA, HQS FED anticipates that it will be between 18 and 24 months before NPG 8820 is reissued. In the interim, HQS FED will reemphasize to the NASA Centers required environmental language on NASA Form 1509 and increase scrutiny that such mandate is carried out in practice. This interim solution will be in place by August 1, 2000.

Recommendation #8: Direct Center Directors to bring the programs/projects identified in Appendix E into compliance with NEPA.

Response #8: Non-concur. Any review of proposed Federal actions concerning NEPA compliance and the potential implications of noncompliance must take into account 40 CFR 1500.3 of the CEQ regulations implementing NEPA. That provision states in pertinent part that "It is the Council's intention that any trivial violation of these regulations not give rise to an independent cause of action." Therefore, in our analysis of the programs/projects identified in the OIG draft report as not in compliance or only partly in compliance with NEPA, we looked at both the alleged basis for noncompliance and what should be the appropriate remedy, if any. We had difficulty in evaluating the draft report's findings because it was not always clear what the basis for asserted noncompliance was. In some cases, the draft report seemed to say that an environmental assessment (EA) is required but none was prepared. In others, the document implied that the administrative record for categorical exclusions was inadequate. For a third group, we could only guess.

To summarize our findings, in our view the vast proportion of the 13 programs/projects identified either were fully in compliance with NEPA or only had committed technical trivial violations. In the other instances, errors can be attributed to ambiguities in NASA NEPA regulations, insufficient management controls, or lack of training. We concede that NASA Centers at times have been sloppy in documenting and preserving an administrative record to support categorical exclusions. However, the probability of litigation over an obvious categorical exclusion is extremely remote. Our office will advocate working with the Strategic Enterprises and Office of the General Counsel (OGC) to develop workable guidance as to when a proposed activity that is clearly categorically excluded needs

****Deliberative process information omitted.****

Appendix F

Deliberative process information omitted.

****Deliberative process information omitted.****

existing program/project managers. Because training of new program/project managers alone will not correct the shortfall of NEPA training among existing program/project managers and other involved NASA personnel, this deficiency must also be addressed. We will propose a comprehensive educational program involving (a) an executive NEPA overview sessions for all NASA senior staff with responsibility for mission, R&D, and facility construction activities; (b) NEPA and environmental planning training (about 4 hours in length) for all existing NASA program/project managers; (c) a mandatory 3-5 day NEPA training course for at least one working level environmental staff member at each NASA major installation; and (d) a recommendation that appropriate NASA contracts be modified to include provision for equivalent environmental training programs. Such an educational initiative on the role of NEPA and environmental planning will require the allocation of additional resources and coordination with the HQS training office and Strategic Enterprises, all of which we will advocate.

If we can be of further assistance, please contact Kenneth Kumor of my staff at 202-358-1112.



Jeffrey E. Sutton

Enclosure

**RECOMMENDED EDITORIAL CHANGES
AND
ITEMS OF CONCERN**

To assist the OIG in amending its draft report, we have identified language in the body of the draft report that we believe needs to be either changed or omitted. Many of these needs are sufficiently identified in the body of the letter that they need not be repeated. Further suggestions for improving the report follow:

- Executive Summary, **Results of Audit**, sentences 1 and 2: Insert "draft" before "guidance". Also, in sentence 1 insert "at Glenn Research Center and Marshall Space Flight Center" after "reviewed" and make the same insert at the end of sentence 3.
- Executive Summary, **Results of Audit**, sentences 4: Delete. We believe there is no basis for such a sweeping assertion.
- Page 2, paragraph 2, sentence 1: Replace "various regulations, guidelines, and handbooks" with "one set of NEPA regulations, one NEPA guidance document, and other guidance documents summarizing and providing reference to those NEPA materials".
- Page 2, paragraph 3, Sentence 2: Replace the sentence with "NPG 8840 has been under development for 4 years."
- Page 3, last line and page 4, line 1: Delete "however, this statement was obtained from the contractor, and". The statement is not accurate.
- Page 6, **Controls Over NEPA Implementation**: Replace the text with "NASA's manner of compliance with NEPA in certain instances demonstrates the need to improve environmental management controls to more effectively and efficiently ensure compliance. Specifically, certain NASA line offices have not emphasized the need for

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environmental management planning to ensure compliance with environmental legal requirements; NASA HQS existing oversight and guidance addressing NEPA are inadequate; and NASA has not trained most program/project managers on the NEPA requirements. An effective system of management controls, as explained below, could better ensure compliance with NEPA.”

- Page 6, **Environmental Management Plan**, paragraph 1, sentence 3; and paragraph 2, sentence 1: Delete. There is no support provided for these statements.
- Page 6, **Environmental Management Plan**, paragraph 3: We see little, if any, relevance in discussing the FAR.
- Page 7, **Oversight Responsibilities**, paragraph 1: Delete sentence 2. There is no support for such a sweeping statement.
- Page 7, **Oversight Responsibilities**, paragraph 3, sentences 3 and 4: Delete or drastically reword. The facts do not support use of “none of”. There is no caveat as to the NASA NEPA category for such projects (*i.e.*, categorical exclusion) and the nature and gravity of the violation.
- Page 12, first full paragraph, sentence 3: Delete. The statement is inflammatory and not supported by the facts.
- Page 12, second full paragraph: Either delete or drastically modify to show relevance to the environmental scope and level of the programs/projects reviewed. Specifically, the two examples cited involved environmental impact statements (EIS’s). None of the audit findings suggest that NASA was in non-compliance for any programs/projects requiring an EIS. In addition, while the Environmental Protection Agency does review and provide comments on EIS’s pursuant to Section 309 of the Clean Air Act, that has little relevance since the thrust of the OIG draft report seems to focus on deficiencies in NASA’s EA and categorical exclusion processes.

Appendix G. OIG Comments on Management's Response

NASA management provided the following general comments in its response to our draft report. Our responses to the comments are also provided.

Management's Comment. The characterization at various points that there are NASA programs/projects totaling about \$3 billion at risk for failure to comply with NEPA is unfair, inflammatory, and unsupported by the facts.

1. OIG Comments. The report states that 11 of the mission-related programs/projects reviewed, totaling about \$3 billion, were not in compliance with NEPA. We believe this is not an unfair characterization. Our findings and conclusions are based on a thorough review of NASA program/project files and related documents, which did not support that environmental impacts were evaluated in compliance with NEPA. We also interviewed present and past program/project managers, who stated for the most part, that they were unaware of the NEPA and NASA requirements. In our opinion, such a lack of awareness creates a major risk of NEPA noncompliance within NASA.

Because management has not provided us with evidence that our findings are invalid, we have not been able to validate management's comments specifically related to the 13 programs/projects. In fact, we have reason to question management's assertions for these programs/projects. For example, management stated that a sizable portion of the Physics and Process Modeling project involved mathematical modeling using computers. Our follow-up related to the project at Glenn contradicted management's response. After the audit, we contacted the initial project manager who stated that about one-third of the project was for computer analysis, including the mathematical modeling, and two-thirds was for testing in laboratories and test cells to validate the analysis. Additionally, we reviewed the current project plan, which further supported that both analysis and actual testing had been performed. According to NEPA and NASA guidance, this project must be evaluated for NEPA compliance.

Management's Comment. There are several statements that NASA lacks effective NEPA guidance. For the past 18 months NASA Centers have been told to essentially ignore NHB 8800.11, which was outdated and ineffective. Instead, the Centers were told to use draft NPG 8840 as de facto guidance prior to its issuance. The OIG found that the draft NPG 8840 covers virtually all the relevant elements of NEPA guidance. It has been management's understanding that NASA Centers have been operating in that de facto fashion.

2. OIG Comments. We agree that the draft NPG 8840 is a much improved and thorough environmental document. However, the term NASA guidance refers to both CFR 1216.3 and the draft NPG 8840. As stated in the report, the CFR is unclear and inadequate. In addition, guidance can be effective only if implemented by NASA staff. We identified that mission-related program/project managers and their overseers were not aware of the draft NPG 8840 or the requirements for evaluating environmental impacts or NEPA compliance. We also found that the draft NPG has been disseminated only to the Centers' environmental offices. However, the

Appendix G

NEPA process must be initiated by the program/project managers because the Center's environmental offices are often uninformed of new program/projects.

Management Comment. There is an implication that NASA presently has high litigation exposure. The facts of the situation for the programs/projects reviewed in no way support that assertion.

3. OIG Comments. We disagree that the report implies high exposure to litigation associated with the noncompliant programs/projects. The word litigation is used only once in the impact section of the report. Further, the language in the report was excerpted from the draft NPG 8840. The report points out that increased risks, including litigation, may exist when the NEPA process is not followed.

Appendix H. Report Distribution

National Aeronautics and Space Administration (NASA) Headquarters

A/Administrator
AI/Associate Deputy Administrator
B/Chief Financial Officer
B/Comptroller
BF/Director, Financial Management Division
G/General Counsel
H/Associate Administrator for Procurement
J/Associate Administrator for Management Systems
JM/Director, Management Assessment Division
M/Associate Administrator for Space Flight
R/Associate Administrator for Aero-Space Technology
S/Associate Administrator for Space Science
U/Associate Administrator for Life and Microgravity Sciences and Applications
Y/Associate Administrator for Earth Science
Z/Associate Administrator for Policy and Plans

NASA Centers

Director, John H. Glenn Research Center at Lewis Field
 Chief, Environmental Management Office, John H. Glenn Research Center at Lewis Field
Director, John F. Kennedy Space Center
 Chief, Environmental Program Office, John F. Kennedy Space Center
Director, George C. Marshall Space Flight Center
 Deputy Director, George C. Marshall Space Flight Center
 Manager, Environmental Engineering Department, George C. Marshall Space Flight Center

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Assistant to the President for Science and Technology Policy
Deputy Associate Director, Energy and Science Division, Office of Management and Budget
Branch Chief, Science and Space Programs Branch, Energy and Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, Defense Acquisition Issues, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology, and Space

Appendix H

Chairman and Ranking Minority Member - Congressional Committees and Subcommittees

Senate Committee on Appropriations

Senate Subcommittee on VA, HUD, and Independent Agencies

Senate Committee on Commerce, Science, and Transportation

Senate Subcommittee on Science, Technology, and Space

Senate Committee on Governmental Affairs

House Committee on Appropriations

House Subcommittee on VA, HUD, and Independent Agencies

House Committee on Government Reform

House Subcommittee on Government Management, Information, and Technology

House Subcommittee on National Security, Veterans Affairs, and International Relations

House Committee on Science

House Subcommittee on Space and Aeronautics

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

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Report Title: Compliance With the National Environmental Policy Act

Report Number: _____ **Report Date:** _____

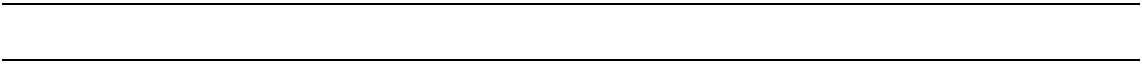
Circle the appropriate rating for the following statements.

	Strongly Agree	Agree	Neutra l	Disagre e	Strongl y Disagre e	N/A
1. The report was clear, readable, and logically organized.	5	4	3	2	1	N/A
2. The report was concise and to the point.	5	4	3	2	1	N/A
3. We effectively communicated the audit objectives, scope, and methodology.	5	4	3	2	1	N/A
4. The report contained sufficient information to support the finding(s) in a balanced and objective manner.	5	4	3	2	1	N/A

Overall, how would you rate the report?

Excellent	Fair
Very Good	Poor
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If you have any additional comments or wish to elaborate on any of the above responses, please write them here. Use additional paper if necessary. _____



How did you use the report? _____

How could we improve our report? _____

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Thank you for your cooperation in completing this survey.

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