

Department of Energy

Washington, DC 20585

March 6, 1995

7.1
/mrsu

Mr. John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW., Suite 700
Washington, D.C. 20004

Dear Mr. Conway:

The Implementation Plan (IP) for Recommendation 93-1 Action 4 Report/Nuclear Explosive Safety Study Corrective Action Plan (93-1/NESSCAP) was approved by Dr. Everet Beckner, Principal Deputy Assistant Secretary for Defense Programs on January 24, 1995. A copy of the IP is provided as Enclosure 1.

In accordance with the 93-1/NESSCAP IP, this progress report (Enclosure 2) describes program actions during the period November 1994-January 1995. Program emphasis has been on project organizational development, formation of associated working groups, and aggressively addressing issues identified in the individual tasking statements by subject matter expert teams. The project schedule has been reevaluated to assure that the Department will meet the June 1995 deadline for the development of draft nuclear explosive safety orders, supporting standards, and other documentation discussed in the Recommendation 93-1 Action 4 Report. A revised activities schedule and project organization were provided with the November progress report and both are included in the IP.

I have also established and chair a 93-1/NESSCAP Policy Oversight Group that includes senior management personnel from Headquarters Defense Programs, Environment, Safety and Health, and field operating organizations to assess work in progress, accomplishments, and provide direction and approval at significant project milestones. The first Policy Oversight Group meeting was held on January 18, 1995. A copy of the memorandum establishing the Policy Oversight Group is found at Enclosure 3.

If you have questions, please call me or have your staff contact Dana Krupa of my staff at 202-586-3842.

Sincerely,

Charles J. Beers, Jr.
Rear Admiral, U.S. Navy
Deputy Assistant Secretary for
Military Application and
Stockpile Support
Defense Programs

3 Enclosures



Department of Energy
Washington, DC 20585

Enclosure 1

January 24, 1995

MEMORANDUM FOR DISTRIBUTION

SUBJECT: IMPLEMENTATION OF THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 93-1 ACTION 4 REPORT AND THE NUCLEAR EXPLOSIVE SAFETY STUDY REVIEW TEAM REPORT

Departmental Policy makes the protection of the public health and safety of paramount concern in the planning and conduct of its nuclear weapons program. The Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-1 and a letter concerning the Nuclear Explosive Safety Study (NESS) raised issues and identified potential deficiencies with both the NESS process and the level of nuclear safety assurance provided by applicable Orders and Directives.

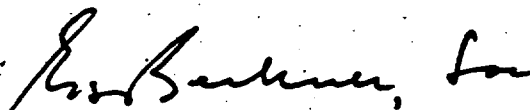
In the DOE's response to the DNFSB, by way of the Recommendation 93-1 Action 4 Report and the NESS Corrective Action Plan (CAP), the Department has made a commitment to correct identified deficiencies and improve the overall process. This includes nuclear explosive safety and environmental, safety, and health requirements.

To ensure integration of the action items in the DNFSB Recommendation 93-1 Action 4 Report and the NESS Final Report, this memorandum establishes management responsibilities for the Department and the plan to implement the overall effort (see attached appendices). We expect each Office to support this Plan expeditiously.

- a. The Deputy Assistant Secretary for Military Application and Stockpile Support (DASMSS) (DP-20) has overall responsibility for the management, implementation, and completion of the Plan, and will:
 1. Establish the management structure shown in Appendix I, Figure 1.
 2. Provide a chairperson for the Policy Oversight Group (reference Appendix I, Figure 1).
 3. Ensure that the results from the Albuquerque and Nevada Ops Coordination Teams are compatible, integrated, and fulfill the actions required in the NESSCAP (June 15, 1994) and the DNFSB 93-1 Action 4 Report (August 8, 1994).
 4. Provide the Chairperson for the Nuclear Explosive Weapons Appraisal Process Working Group.
 5. Ensure that the NESS Final Report recommendations are adequately addressed in accordance with the NESSCAP.
 6. Provide the Chairperson for the Recommendation 93-1/NESSCAP Working Group.

7. Provide programmatic and policy guidance to the Working Groups as required.
 8. Resolve issues forwarded by the Working Groups.
 9. Provide periodic status briefings to the senior level managers.
 10. Provide bimonthly progress reports to the DNFSB through the Departmental Representative to the Board (EH-9.0).
- b. The Deputy Assistant Secretary for Research and Development (DP-10) and the Deputy Assistant Secretary for Facility Transition and Technical Support (DP-30) will:
1. Provide a member for the Policy Oversight Group.
 2. Participate in the appropriate Working Groups/Subject Matter Expert (SME) teams and provide technical assistance with regards to policy and standards concerning nuclear safety orders for facility operations.
 3. Provide technical assistance to the Albuquerque Operations Office and the Nevada Operations Office, as required, to execute all aspects of the Plan.
- c. The Deputy Assistant Secretary for Nuclear and Facility Safety (EH-3.0) is requested to provide:
1. Technical assistance as members of the appropriate Working Groups/SME Teams.
 2. A member for the Policy Oversight Group.
- d. The Deputy Assistant Secretary for Worker Health and Safety (EH-5.0) is requested to provide:
1. technical assistance as members of the appropriate Working Groups/SME Teams.
 2. A member for the Policy Oversight Group.
- f. The Manager, Albuquerque Operations Office will:
1. Provide the Chairperson for the NESS Process Working Group.
 2. Be responsible to the DASMASS for adequately addressing the NESS Review Team Report recommendations in accordance with the NESS CAP.
 3. Provide technical assistance and members to the Policy Oversight and Working Groups/SME teams as requested.
 4. Coordinate assigned 93-1 Subject Matter Expert (SME) teams.

- g. The Manager, Nevada Operations Office will:
1. Provide technical assistance and members to the Policy Oversight and Working Groups/SME teams as requested.
 2. Coordinate assigned 93-1 SME teams.
- h. The Manager, Oakland Operations Office will provide technical assistance and members to the Policy Oversight and Working Groups/SME teams as requested.
- i. The national laboratories will provide technical assistance and members to the Working Groups, subject matter expert teams, as requested, and advisors to the Oversight Group.



Victor H. Reis
Assistant Secretary
for Defense Programs

2 Enclosures

Distribution:

Deputy Assistant Secretary for Research and Development, DP-10

**Deputy Assistant Secretary for Military Application
and Stockpile Support, DP-20**

**Deputy Assistant Secretary for Facility Transition
and Technical Support, DP-30**

Deputy Assistant Secretary for Nuclear and Facility Safety, EH-3.0

Deputy Assistant Secretary for Worker Health and Safety, EH-5.0

Manager, Albuquerque Operations Office

Manager, Nevada Operations Office

Manager, Oakland Operations Office

President, Sandia National Laboratories

Director, Los Alamos National Laboratory

Director, Lawrence Livermore National Laboratory

cc: Assistant Secretary for Environment, Safety and Health (EH-1.0)

Departmental Representative to the DNFSB (EH-9.0)

**IMPLEMENTATION PLAN
FOR THE
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 93-1 ACTION 4 REPORT
AND THE
NUCLEAR EXPLOSIVE SAFETY STUDY REVIEW TEAM REPORT**

I. Introduction

At the request of the Defense Nuclear Facilities Safety Board (DNFSB), the Department formally reviewed the nuclear safety Orders that govern nuclear explosive facilities and operations. The evaluation included the relevant features of the facilities where these operations are conducted, as well as critical support items and programs. The DNFSB Recommendation 93-1 Action 4 Report (August 8, 1994), contains 16 action items related to order revisions and/or modifications, and nuclear safety standards development to enhance the nuclear explosive operations safety. In addition, the Department performed an independent review of the Nuclear Explosive Safety Study (NESS) process which also provides recommendations to improve the nuclear explosive safety program. The Secretary approved the NESS Corrective Action Plan (NESSCAP) on June 15, 1994.

This Plan will encompass all nuclear explosive¹ assembly, disassembly, and test operations and associated facilities and programs. This covers operations under the purview of the Albuquerque Operations Office (AL), the Nevada Operations Office (NV) and the Oakland Operations Offices. Since it is imperative that the corrective actions and improvements described in the DNFSB Recommendation 93-1 Action 4 Report and the NESS Final Report be properly integrated, the management structure shown in Figure 1 will be established and chartered.

II. Responsibilities

The Policy Oversight Group will be chaired by DP-20 with representatives from the Offices of the Assistant Secretary for Environment, Safety and Health (EH) and Defense Programs (DP) and will perform the following functions:

1. Provide final approval of draft Order revisions, new Orders, technical standards, and guides before initiating action for Departmental approval.
2. Ensure that the results produced by the subject matter expert teams (NESS Process, the Nuclear Explosive Weapons Appraisal Process, and the 16 action items identified in the Recommendation 93-1 Action 4 Report)

¹For the purpose of DNFSB Recommendation 93-1, nuclear explosives and nuclear weapons are synonymous. DOE defines a nuclear weapon as the militarized version of a nuclear explosive.

are integrated, compatible, and fulfill the actions required in DNFSB letters dated January 21, 1993 and December 8, 1993.

3. Monitor the planning, coordination, and accomplishment of the action items described in this Implementation Plan.

The Recommendation 93-1/NESSCAP Working Group provides routine oversight and direction concerning the technical areas described in the DNFSB Recommendation 93-1 Action 4 Report and the actions specified in the NESS Corrective Action Plan. This working group subsumes all tasks and functional areas described in the NESSCAP, to include environment, safety and health responsibilities. The Albuquerque and Nevada Operations Offices will have the responsibility for the organization and coordination of subject matter expert teams in the areas identified in Figure 1 and as described in Appendix II. Area coordinators will be designated by the Albuquerque and Nevada Operations Offices to assemble necessary subject matter expert (SME) teams, to include staffing support from HQ, the other operations offices, support contractors, and the national laboratories. The area coordinators will be responsible for providing completed products to the Recommendation 93-1/NESSCAP Working Group in accordance with the provisions of this Implementation Plan.

The Recommendation 93-1/NESSCAP Working Group will perform the following functions in accordance with the DNFSB Recommendation Action 4 Report.

1. Review completed task products provided from AL and NV area coordinators.
2. Provide the following inputs to the Policy Oversight Group concerning 93-1 actions:
 - a. Draft new Orders, as appropriate; and
 - b. Draft Standards and Guides.
3. Work with the NESS Process SME Team concerning the resolution of issues about evaluation of plutonium and other radioactive material dispersal and contamination.
4. Review exclusion statements in existing Orders and directives and provide a recommendation to the Policy Oversight Group.
5. In addition, this group will draft a revision of DOE Order 5610.10 based on inputs from the working groups.
6. Ensure that a policy document is developed which:
 - a. clearly defines the relationships between the nuclear safety Orders (5480 series) and the nuclear explosive safety Orders (5610 series);

- b. establishes and clarifies organizational responsibilities;
 - c. provides a process to coordinate the integration and future development of the 5480 and 5610 series Orders to assure an equivalent level of safety assurance; and
 - d. ensure that divergence does not recur in the future.
7. Ensure that the Deputy Assistant Secretary for Military Application and Stockpile Support (DASMSS) programmatic and policy guidance is properly implemented by the applicable Working Groups.
 8. Resolve issues forwarded by the area coordinators and SME teams and working groups.
 9. Ensure that periodic status briefings are prepared for the senior level managers.
 10. Ensure that bimonthly progress reports to the Defense Nuclear Facilities Safety Board are prepared and approved by the senior level managers.
 11. Ensure that the provisions of the NESSCAP are fulfilled by the groups specified below:
 - a. The NESS Process SME Team/Working Group, under the Albuquerque Area Coordinator, will perform the following tasks in accordance with the NESSCAP:
 - (1) Evaluate, integrate, and incorporate the applicable results from the:
 - (a) NESS Final Report (April 13, 1994);
 - (b) NESS Corrective Action Plan (June 15, 1994);
 - (c) DNFSB Recommendation 93-1 Action 4 Report (August 8, 1994); and
 - (d) NESS Interim Guidance (February 22, 1994).
 - (2) Provide the following inputs to the Recommendation 93-1/NESSCAP Working Group concerning the nuclear explosive safety process:
 - (a) Draft revision of DOE Order 5610.11, and/or new Orders; and
 - (b) Draft Standards and Guides.
 - (3) Work with the Recommendation 93-1/NESSCAP Working Group to resolve issues concerning the evaluation of plutonium and other radioactive material dispersal and contamination.

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(4) Coordinate activities with the other working groups and the Policy Oversight Group.

(5) The NESS Process Team will build on the current nuclear explosive safety study process and on the progress made implementing the Headquarters Interim Guidance.

b. The Nuclear Explosive Weapons Appraisal Process SME Team/Working Group will perform the following tasks in accordance with the NESSCAP:

(1) Perform those appropriate tasks and recommendations specified in the NESSCAP and the NESS Final Report; and

(2) Provide draft inputs to the 5610 series Orders as required. In addition, if required, draft new Standards and Guides.

(3) This Working Group will build on the current appraisal process and on the progress already being made with appraisal guides by Headquarters and Operations Offices.

12. Ensure that Action 4 Report action items are adequately addressed. Appendix II describes the goals and expectations for each action item, the expected outputs to be developed, and supplementary information concerning integration with other DNFSB recommendations. For each action item, participating DOE HQ and field elements are identified.

a. Tasking statements for each action item in Appendix II indicate the scope of the task, participating agencies, and estimated task duration. Organizations are not expected to provide all personnel or skills required, but are requested to identify the number and/or types of personnel (nuclear explosive, nuclear safety, or other ES&H related skills) which might be available.

b. Individual SME teams for each tasking statement will consist of a group of 3 to 5 experienced individuals, who comprise a mix of technical background expertise and experience in a specific subject area.

(1) Based on previous experience of SME action teams, the teams will be required to work on a short term basis and will involve small numbers of different personnel for intense periods. This intense work period will approximate 5 to 10 work days for each action item. The work would be completed over a 30-60 day period which allows time to conduct independent research, prepare draft documents, and provide for product reviews and resolution between the SME

team members before documentation is presented to the specific working groups.

(2) Subject Matter Expert teams staffing is expected to involve at least one individual with nuclear explosive experience from either AL or NV and at least one individual with prior experience in the DNFSB Recommendation 93-1 effort. The Operations Office could provide a SME for the specific nuclear safety subject area if they cannot provide a nuclear explosive representative.

(3) When HQ elements (DP, EH, etc.) are listed, these Organizations should nominate an individual with specific background in the subject area. As such, it is anticipated that HQ elements might involve a mix of technical specialties with representation from DP-10, DP-20, DP-30, EH-10, EH-30, EH-60 or other Office.

(4) Upon receipt of this Implementation Plan (IP), all addressees (HQ and field agencies) are requested to provide the Office of Weapons Surety (DP-21) the names and specialty areas of individuals for SME teams.

(5) The national laboratories are requested to identify personnel who could participate in SME team duties.

c. Participating personnel and Organizations are authorized to employ other support Organizations and/or contractor personnel within the limits of their available resources.

d. Ensure that EH participates in the following Appendix II tasks:

- (1) Performance Indicators, Tasking 1 & 2
- (2) Unreviewed Safety Questions, Tasking 1 & 2
- (3) Nuclear Explosive Safety, Tasking 1

The DOE Order 5610 Integration Group provides staffing support to the Policy Oversight Group and the Recommendation 93-1/NESSCAP Working Group, as necessary. This group consists of representatives from the working groups and subject matter expert teams, as necessary, including the national laboratories. As tasked, this group will review, coordinate, and integrate draft Orders, revisions, new Orders, directives, technical standards, and guides prior to submitting them to the Policy Oversight Group for subsequent Departmental processing.

III. Schedule

The Recommendation 93-1 action items will be completed according to the schedule in Figure 2. In those cases where SME Team products serve as input to the NESSCAP efforts, e.g., modifications to DOE Order 5610-series, the proposed adjustments in the program schedule will be coordinated with the Recommendation 93-1/NESSCAP Working Group and Policy Oversight Group.

In accordance with the NESSCAP, the NESS Process SME Team and the Nuclear Explosive Weapons Appraisal Process SME Team will complete their tasks in accordance with the schedule shown in Figure 2.

Schedule changes must be approved by the Policy Oversight Group.

IV. Reports

Periodic Progress Reports

Bimonthly reports will be submitted to the DNFSB. The first report will cover the period ending October 31, 1994; subsequent progress reports will be forwarded at the end of December 1994, February, April, and June 1995.

V. Coordination and Integration

The Department is currently responding to several DNFSB recommendations which must be considered in the 93-1 NESSCAP activities and the results integrated wherever logical. Where necessary or desired, Working Group Chair(s) and SME teams are authorized to coordinate directly with the DP point of contact for any of the following DNFSB-related efforts. Currently, active DNFSB Recommendations are:

<u>Recommendation</u>	<u>Subject</u>	<u>Contact Office</u>	<u>Phone Number/Fax</u>
90-2	Codes and Standards	DP-311	3-6582/8754
91-6	Worker Rad Protection	DP-311	3-7316/8754
92-2	Facility Rep Program	DP-311	3-8026/8754
92-6	O. R. R.	DP-311	3-8026/8754
92-7	Training/Qualification	DP-31	3-6703/8754
93-2	Criticality Experiments	DP-241	3-5494
93-3	Improving Technical Capability	DP-31	3-6703/8754
93-6	Access to Weapons Expertise	DP-12	3-3988

In any situations where access to facilities, personnel or information is desired but can not be obtained through direct coordination, requests for assistance should

be forwarded to the Recommendation 93-1/NESSCAP Working Group Chair by the most expeditious means.

DNFSB 93-1 and NESS CAP Integration

Management Structure
and Process Flow

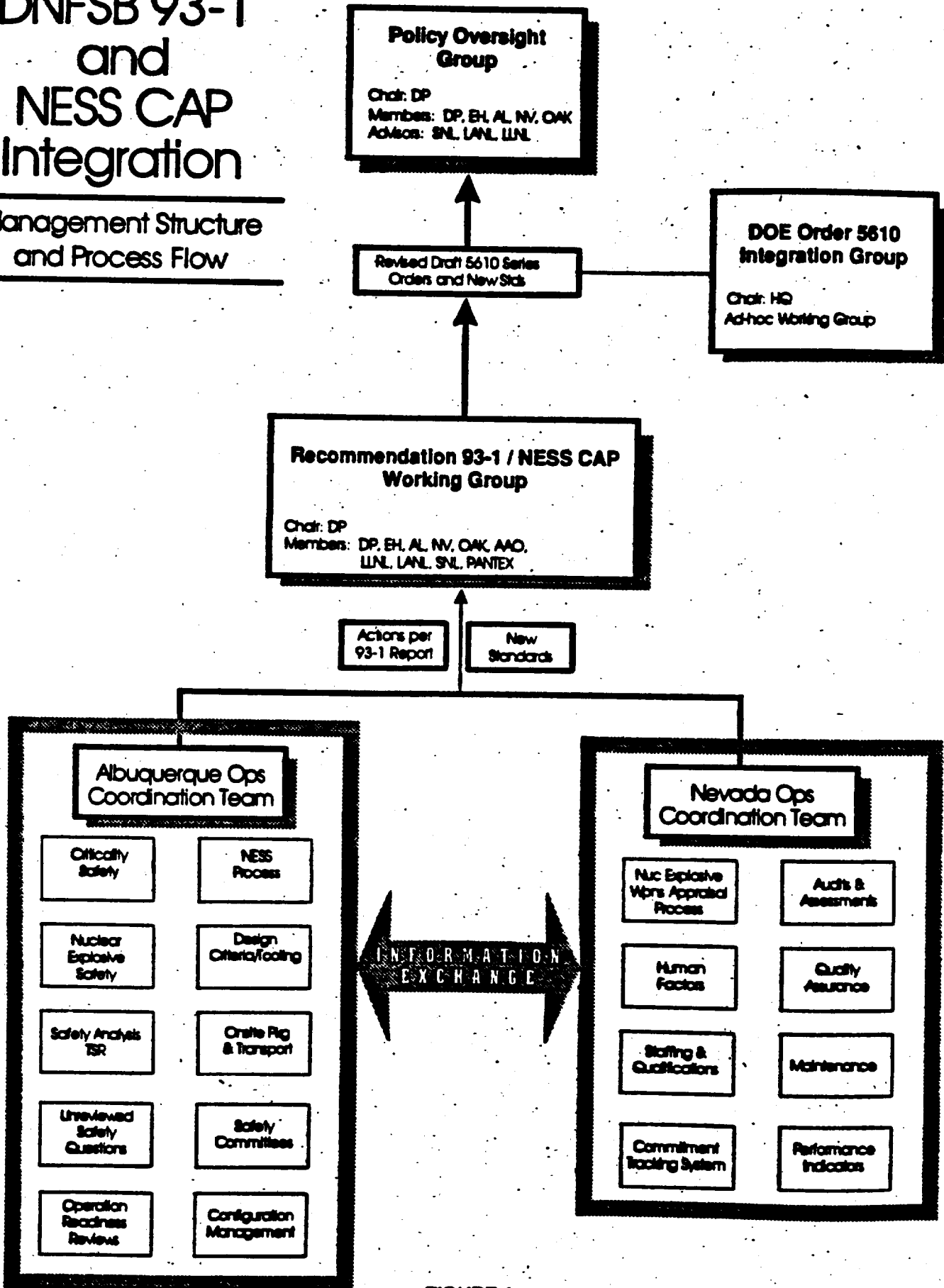


FIGURE 1

INFSH Recommendations 93-INRESSCAP Schedule

1993

1994

SEP OCT NOV DEC JAN FEB MAR APR MAY JUN

TBD

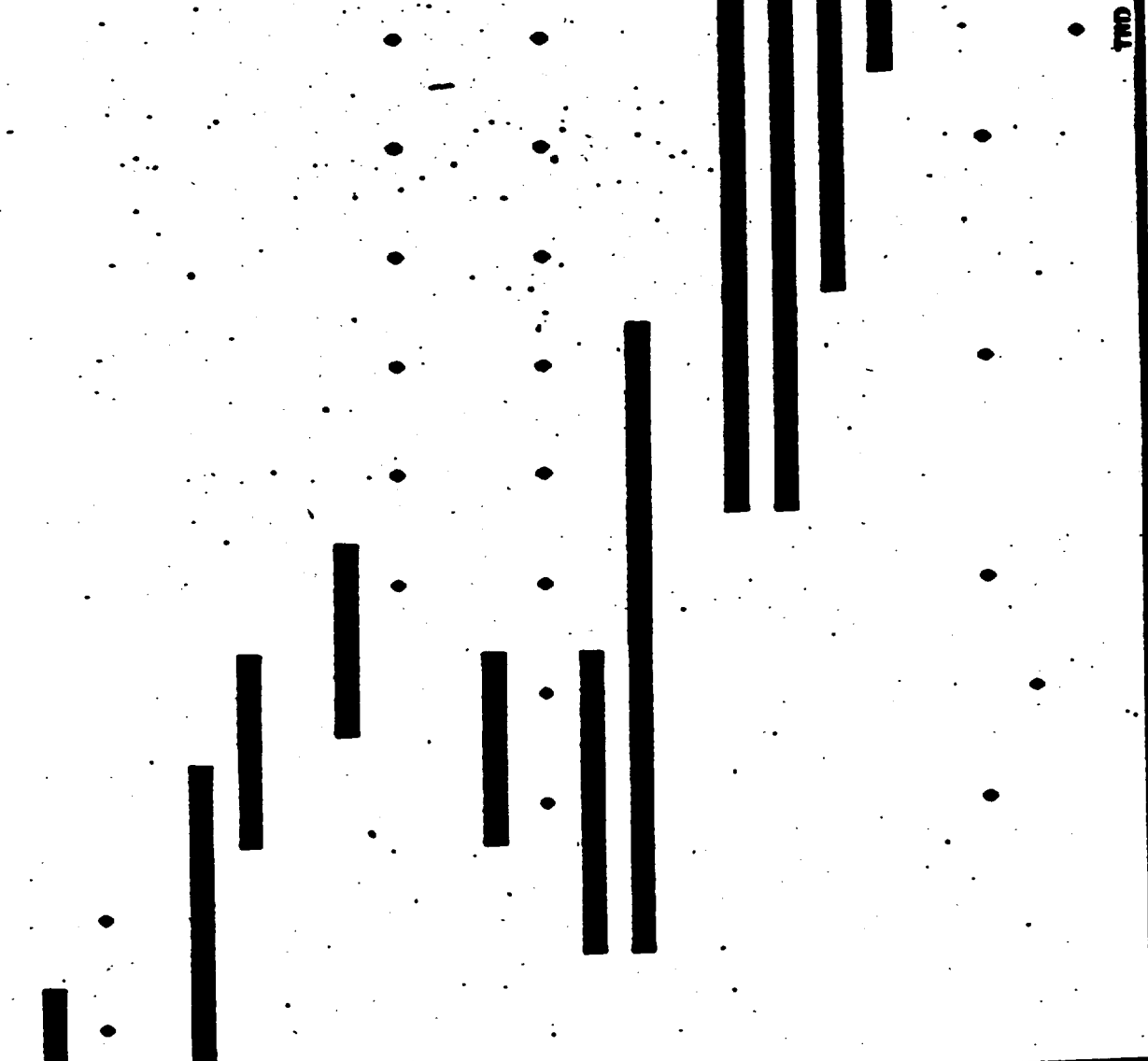


FIGURE 2
APPENDIX 1

TASKING STATEMENTS Audits and Assessments

Goal

Develop a uniform means to conduct audits and assessments.

Problem

Requirements in DOE nuclear explosive safety Orders or Directives for conducting audits of nuclear explosive operations are not specific, although, AL SD 56XB requires appraisals of these operations. Training and qualification criteria are not specified for audit personnel for nuclear explosive facilities and operations, although there is a general requirement that personnel conducting facility audits be qualified. There are no explicit requirements for management self assessments for nuclear explosive operations. Appraisals of environmental monitoring programs as they relate to effluent monitoring are routinely specified for DOE activities, but the specific Order delineating the requirements excludes the nuclear weapons safety program.

Tasking

1. Review DOE Orders 5482.1B and 5700.6C (10CFR830.120). Determine if the appraisals required by these Orders and standards can be applied as the basic references for conducting audits and assessments of the nuclear explosive operations and, if considered necessary, determine how these Orders could be augmented with unique weapon (nuclear explosive) standards for issuance in the 5610 series Orders. Make a recommendation to the DNFSB Recommendation 93-1 Working Group concerning the best way to accomplish the desired Order revision.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 4

Note: Task completion is obtained when the Orders are reviewed, augmentation requirements are identified, and a recommendation is made to the 93-1 Working Group.

2. Review existing guidance and technical standards to determine the adequacy of existing guidance for conducting audits and assessments for the nuclear explosive facilities and nuclear explosive operations. Determine whether additional guidance and technical standards are needed and if required, provide a recommended draft to the 93-1 Working Group.

Participation: DP, AL, NV

Estimated Duration (weeks): 5

Note: Task completion is obtained when the applicable guidance and technical standards are reviewed, additional guidance and technical standards have been developed, and these products are delivered to the 93-1 Working Group.

3. Develop requirements for training and qualifying audit and appraisal personnel for nuclear explosive operations and provide a draft of these requirements to the 93-1 Working Group.

Participation: DP, AL, NV

Estimated Duration (weeks): 3

Note: Task completion is obtained when requirements for training and qualifying audit and appraisal personnel are identified and a recommendation for accomplishing this training is provided to the 93-1 Working Group.

Coordination: Recommendation 93-3 and NESSCAP

TASKING STATEMENTS Commitment Tracking Systems

Goal

Establish a commitment tracking system.

Problem

DOE Orders and directives do not require the establishment of a commitment tracking system to monitor all internal and external commitments to improve safety, health, safeguards, and environmental protection programs for the nuclear explosive facilities and nuclear explosive operations. Examples of external commitments include agreements with state and local agencies and initiatives in response to DNFSB recommendations. Internal sources may include requirements of new or revised DOE Orders or directives, and corrective actions in response to audits, appraisals, assessments, occurrences, and inspections.

Tasking

1. Provide recommendations to the 93-1 Working Group in the form of a draft revision to the 5610 Series Orders addressing the establishment of a commitment tracking system. This system is to monitor all commitments to improve safety, health, safeguards, and environmental protection programs for the nuclear explosive facilities and operations. The system is to include commitments for program improvement at the HQ and Operation Office levels as well as at the site/facility level.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 8

Note: Task completion is obtained when the proposed text section for a 5610-series Order has been provided to the 93-1 Working Group.

TASKING STATEMENTS Criticality Safety

Goal

Develop a uniform Criticality Safety Program.

Problem

Criticality safety requirements in Orders applicable to nuclear explosive facilities and operations are less detailed and rigorous than for DOE defense and commercial nuclear facilities. Requirements to conduct formal hazards analyses that address criticality concerns are not specified. Criticality analysis requirements and requirements for criticality detection systems and criticality safety programs are not equivalent. Approval of modifications by technical authorities, preventive maintenance and surveillance testing, and appropriate training and involvement of supervisory and managerial personnel concerning engineered controls for criticality are not addressed for the nuclear explosive facilities and nuclear explosive operations.

Tasking

1. Review DOE Orders 5480.23 and 5480.24 to evaluate whether these Orders could be made applicable to the nuclear explosive facilities and operations to address the criticality safety concerns. It is desired that these Orders be adopted, by reference, in the 5610 Series Orders. Make a recommendation to the 93-1 Working Group concerning the best way to accomplish the desired order revision.

Participation: DP, AL, NV

Estimated Duration (weeks): 3

Note: Task completion is obtained when criticality Orders are reviewed and a proposed text section to the 5610 Series Orders addressing these procedures is provided to the 93-1 Working Group.

Coordination: NESSCAP

2. Review guidance and technical standards to determine the adequacy of existing guidance for establishing criticality safety for the nuclear explosive facilities and nuclear explosive operations. Determine whether additional guidance and technical standards are needed and provide a recommended draft to the 93-1 Working Group.

Participation: DP, AL, NV

Estimated Duration (weeks): 6

Note: Task completion is obtained when applicable guidance and technical standards are reviewed, additional guidance and technical standards are identified, and a proposed draft is provided to the 93-1 Working Group.

Coordination: - NESSCAP and DNFSB Recommendation 93-2

TASKING STATEMENTS Human Factors

Goal

Develop uniform guidance for human factors programs for the nuclear explosive activities.

Problem

There are no specific requirements or guides for assessing human factors in the design of nuclear explosives or for the facilities or procedures associated with their assembly, disassembly or testing. There are no specific requirements to assess safety risks associated with human involvement, and no guides or criteria are provided. DOE requirements for addressing human factors in safety analyses are contained in DOE Order 5480.23, which is currently excluded from nuclear explosive facilities and operations.

Tasking

1. Review applicability of existing guidance and technical standards, such as the newly published DOE-STD-3009-94, and develop additional guidance and technical standards applicable to nuclear explosive operations as needed. Provided recommended draft documentation to the 93-1 Working Group.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 6

Note: Task completion is obtained when existing guidance and technical standards for human factors are reviewed and additional guidance and technical standards are identified and provided to the 93-1 Working Group.

TASKING STATEMENTS
Performance Indicators

Goal

Provide programmatic guidance for Performance Indicators (PI).

Problem

The DOE performance indicator program is defined in DOE Order 5480.26 and DOE-STD-1048-92. There are no requirements for PI associated with nuclear explosive operations.

Tasking

1. Identify any performance indicators that may help assess and improve nuclear explosive operations by:
 - a. Determining if there are any such internal PIs at Pantex or the Nevada Test Site; and
 - b. Determining if there are any required PIs monitored at Pantex or NTS that may be useful if reported separately for nuclear explosive operations.

Participation: DP, AL, NV

Estimated Duration (weeks): 4

Note: Task completion is obtained when the nuclear explosive unique PI requirements are clearly defined, and the listing is provided to the 93-1 Working Group.

2. If any unique nuclear explosive PIs are identified in Task 1, add the requirements to the 5610-series Orders to describe how they are to be reported.

Participation: DP, AL, NV

Estimated Duration (weeks): 6

Note: Task completion is obtained when the nuclear explosive unique PI requirements are clearly identified, and the proposed text section for a 5610-series Order has been provided to the 93-1 Working Group, where useful information can be provided which meets the general criteria contained in DOE Order 5480.26.

TASKING STATEMENTS
Quality Assurance

Goal

To develop a uniform Quality Assurance (QA) Program.

Problem

There is no HQ-level Order or directive which provides QA program direction for nuclear weapon operations. Work associated with nuclear weapons is excluded from DOE Order 5700.6C except for the design, construction, fabrication, operations, maintenance, decommissioning, and decontamination of facilities and equipment used to produce nuclear weapons. AL Directive QC-1 prescribes the basic quality principles and requirements for nuclear explosive production, dismantlement, maintenance, stockpile evaluation, and disassembly/disposal. AL Directive QC-2 prescribes quality assurance direction for the research, design, development, and associated test activities within the nuclear weapons program. There are some key features lacking in applicable directives. Independent safeguards and quality organizations lack the authorization to halt work for safeguards and/or quality concerns. There is no written delegation of authority for each Manager; or designation of an official authorized to settle disputes between organizational entities.

Tasking

1. Review DOE Order 5700.6C and 10CFR 830.120 to determine if this Order/Rule can be applied as the basic reference for quality assurance direction for the nuclear explosive operations. It is desired to adopt, by reference, DOE Order 5700.6C for QA for nuclear explosive operations. Provide a proposed revision to the 5610 Series Orders to the 93-1 Working Group.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 4

Note: Task completion is obtained when a conclusion is reached concerning an approach to providing a uniform quality assurance program, and a draft revision to the 5610 Series Orders is provided to the 93-1 Working Group.

2. Assess the interface between the quality program requirements in QC-1 for assembly and disassembly operations at Pantex and the quality program requirements in DOE Order 5700.6C for the facilities in which these operations are conducted. Develop additional guidance, if necessary, to define the interface and ensure that clear direction is provided for all aspects of the operations and the equipment involved in the operations. Provide this as a recommendation to the 93-1 Working Group.

Participation: AL

Estimated Duration (weeks): 5

Note: Task completion is obtained when a determination is made whether additional guidance is required and a draft of this additional guidance, if necessary, is provided to the 93-1 Working Group.

3. Assess the quality control program policy for the NTS test activities and develop an approach that will provide adequate program definition. Consider upgrading QC-2, combining QC-1 and QC-2 into a single directive, or specifying QC-1 as QA policy for the NTS test process. If it is decided that such direction is required, provide recommended draft documentation to the 93-1 Working Group.

Participation: AL, NV, EH

Estimated Duration (weeks): 5

Note: Task completion is obtained when a determination is made whether additional guidance is required and a draft of this additional guidance, if necessary, is provided to the 93-1 Working Group.

**TASKING STATEMENTS
Safety Analysis/TSR**

Goal

Develop a uniform means to conduct safety analyses and to develop technical safety requirements.

Problem

Applicable DOE requirements for conducting safety analyses for nuclear explosive facilities and operations are not as detailed as requirements for DOE defense nuclear facilities. The analyses for the weapon operation and the facility are not conducted in conjunction with each other. There are no DOE or directive requirements to integrate the safety analyses for nuclear operations with those of the facilities in which these operations occur. A systematic method to predict component failures is not specified. Analyses of other hazards affecting nuclear explosive safety (e.g., industrial), are not specified. Failure modes and effects analysis (FMEA) is not specified for nuclear explosive facilities at NTS. Applicable DOE Orders and directives do not precisely define, document, or implement operating limits and surveillance and test requirements.

Tasking

1. Review DOE Orders 5480.22 and 5480.23 to determine if these Orders can be utilized to establish procedures for administering safety analyses and technical safety requirements for the nuclear explosive facilities and nuclear explosive operations. It is desired that these Orders be adopted, by reference, in the 5610 Series Orders. Make a recommendation to the 93-1 Working Group concerning the best way to accomplish the desired Order revision.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 4

Note: Task completion is obtained when the Safety Analysis and Technical Safety Requirement Orders are reviewed, an approach to promulgating revised guidance is developed, and a proposed text section to the 5610 Series Orders is provided to the 93-1 Working Group.

2. Review existing guidance and technical standards to determine the adequacy of the existing guidance for conducting safety analyses and prescribing technical safety requirements. If additional guidance and technical standards are needed, provide a recommended draft to the 93-1 Working Group.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 8

Note: Task completion is obtained when a review of existing guidance and technical standards has been completed, additional guidance and

technical standards are drafted, if required, and the proposed drafts are submitted to the 93-1 Working Group.

TASKING STATEMENTS
Unreviewed Safety Questions

Goal

Develop a uniform approach to identify and process unreviewed safety questions (USQs).

Problem

Applicable Orders and directives do not contain a process for activities involving nuclear explosives, nuclear explosive components, or nuclear explosive-like assemblies (NELAs) that is equivalent to the USQ process in DOE Order 5480.21. This process provides contractors the flexibility to make changes within an approved operation envelope without prior DOE approval and is also used to assess potential safety analysis inadequacy or a possible reduction in the margin of safety.

Tasking

1. Review DOE Order DOE 5480.21 to determine if this Order could be utilized in the nuclear explosive facilities and nuclear explosive operations. It is desired that this Order be adopted, by reference, in the 5610 Series Orders. Make a recommendation to the 93-1 Working Group concerning the best way to accomplish the desired order revision including the augmentation of any unique provisions of USQ-like processes to the 5610-series Orders for nuclear explosives, nuclear explosive components, or NELAs.

Participation: DP, AL, NV

Estimated Duration (weeks): 5

Note: Task completion is obtained when the USQ Order is reviewed, an approach to incorporating USQ-like processes in the nuclear explosive activities is developed, and a proposed text revision to the 5610 series Orders is provided to the 93-1 Working Group.

2. Review existing guidance and technical standards to determine its adequacy. If additional guidance and technical standards are needed, provide a recommended draft to the 93-1 Working Group

Participation: DP, AL, NV

Estimated Duration (weeks): 4

Note: Task completion is obtained when existing guidance and technical standards are reviewed, additional guidance and technical standards are developed, and a draft is provided to the 93-1 Working Group.

TASKING STATEMENTS Configuration Management

Goal

Develop an integrated configuration management program.

Problem

Establishing and maintaining design requirements (including reconstituting design basis for existing facilities), change control, document control, and assessments are the primary features of a configuration management program. An integrated configuration management program is essential to ensure that changes to facilities and operations are reviewed against the design requirements documents to ensure the changes do not adversely affect the facility safety envelope. There are several DOE Orders which address configuration management principles. These include DOE Orders 5480.19, 5480.21, 5480.22, 5480.23, 5700.6C, and 4330.4B which address elements of a configuration management program. DOE-STD-1073-93 sets the guidelines for the Department's Configuration Management Program. DOE Orders 5480.21, 5480.22, 5480.23, and 5700.6C are not directly applicable to those activities which assemble, disassemble, and test nuclear weapons.

Tasking

1. Convene a working group of subject matter experts to determine the configuration management requirements to be applied to the nuclear explosive facilities and operations by conducting a thorough review of DOE directives and standards discussed above. Requirements developed should address the measures necessary to control the configuration of nuclear explosive assemblies and components, tooling and special equipment used in the operations, and the interface with facility configuration control programs. Provide a recommendation to the 93-1 Working Group in the form of a draft revision to the DOE Order 5610 Series Orders which addresses these measures.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 4

Note: Task completion is obtained when the configuration management requirements for the nuclear explosive facilities and operations are determined, and a proposed text revision to the 5610 Series Orders addressing configuration management is provided to the 93-1 Working Group.

2. Review the existing guidance and technical standards to determine if they are adequate and develop additional guidance and technical standards as needed. Determine if guides such as those in DOE-STD-1073-93 should be utilized and make a recommendation to the 93-1 Working Group in the form of draft standards and guides.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 6

Note: Task completion is obtained when existing guidance and technical standards are reviewed, additional guidance and technical standards are developed, and the findings are provided in draft form to the 93-1 Working Group.

TASKING STATEMENTS
Design Criteria/Tooling and Special Equipment

Goal

Develop a design criteria for tooling and special equipment.

Problem

There is no specific design criteria for the tooling and special equipment used for nuclear explosive operations since most of these tools are custom designed and fabricated. Equipment typically used at DOE facilities must meet the General Design Criteria of DOE Order 6430.1A. This Order does not contain general design criteria for tooling and special equipment, nor does it require that design criteria be developed and approved.

Tasking

1. Review the applicability of existing guidance and technical standards, and develop additional guidance and technical standards as needed. Provide to the 93-1 Working Group a draft revision of the 5610 Series Orders which adds requirements for developing and documenting general design criteria for tooling and special equipment important to the safety of nuclear explosive operations. The requirements should include criteria for fabrication of items not commercially procured.

Participation: DP, AL, NV

Estimated Duration (weeks): 6

Note: Task completion is obtained when existing guidance and technical standards are reviewed, additional guidance and technical standards are developed, and these are provided to the 93-1 Working Group as a proposed text section to the 5610 Series Orders.

TASKING STATEMENTS

Maintenance

Goal

Modify the applicability of maintenance programs.

Problem

The maintenance program specified to be used for the nuclear explosive facilities and operations is DOE Order 4330.4B, Chapter I. Chapter II of the Order, applicable to nuclear facilities, specifies the same program elements as Chapter I but requires more rigor and DOE approval of a Maintenance Implementation Plan (MIP). The 93-1 Action 4 Report recommended that the maintenance of equipment and facilities important to nuclear explosive safety be based on the guidelines of Chapter II of DOE Order 4330.4B, and that DOE approve the MIP for nuclear explosive facilities.

Tasking

1. Identify any problems or obstacles which are expected to impair the implementation of DOE Order 4330.4B, Chapter II and provide a recommendation to the 93-1 Working Group concerning a course of action to implement this chapter.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 4

Note: Task completion is obtained when a review of Chapter II of DOE Order 4330.4B is completed, any problems in implementing this Order are identified, and a recommendation on implementing this Order is made to the 93-1 Working Group.

TASKING STATEMENTS Nuclear Explosive Safety

Goal

Integrate the principles of the DOE defense nuclear facility safety program with the Nuclear Explosive Safety Study Program.

Problem

93-1 Action 4 Report

Nuclear explosive safety evaluation requirements specify a quantitative risk assessment be performed for credible accidents that could disperse plutonium. Such an assessment is not required for all potential accidents involving nuclear explosives. There are no requirements for training and qualification of the personnel who are assigned to conduct Nuclear Explosive Safety Studies.

Nuclear Explosive Safety Study Final Report

Risks from other sources, including contaminations from non-energetic releases and the full spectrum of ES&H concerns, are treated in the Safety Analysis Report (SAR) rather than the NESS. A thorough review of the concerns of the DNFSB requires consideration, not just of the NESS process, but also of the SAR process. It is not necessary or desirable for all risk assessments performed for the SAR or any other purpose relevant to the facility's operations be reviewed by the NESSG, so that any implications for NES can be assessed. A clear boundary of responsibility should be defined between NESSs and SARs. Risk should be addressed by the NESS or SAR and any duplication of effort eliminated.

Tasking

1. Determine the best possible way to integrate the output of the Nuclear Explosive Safety Studies with the conduct of facility safety analyses. Provide a recommendation to the 93-1 Working Group on how best to resolve these issues.

Participation: DP, AL, NV

Estimated Duration (weeks): 6

Note: Task completion is obtained when these issues have been evaluated, an approach to integrating the hazard and accident analysis processes with the Nuclear Explosive Safety Studies has been developed, and a recommendation to accomplish these efforts have been provided to the 93-1 Working Group.

Coordination: NESSCAP and Safety Analysis/Technical Safety Requirements Subgroup

2. Determine what training and qualification requirements are necessary for personnel who are assigned to conduct the Nuclear Explosive Safety Studies. Make a recommendation to the 93-1 Working Group concerning recommended revisions to the DOE 5610 Series Orders.

Participation: DP, AL, NV

Estimated Duration (weeks): 4

Note: Task completion is obtained when qualification requirements for personnel conducting Nuclear Explosive Safety Studies are identified and a proposed text section to the 5610 Series Orders is provided to the 93-1 Working Group.

Coordination: NESSCAP and Recommendation 93-3.

TASKING STATEMENTS
Onsite Packaging and Transportation

Goal

Develop onsite packaging and transportation requirements for the transport of nuclear components.

Problem

There are no requirements for the onsite packaging and transport of nuclear components for nuclear weapons or nuclear explosive assemblies. DOE Order 5610.11 addresses the onsite transportation of nuclear explosives, but is not specific concerning the onsite transportation of nuclear components.

Tasking

1. Review the applicability of existing guidance and technical standards, develop additional guidance and technical standards, for onsite packaging and transport, as needed. Include specific requirements for the onsite packaging and transport of nuclear components in a draft revision to the appropriate DOE Orders. Provide this draft revision to the 93-1 Working Group.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 16

Note: Task completion is obtained when existing guidance and technical standards are reviewed, additional guidance and technical standards are developed, and these and a proposed text section to the 5610 Series Orders is provided to the 93-1 Working Group.

TASKING STATEMENTS
Readiness Reviews

Goal

Develop a consistent process for starting and restarting nuclear explosive operations and facilities.

Problem

Requirements for conducting the review of operations and facilities prior to their initial start up or for resumption, after having been suspended for prolonged periods, is not consistent for the nuclear explosive facilities and operations. DOE Order 5480.31 and DOE-STD-3006-93 provides guidance for readiness reviews for start and restart of nuclear facilities. This Order is excluded from the nuclear explosive facilities. AL SD 5480.31, applicable to Pantex, contains requirements for readiness reviews at Pantex. This directive references DOE-STD-3006-93 for guidance in the review process for facilities. AL SD 56XB is used for the review process for nuclear explosive operations. NV Order 56XE.1 contains readiness review requirements for some nuclear explosive operations and facilities at NTS. There are no readiness review requirements for device assembly facilities. The exclusion of DOE Order 5480.31 from the nuclear explosive facilities and nuclear explosive operations results in the omission of some of the basic principles of the readiness reviews contained in this Order such as review criteria, team composition, schedule, review scope, and corrective action management.

Tasking

1. Review DOE Order 5480.31 and DOE-STD-3006-93 to determine if this Order and Standard can be applied as the basic reference for conducting readiness reviews for the nuclear explosive facilities and nuclear explosive operations. It is desired that these Orders be adopted, by reference, in the 5610 Series Orders. Make a recommendation to the 93-1 Working Group concerning the best way to accomplish the desired Order revision.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 7

Note: Task completion is obtained when Orders addressing readiness reviews are reviewed, an approach to implementing these Orders for the nuclear explosive activities have been developed, and a proposed text section for the 5610 Series Orders is provided to the 93-1 Working Group.

2. Review the applicability of existing guidance and technical standards and develop additional guidance and technical standards as needed. Provide draft guidance and technical standards to the 93-1 Working Group.

Participation: AL, NV

Estimated Duration (weeks): 9

Note: Task completion is obtained when existing guidance and technical standards are reviewed, additional guidance and technical standards are developed, and the proposed standards are provided to the 93-1 Working Group.

**TASKING STATEMENTS
Safety Committees**

Goal

Evaluate existing safety review programs and determine needed improvements.

Problem

DOE Order 5610.11 requires the performance of a nuclear explosive safety review by the Nuclear Explosive Safety Study Group prior to beginning any operation involving a nuclear explosive or before transporting a nuclear explosive. The safety review is performed only for nuclear explosive operations when the main charge and fissile material are co-located. This review is not an internal independent safety review as would be required for commercial nuclear facilities. Independent reviews of safety analyses are required for DOE Operations and facilities by DOE Order 5481.1B and contractor internal review systems are included in DOE Order 5480.6 (applicable to nuclear reactors).

Tasking

1. Evaluate the scope of existing safety review groups and procedures for integration and completeness. Identify improvements that can be made to existing programs, and make recommendations to the 93-1 Working Group in the form of a draft revision to the DOE 5610 Series Orders.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 3

Note: Task completion is obtained when improvements have been identified and a proposed text section to the 5610 Series Orders has been provided to the 93-1 Working Group.

Coordination: NESSCAP

2. Review the guidance of DOE Order 5480.6 and existing guidance and technical standards and develop additional guidance and technical standards as needed. Provide draft of recommended guidance to the 93-1 Working Group.

Participation: DP, AL, NV, EH

Estimated Duration (weeks): 5

Note: Task completion is obtained when additional guidance and technical standards have been drafted and provided to the 93-1 Working Group.

Coordination: NESSCAP

Excerpts from DOE Order 5480.6

Contractor Independent Review and Appraisal System. Each contractor to whom this Order is made applicable shall establish and maintain an internal safety review system for all phases of reactor program life which

- (1) Functions primarily in an advisory capacity to the line organization and reporting to a designated official at a level of management sufficiently high to take any necessary corrective action. (Safety is a line responsibility; neither review nor subsequent approval releases line management from its responsibility for the safety of people and equipment.)
- (2) Is clearly defined and delineated in writing (e.g., purposes, objectives, functions, authority, responsibility, composition, quorum, meeting frequency, and reporting requirements).
- (3) Can be audited by contractor management and by DOE. The performance of the system shall be recorded in sufficient detail to permit contractor management and DOE to evaluate its effectiveness. Actions taken on any recommendations resulting from reviews, audits, inspections, appraisals, and surveillance shall be included in these records.
- (4) Provides technical competence in the areas being reviewed. Each review, except that described in subparagraph (9), below, shall be carried out by persons whose technical disciplines cover the range of technical fields encountered in performing a safety review. Safety considerations are to be treated in the breadth and depth necessary to identify potential hazards and to evaluate risks.
- (5) Provides for group discussions between reviewers on all but routine matters.
- (6) Provides an independent determination of whether a proposed activity involves an unreviewed safety question, violation of a Technical Specification, or any other matter for which approval is required.
- (7) Provides an appraisal of the overall operation of each facility at least annually. The majority of the individuals performing the appraisal shall be independent of the operation being appraised. It shall include, but may not be limited to, applicable areas listed in subparagraph (8), below.
- (8) Provides for objective and independent review of:
 - (a) Proposed modifications to plant and equipment having safety significance, and safety analysis thereof;
 - (b) Proposed experiments and irradiations having safety significance;

- (c) Administrative, operating (normal and abnormal), maintenance, repair, testing, quality assurance, and emergency procedures and significant changes thereto;
 - (d) Organization and staffing;
 - (e) Safety evaluations and Technical Specifications, and changes thereto;
 - (f) Appropriate training programs, initial and subsequent qualification and certification requirements and procedures. Emphasis in the training program review shall include the involvement of all appropriate levels of management, including senior management, in assuring adequate coverage for: understanding of basic principles, mitigation of the severity of postulated reactor accidents, and understanding of plant specific limitations; and in reviewing general exam approach, management, and update techniques;
 - (g) Occurrences, including violations of Technical Specifications;
 - (h) The condition of the physical plant; and
 - (i) The accuracy and completeness of record keeping and documentation.
- (9) Is reviewed by contractor management for adequacy of performance at least every 3 years.

TASKING STATEMENTS
Staffing and Personnel Training and Qualification

Goal

Develop a uniform staffing and personnel training and qualification program.

Problem

DOE Order 5480.20 provides comprehensive training and qualification policies and procedures for DOE nuclear facilities. This Order is excluded from activities which assemble, disassemble, and test nuclear weapons. Training and qualification Orders applicable to nuclear explosive facilities and nuclear explosive operations do not require a systematic approach to training. Staffing of these facilities and operations is not required to be based on safety analyses. Applicable requirements do not specify knowledge and skill requirements nor do they include comprehensive requirements for training in safety, safeguards, and environmental protection hazards or thoroughly address requalification, certification, general employee or visitor training. Applicable requirements do not specify using written or oral examinations or require that the training organization be a part of line management. There are no applicable requirements to accredit training programs as required for selected nuclear facilities.

Tasking

1. Review DOE Order 5480.20 to determine if the training program established by this directive can be invoked as the basic reference for training for the nuclear explosive facilities and nuclear explosive operations. It is desired that this Order be adopted, by reference, in the 5610 Series Orders. Make a recommendation to the 93-1 Working Group concerning the best way to accomplish the desired order revision.

Participation: DP, AL, NV

Estimated Duration (weeks): 4

Note: Task completion is obtained when DOE Order 5480.20 has been reviewed for applicability and a proposed text section for incorporating training guidance in the 5610 Series Orders has been provided to the 93-1 Working Group.

Coordination: Recommendation 93-3

2. Determine whether it is necessary to accredit training programs for the nuclear explosive facilities and nuclear explosive operations. Make a recommendation to the 93-1 Working Group.

Participation: DP, AL, NV

Estimated Duration (weeks): 7

Note: Task completion is obtained when the need to accredit training programs for the nuclear explosive facilities and nuclear explosive

operations has been evaluated and a recommendation concerning this training aspect has been provided to the 93-1 Working Group.

3. Review applicable existing guidance and technical standards to support training and qualification for the nuclear explosive facilities and nuclear explosive operations. Provide draft revisions or additions to the 93-1 Working Group.

Participation: DP, AL, NV

Estimated Duration (weeks): 7

Note: Task completion is obtained when applicable guidance and technical standards have been reviewed and additional guidance and technical standards have been drafted and submitted to the 93-1 Working Group.

**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Recommendation 93-1/NESSCAP
Action Item Response**

**DOE Orders with Supporting Safety
and Implementation Guides and
Technical Standards**

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**Orders, Standards and Guides
Development**

Purpose

Provide working guidelines for developing Recommendation 93-1/NESSCAP products

Concepts

Employ the document hierarchy guidelines described in the draft New Directives System Manual (September 1993)

Supporting documents

Criteria for the department's standards program, DOE/EH/0416, (September 1994)

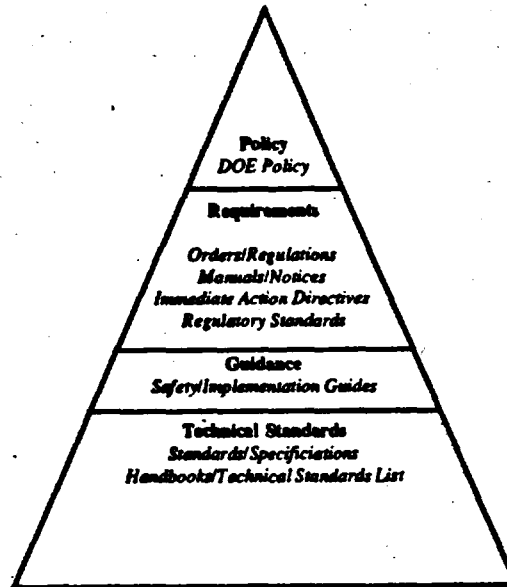
Standard for developing and issuing DOE safety guides and implementation guides, DOE-STD-1075-94 (July 1994)

Guidance for preparation of DOE 5480.22 (TSR) and DOE 5480.23 (SAR) implementation plans, DOE-STD-3011-94 (November 1994)

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Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards

DOE Directives Hierarchy



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DOE Directives Hierarchy Purposes

Orders

- Establishes/changes departmental requirements, standards, procedures, or responsibilities (mandatory compliance)
- Provide policy objectives and goals
- Assigns applicable organizations responsibilities

DOE Manual

- Establishes/changes procedures which are lengthy and detailed
- Consistent with policy statements and orders (mandatory compliance)

Safety/Implementation Guides

- Guides, instructs, informs or requests action, but does not establish or change departmental policy, requirements, procedures or responsibilities (compliance invoked by Policy Guidance/Orders)

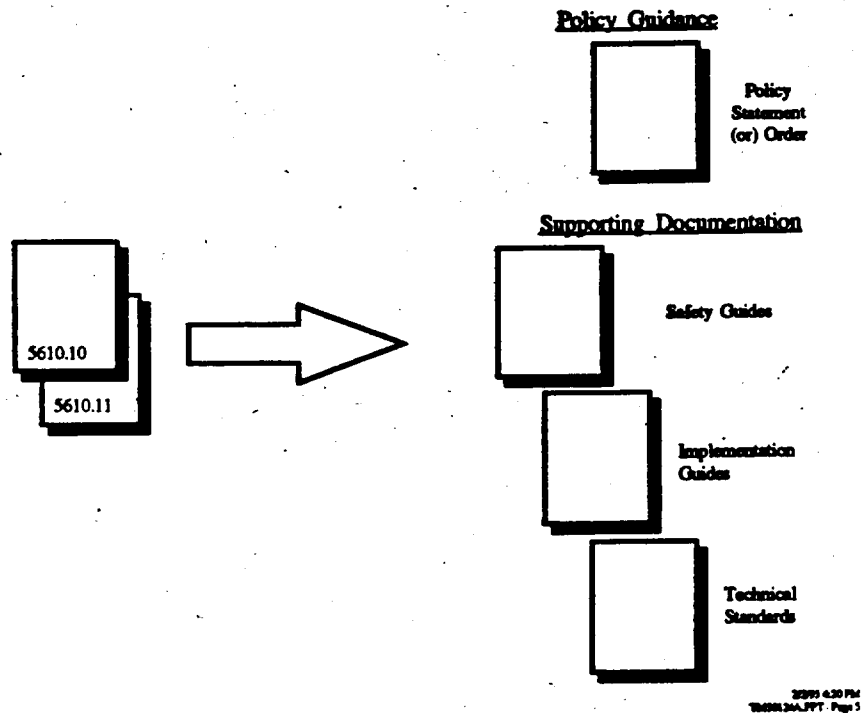
Technical standards

- Guides, instructs, informs or describes acceptable methods for meeting departmental requirements; does not establish or change departmental policy; amplifies information from higher level documents (describes acceptable performance; invoked by higher level directives)

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Recommendation 93-1/NESSCAP Action Items Response

DOE Orders with Supporting Safety and Implementation Guides and Technical Standards



Anticipated 93-1/NESSCAP Products

SME teams/area groups

- Develop proposed orders sections with suggested supporting standards and guides documentation which support the revised 5610 series orders and provide headquarters level direction to field operations
- Provide recommendations for location of specific products in order(s), guide(s) or standard(s)

Intent

- Provide maximum flexibility to the technical work and not burden them with the administrative issues
- Final products developed by the 5610 orders integration group based on field input; further departmental actions will involve an interactive process with field elements

Note

- The "adopt by reference" term was developed to permit incorporation of '5480 series Orders or other concepts into the 5610-series orders to their application to nuclear explosive operations, or incorporated in a safety/ implementation guide or other form of technical standard as the SME teams/WGs recommend
- "Technical standard" was a generalized, inclusive term considered as a generic statement covering: manuals, safety or implementation guides and/or separate technical standards

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Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards

Action Items and Potential Products

NESSCAP NESS Process Working Group

Provide draft revision of DOE Order 5610.11 with proposed standards and guides (as described in the NESSCAP)

NESSCAP Appraisals Working Group

Provide draft materials as described in the NESSCAP concerning the nuclear explosive and weapons appraisals process

General Recommendation 93-1 Action 4 tasks

- 2.1 1. Issue revised 5610 orders which include 93-1 Action 4 AND NESSCAP items
2. Issue a policy document concerning scope of 5480 and 5610 series orders, with organizational responsibilities to ensure orders are coordinated/do not diverge in the future.
- 2.2 1. The cognizant secretarial officer will provide policy direction to clearly state the intent and usage of nuclear weapon safety program exclusions.
Initiate action to review exclusion statements in existing orders and directives, and revise as necessary.
- 2.3 Nonmandatory standards and guidelines.
If required under implementation plans, other orders or directives, of higher level policy guidance, optional standards and guides can be binding when invoked by other mandatory requirements.

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Action Items and Potential Products

Audits & assessments

Guide covering areas of management self-assessments, audit personnel training, and environmental monitoring programs related to nuclear explosive operations and facilities.

Potential modifications to orders and safety/implementation guides covering appraisals for nuclear explosive operations.

Develop training guidelines and requirements for training and qualifying audit and appraisal personnel.

Commitment tracking systems

Provide proposed draft 5610 order section concerning establishment of commitment tracking system to include external and internal commitments.

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**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Action Items and Potential Products
(Cont.)**

Criticality safety program

recommend to 93-1/NESSCAP WG best means to incorporate criticality provisions of DOE orders 5480.23 and 5480.24 for nuclear explosive operations and facilities.

provide proposed guidance as technical standard or other safety guide or orders provision for DOE 5610-series orders.

determine if additional technical standards or other guidance is required and provide a draft document.

Human factors

review existing guidance and standards, such as DOE-STD-3009-94, and develop recommended additional guidance and technical standards applicable to nuclear explosive operations.

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**Action Items and Potential Products
(Cont.)**

Performance Indicators (PI)

Determine if any performance indicators, as described in DOE Order 5480.26 and DOE-STD-1048-92, exist at the Pantex Plant and NTS sites, or can be developed for nuclear explosive operations and facilities.

If any nuclear explosive PIs are identified, develop draft sections for 5610 orders covering reporting and monitoring.

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**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Action Items and Potential Products
(Cont.)**

Quality Assurance Program

Lack of HQ-level Quality Assurance direction for nuclear explosive operations and facilities. Review DOE Order 5700.6C and 10CFR830.120 to determine if this rule should be applied to nuclear explosive operations.

Assess the interface between quality program requirements in QC-1 for assembly and disassembly programs at Pantex and DOE Order 5700.6C for the facilities in which these operations are performed.

Assess NTS test activities quality control program to develop an approach which will provide adequate program definition. If revised QA policy is required, provide draft documentation to 93-1/NESSCAP Working Group.

Develop additional guidance documentation and provide to 93-1/NESSCAP WG for action.

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**Action Items and Potential Products
(Cont.)**

Safety Analysis/TSR

Review DOE Orders 5480.22 and 5480.23 to determine if these orders can be applied to NES activities. Make a recommendation to 93-1 WG on best way to incorporate SA/TSR into 5610 orders, if desired.

Review existing guidance and technical standards to determine their adequacy, and provide a recommended draft guide(s) and standard(s) to the 93-1/NESSCAP WG.

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**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Action Items and Potential Products
(Cont.)**

Unreviewed Safety Questions

Review DOE Order 5480.21 to determine if this order could be utilized for Nuclear Explosive Operations, draft an approach to incorporate in nuclear explosive activities, and prepare proposed text for 5610 series orders for 93-1/NESSCAP WG.

If additional guidance and standards are required, develop drafts for the 93-1/NESSCAP WG.

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**Action Items and Potential Products
(Cont.)**

Configuration Management

Identify what additional configuration management elements are required for nuclear explosive facilities and operations. Develop proposed text describing proposed additions/revisions to 5610 series orders.

Review proposed configuration management related actions, and prepare additional standards and guides, if needed.

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**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Action Items and Potential Products
(Cont.)**

Design Criteria/Tooling & Special Equipment

Review existing guidance and technical standards and develop additional guidance and technical standards as needed.

Maintenance

Review Chapter II, DOE Order 4330.4B, identify any problems would be encountered in applying the Chapter II criteria to nuclear explosive facilities, and propose draft text to the 93-1/NESSCAP WG to implement these actions.

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**Action Items and Potential Products
(Cont.)**

Nuclear Explosive Safety

Develop "best possible methods" to integrate NESS outputs with requirements of the facility Safety Analysis processes (e.g. how to accomplish the NESS SAR integration).

Develop training and qualification requirements for personnel to perform duties as members of Nuclear Explosive Safety Study Groups. (Propose text to be included in 5610 series orders)

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**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Action Items and Potential Products
(Cont.)**

Onsite Packaging & Transport

Develop additional guidance and technical standards for onsite packaging and transport of nuclear components and sub-assemblies and propose text for applicable DOE orders.

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**Action Items and Potential Products
(Cont.)**

Readiness Reviews

Provide the 93-1/NESSCAP WG with suggested text for DOE 5610 series orders for proposed methods to incorporate DOE Order 5480.31 and DOE-STD-3006-93 concerning nuclear explosive operations.

Review proposed revisions to orders, standards and other guides to determine requirements for additional guidance, and prepare draft text to accomplish these goals.

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**Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards**

**Action Items and Potential Products
(Cont.)**

Safety Committees

Evaluate existing safety review groups and procedures for integration and completeness. Provide the 93-1/NESSCAP WG with proposed text for DOE 5610 series orders.

Review DOE Order 5480.6 guidance, and other available DOE guidance and technical standards to determine if additional guidance documents are required. Provide written recommendation to the 93-1/NESSCAP WG.

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**Action Items and Potential Products
(Cont.)**

Staffing/Personnel Training & Qualification

Review DOE Order 5480.20 to determine if the proposed training program(s) can be invoked as the basic training reference for nuclear explosive facilities and operations. Make written recommendation and proposed text to the 93-1/NESSCAP WG on the best way to accomplish this.

Prepare a written recommendation concerning necessity to accredit training programs for the nuclear explosive operations and facilities.

Review applicable existing guidance and technical standards which support training and qualification for nuclear explosive operations and facilities. Prepare written recommendation, with suggested text concerning changes or revisions to existing DOE documents (standards, guides, and/or orders).

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Recommendation 93-1/NESSCAP Action Items Response
DOE Orders with Supporting Safety and Implementation Guides and Technical Standards

5610 Orders Integration Group

- Provides staffing support to the Policy Oversight Group and the 93-1/NESS Working Group, as necessary.
- Includes representatives from the SME teams/area groups/working groups, with additional technical writers, editors and such other personnel providing administrative and technical services to prepare all documentation for subsequent departmental processing.
- Interaction with area SME teams/working group personnel to assure clear understanding of proposed concepts and provide additional information and amplification where necessary. (names of site/area people involved with individual tasks should be identified to allow follow up contacts.)
- Prepare all documentation for orders, guides, and standards into required formats and organization to meet departmental processing requirements.
- Operate in Germantown office area.

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POTENTIAL 93-1/NESSCAP DOCUMENTS

ACTION ITEM (93-1 Action 4 Report)	ORDER	SAFETY GUIDE	IMPLEMENTATION GUIDE	STANDARD	OTHER
General Items					
2.1 DOE-HQ Nuclear Safety Policy:					
1. Revise 5610 series					
2. Policy document on 5610 & 5480 orders interface					
2.2 Exclusion Statements review					
2.4 HQ-Operations Office Direction					
2.5 Scope of 5610 Orders					
3.1.1 AI-1 Audits & Assessments					
1. Adopt by reference 5482.1B & 5700.6C in 5610					
2. SME Team to develop additional guidance					
3. Audit/Assessment training & qualification					
3.1.2 AI-2 Commitment Tracking System: addition to 5610					
3.1.3 AI-3 Performance Indicators (PIs)					
1. Identify nuclear expl opns PIs					
2. Prepare 5610 text					
3.1.4 AI-4 Quality Assurance					
1. Adopt, by ref, 5700.6C in 5610					
2. Assess QC-1/5700.6C interface for assembly/disassembly at Pantex					
3. Assess QC-1/QC-2 interface for NTS test operations & prepare docs					
3.1.5 AI-5 Safety Committees					
1. Evaluate existing safety review groups & recommend 5610 improvements					
2. SMEs evaluate existing guidance on safety committees (e.g., 5480.6B, etc)					
3.2.1 AI-6 Staffing/Personnel Training & Qualification					
1. Adopt 5480.20 by reference					
2. SMEs determine accreditation requirements for NE activities					
3. SMEs determine if additional guidance is needed					
3.2.2 AI-7 Human Factors					
1. Develop 5480.23-like human factors guidelines for NES operations					
3.3.1 AI-8 Criticality Safety					
1. Augment 5610 with adopted 5480.23 and 5480.24 provisions and develop new NES factors					

Recomendation 93-1/NESSCAP Exclusion Statement Review

Recommendation 93-1/NESSCAP Exclusion Statement Review

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Exclusion Statement Review

- Implementation plan tasking for Recommendation 93-1/NESSCAP Working Group:
 - Review exclusion statements in existing orders and directives and provide a recommendation to the Policy Oversight Group
- Recommendation 93-1 Action 4 report:
 - Cognizant secretarial office will provide policy direction to clearly state the intent and usage of nuclear weapon program safety exclusions.
 - To remedy any existing confusion, the DOE will initiate action to review exclusion statements in existing orders and directives, and revise or delete as necessary.

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Recomendation 93-1/NESSCAP Exclusion Statement Review

Exclusion Statement Review (Cont.)

- **Background:**
 - Recommendation 93-1 orders review focused on the impact of the exclusion statements and the nuclear safety assurance applicable to the nuclear explosive safety program - did it help or hinder nuclear explosive safety.
 - Issues related to specific orders exclusion statements are described in tables contained in the action 3 and 4 reports.
 - Action 3 orders evaluation personnel generally believed that the exclusion clauses were not warranted in most orders, but that was not documented.
 - Lacking definitive results, action to initiate blanket removal of the exclusion clauses was not taken, but actions to have SME teams review this topic during 93-1/NESSCAP operations was considered appropriate.
 - Manager, Albuquerque Operations, requested blanket removal of the exclusion clauses not be done at this time but reconsidered at the end of the orders and directives review process is completed.

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Exclusion Statement Options

- 1 - No change from current situation basically, take no action and let the orders and exclusions remain
- 2 - Provide section in the basic nuclear safety orders which provides specific paragraph, section or element exemptions; but no blanket exclusions. Text could say:
"Operations and activities covered by the 5610 series orders are exempt from the provisions of paragraph __, section __ or similar statement."
- 3 - Cross reference in other orders; specific in 5610-series
"Specific provisions of this order applicable to nuclear explosive operations and activities are described in paragraph __, section __, DOE order 5610.xx." Or a similar statement.
- 4 - Delete all exemptions/exclusions on order by order or blanket basis.
"Delete the exclusions/exemptions on a one for one basis as the orders are revised."
(or)
"Request EH-1 and/or HR-1 to remove the exemptions in a single step."

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Recomendation 93-1/NESSCAP Exclusion Statement Review

Specific Orders and Topics Affected by the Exclusion Clauses

- 4330.4b Maintenance criteria with application of chapter one or chapter two for nuclear explosive operations
- 4700.1b Development of criteria and standards for tooling and special equipment
- 5480.6 Clarification of the DOE intent for nuclear safety committees, contractor internal review system or other safety review group must be developed.
- 5480.19 Configuration management-cross referenced to other facility operations issues
- 5480.20 Staffing/training and qualification of nuclear explosive personnel
- 5480.21 Unreviewed safety question (USQ) process-requires clarification of the interface between SAR's, NESS's, and the USQ process.
- 5480.22 Clarification of the SAR/NESS integration, defining specific areas of technical interest, and the standards and rules which apply.
(Requires complete description of roles and responsibilities for conduct of SARs and NESS for the operation and the facility.)

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Specific Orders and Topics Affected by the Exclusion Clauses

- 5480.23 Human factors elements consideration in safety analysis, and criticality safety evaluations. Methods and guidelines must be developed.
- 5480.24 Conduct of hazards analysis; establishment of hazard category for conduct of hazard and accident analysis portions of the safety analysis
- 5480.26 Identification of performance indicators for nuclear explosive operations and possible impact on other facility operations and worker safety
- 5480.31 Readiness reviews (integration with NESS & SAR activities) and application of DOE-STD-3006-93
- 5482.1b Appraisal program operations and use of facility/contractor staff for ES&H appraisals, to include provisions for effluent monitoring.
- 5700.6c Appraisal program operations-general provisions as applied to sweep activities.

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Recomendation 93-1/NESSCAP Exclusion Statement Review

Exclusion statement review proposed actions

ORDER	NO CHANGE	SPECIFY IN ORDER	SPECIFY IN 5610	REMOVE WITHOUT REPLACEMENT
4330.4B				
4700.1C				
5480.6				
5480.19				
5480.20				
5480.21				
5480.22				
5480.23				
5480.24				
5480.26				
5480.31				
5700.6C				

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Exclusion Statement Review

Schedule

Complete exclusion review in conjunction with SME/WG team action items

Action required by each area coordinator to obtain consensus on proposed actions, focused on how to accommodate these issues in the revised 5610 series and supporting documentation.

Regular status reports required for DP-20 and policy oversight group

Preliminary results to be provided DP-20 at next policy oversight group meeting on/about February 16

Routine status must be provided

Methods/means

Must be addressed in proposed orders segments and supporting documentation

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**PROGRESS REPORT
DNFSB RECOMMENDATION 93-1
AND
NUCLEAR EXPLOSIVE SAFETY STUDY REVIEW**

NOVEMBER 1994 - JANUARY 1995

This progress report covers a three-month period and describes the continued integration of the Defense Nuclear Facilities Safety Board Recommendation 93-1 Action 4 Report and the Nuclear Explosive Safety Study Corrective Action Plan (NESSCAP) of September 30 and June 15, 1994, respectively. These two nuclear explosive safety related efforts were combined into a single program to assure the coordination and integration of actions related to the Departmental nuclear explosive safety orders and directives.

1. CURRENT PERIOD

Principal efforts have been focused on the finalization of staffing and internal coordination of a comprehensive Implementation Plan (IP). The IP addresses a revised management structure, provides the description and responsibilities of each group, addresses organizational relationships and resource requirements, sets the program schedule, and describes the expected products fulfilling the task requirements.

A. Implementation Plan. The IP was signed by DP-1 on January 24, 1995 (copy attached). As reported in the last progress report, the original intent of the IP was to formally involve both the Assistant Secretaries for Defense Programs (DP) and Environment, Safety and Health (EH). This joint action was proposed by DP as the scope of proposed corrective actions require cooperative and coordinated efforts across organizational lines. During the formal IP concurrence process, which began on November 3, 1994, EH underwent reorganization, modifying the planning and coordination relationships within the EH/DP interface. Some adjustments were necessitated in EH's participation in various working groups; the major change was their reconsideration of formally co-chairing the program. EH is, however, committed to support the effort with personnel resources and nuclear safety expertise.

1) Revised Management Structure. The revised management structure and work organization for the combined effort is presented in the IP, Figure 1, Appendix I and follows changes proposed in the last progress report. The structure has evolved by consolidating all three principal working groups (two NESSCAP, one 93-1) under a single focal point with subsidiary subject matter expert (SME) teams divided between Albuquerque (AL) and Nevada (NV) Operations Office coordination teams, and establishes a Policy Oversight Group and an Orders Integration Group.

All major groups contain representatives of the headquarters DP and EH organizations, as well as the AL, NV and Oakland Operations Offices. Additional technical and administrative support is being provided by the national laboratories and several support contractors.

While the management structure has been revised to better handle reporting requirements and control, it has no adverse affect on the progress of the overall program.

2) Program Schedule. The program schedule provided in the IP, Figure 2, Appendix I, reflects the changes in management structure and SME team groupings. Many of the action tasks specified in the IP will be accomplished by the same SMEs under each coordination team. The ability to obtain the services of SMEs for shorter time periods will allow this process to be completed in a more efficient manner. Start and end times for the SME effort is provided as well as projected time duration for new DOE Order 5610 development and scheduled deliverables to the DNFSB. Although internal milestones have been consolidated, the original delivery date for the draft DOE Order 5610 with supporting standards and guides, ready for implementation, remains unchanged.

B. Policy Oversight Group Meeting. The Policy Oversight Group (POSG), which was formed on December 18, 1994, held it's first meeting on January 18, 1995. The POSG was chaired by RADM Beers, DP-20; attendees included organizational representatives and personnel which are responsible for performing the IP tasks. Primary focus was on program status, the role and makeup of the POSG, and potential issues or concerns that required POSG resolution. The next POSG meeting is scheduled for February 28, 1995, at which a program review is scheduled.

C. 93-1/NESSCAP Working Group. The 93-1/NESSCAP working group held meetings each month of this reporting period. The group covered overall status and progress made by each of the coordination teams as well as issues that may impact the program. The working group provided the opportunity for the area coordinators to identify specific issues affecting his work and request specific types/levels of assistance for work in progress.

At the January 1995 meeting, direction was given to each coordination team with regard to the Department's new orders and directives system (scope, formats, level of detail). In addition, this meeting included an extensive discussion concerning the continued use of the exclusion/exemption clauses with regard to the nuclear explosive operations and facilities; these clauses are found in many of the Department's ES&H Orders (primarily the 5480-series orders). A possible solution was proposed which has sufficient merit to require continued evaluation. A presentation on the potential scope and formats of proposed documents to be prepared and potential actions to resolve exclusion/exemption clauses in ES&H Orders is located at Attachment 1. It is anticipated that this issue will be brought to closure by the end of the next reporting period.

The next meeting of the Recommendation 93-1/NESSCAP Working Group is scheduled for February 16, 1995, at the Albuquerque Operations Office.

D. Albuquerque Seamless Safety Initiative. By letter of October 31, 1994, AL recommended an alternate approach to the rewrite of the DOE Order 5610 series addressing the Recommendation 93-1 and NESS Report findings. They suggested using the AL draft Supplemental Directives (SD 5610.10 and 5610.11 incorporating elements of the Stockpile Stewardship (SS-21)) as a strawman for the 93-1/NESSCAP Working Group.

The SDs were reviewed by members of the working group. While it was noted that the SDs are Albuquerque specific (with special emphasis on Pantex Operations), the structure was found to be flexible in that it either addresses or is capable of addressing solutions to the issues that are driving the rewrite of the existing Departmental Orders. If there should be some inadvertent disagreement between the newer Headquarters directives and the AL SDs, the Headquarters directives will take precedence.

2. FUTURE ACTIONS

Among the issues to be discussed at the next Policy Oversight Group (POG) meeting will be the preliminary findings and recommendations concerning the exclusion and exemption clauses in the Department's ES&H Orders. While the final impacts of removing the existing exclusions/exemptions can not be determined at this time, preliminary assessments will be provided to the POG at the end of February 1995.

The initial revision of the AL Seamless Safety-21 initiatives (AL Supplementary Directives 5610.10 & 5610.11) should be released at the end of February and will be considered by the 93-1/NESSCAP Working Group for application to the development of new Headquarters orders and standards.



Department of Energy
Washington, DC 20585

Enclosure 3

December 29, 1994

MEMORANDUM FOR DISTRIBUTION

**SUBJECT: IMPLEMENTATION OF THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 93-1/NUCLEAR EXPLOSIVE SAFETY STUDY CORRECTIVE
ACTION PLAN (93-1/NESSCAP)**

The Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-1 and a letter concerning the Nuclear Explosive Safety Study (NESS) raised issues and identified potential deficiencies with both the NESS process and the level of nuclear safety assurance provided by applicable orders and directives. In the a response to the DNFSB, the Department made a commitment to correct identified deficiencies, make genuine improvements to the overall NESS process, and improve integration and compatibility between the nuclear explosive safety and environmental, safety, and health requirements.

The Implementation Plan (IP), which is currently in process for joint approval by the Assistant Secretary for Defense Programs and the Assistant Secretary for Environment, Safety and Health, describes the management structure, methods of operation and expected products that will be produced during the review of Departmental orders and standards that affect nuclear explosive operations and facilities.

Because the 93-1/NESSCAP efforts cut across many departmental areas, the Department of Energy (DOE) has established a senior Policy Oversight Group. This group is composed of personnel from Defense Programs, Environment, Safety and Health, and Operations Offices. They are responsible for overseeing the orders enhancement and integration process, and assure that proposed orders and other documentation are consistent with the Department's long-range goals, policies, and objectives. The 93-1/NESSCAP Policy Oversight Group will be co-chaired by Mr. Orin Pearson, EH-10, and myself to assure that these results are achieved.

I request your cooperation and assistance in providing the personnel, who are listed below, to participate in these activities.

DP-10 Col. Harold Harris
DP-22 Mr. Richard Hahn
DP-24 Mr. Dan Rhoades
NV Mr. Jim Magruder

EH-10 Mr. Richard Stark
DP-30 Mr. Joseph King
AL Mr. Rush Inlow
OAK Mr. Tommy Chang



In the event these individuals are not available, I request the nomination of a suitable alternate who has comparable background and experience in nuclear safety and/or nuclear explosive operations. Additionally, each national laboratory is requested to provide a senior technical advisor to the Policy Oversight Group.

The Policy Oversight Group meetings will be held at DOE Headquarters in Washington or Germantown, and are anticipated to occur approximately one day per month during the January - June 1995 period. I have tentatively scheduled the first 93-1/NESSCAP Policy Oversight Group meeting in Germantown on January 18, 1995.

Further information can be obtained from Mr. Dana Krupa, DP-21, 202-586-3842.



Charles J. Beers, Jr.
Rear Admiral, U.S. Navy
Deputy Assistant Secretary for
Military Application and
Stockpile Support
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Distribution:

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**Deputy Assistant Secretary for Facility Transition and
Technical Support, DP-30**

Deputy Assistant Secretary for Nuclear and Facilities Safety, EH-10

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Manager, Nevada Operations Office

Manager, Oakland Operations Office

President, Sandia National Laboratories

Director, Los Alamos National Laboratory

Director, Lawrence Livermore National Laboratory

Director, Office of Nuclear Weapons Management, DP-22

Director, Office of Weapons Facilities, DP-24