94-0006925

Department of Energy

Washington, DC 20585

December 6, 1994

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

On July 5, 1994, the Department of Energy (DOE) issued its Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-6, which required the Department to issue quarterly progress reports within 30 days of the end of every calendar quarter. Enclosed is the first quarterly report that contains an update of all activities occurring during the quarterly reporting period that ended on September 30, 1994.

In response to your letter of September 14, 1994, which requested DOE revise Commitments 1.1, 2.1.1, 3.1, and 7.1.1, Commitment 7.1.1 is included in this quarterly report. However, the responses for Commitments 1.1, 2.1.1, and 3.1 are not complete and are still being worked.

Attachment 2 of the quarterly report, which contains the Readiness Exercise/Activity Schedule for Commitment 7.1.1, should be placed in the Board's non-public file since it contains "Official Use Only" information.

Should you have any questions concerning the quarterly report, please contact Mr. Richard C. Crowe, Office of Research, Development, and Testing Facilities, on (301)903-6214.

Sincerely,

Everet H. Beckner
Principal Deputy Assistant Secretary
for Defense Programs

Enclosure

QUARTERLY REPORT

DEPARTMENT OF ENERGY

IMPLEMENTATION PLAN FOR

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

RECOMMENDATION 93-6

MAINTAINING ACCESS TO NUCLEAR WEAPONS EXPERTISE

REPORTING PERIOD
JULY 5 THROUGH SEPTEMBER 30, 1994

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Commitment 6.1	A.1
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Related Activities	A.3

1.0 INTRODUCTION

This quarterly report for the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-6 Implementation Plan covers the period July 5 through September 30, 1994.

Response to the DNFSB letter of September 14, 1994, concerning Commitment 7.1.1 is discussed in Section 4.0, Activities. Responses for Commitments 1.1, 2.1.1, and 3.1 are not complete and are still being worked. Support documentation is attached to this report.

The following is a summary of the major highlights, including an indication of which task(s) the highlight is in support of, for the third quarter 1994:

- The Stockpile Stewardship 21 (SS-21) program is being developed to further enhance the disassembly and modification processes. The formalized process will integrate the results of Integrated Safety Skills and Knowledge Platform (ISSKP) 5 (critical safety hazard information) with all other safety hazard information into the disassembly procedure development process. An Interagency Engineering Procedure, EP401110, "Integrated Safety Process for Assembly and Disassembly of Nuclear Weapons," has been issued in draft form. This document formally defines a process and associated safety criteria to conceptualize, develop, verify, implement, and control the "principle elements" of the operating environment. The principle elements are defined as the weapon, personnel, operating procedure, operating facility, tooling, and equipment. A revision of Chapter 3.7, "Qualification Evaluation Weapon Assembly/Disassembly Safety," of the Albuquerque Operations Office Supplemental Directive, AL 56XB, Development and Production Manual (D&PM), was issued on September 23, 1994. As a "proof-of-concept," the current SS-21 procedures are being utilized to develop safe dismantlement procedures for the B61-0 program. When SS-21 procedures are proven, the D&PM will be further revised to include a full description of the SS-21 process and policy direction. (Supports Tasks 5 and 6)

- Critical functional areas developed in ISSKP 1 for Commitment 1.1 were incorporated into the Qualification Evaluation for Dismantlement (QED) phase 1 (Normal Operations) review for the W48 program during the week of September 26, 1994. (Supports Tasks 1 and 6)

- Lawrence Livermore National Laboratory will set up a review team to review the W56 system. Both design and production agencies will participate. A wide range of topics relevant to the development of safe dismantlement procedures will be addressed including: development and design history, safety features, hazard analysis, special tooling, and others. A session is scheduled to be conducted on December 7, 1994, to begin the review and archiving program on this specific system. When feasible, personnel involved in the original design and production will participate. Sandia National Laboratories will be conducting a similar effort to archive the B61 system. A review session for the B61 will

follow the W56 effort. (Supports Tasks 5 and 6)

- Y-12 has completed a program review and is in the process of mapping skills and knowledge to functional areas. Documentation regarding these functional areas was submitted to the design laboratories in November 1994 for review and incorporation in their ISSKP 1 and ISSKP 3 efforts. (Supports Tasks 1, 3, and 9)

- Overall progress on 93-6 was reviewed at the last meeting of the Executive Management Team for Dismantlement. Individual sites shared "lessons learned" in order to assure consistency in the archiving process throughout all participating sites. (Supports Tasks 1, 5, and 6)

- Tasking letters were written from the Albuquerque Operations Office (AL) to the design agencies and Pantex and from Department of Energy (DOE) Headquarters to Headquarters staff and the Albuquerque Operations Office to identify skills and knowledge and document the approach. The DOE Headquarters and Albuquerque Operations Office and the national laboratories have initiated this program. Two meetings have been conducted to share lessons learned, summarize methodologies, and provide a method for DOE/AL and Headquarters to provide further direction to field activities. (Supports Tasks 1 and 5)

- Tasking letter was written from the Nevada Operations Office to the design agencies and support contractors to identify skills and knowledge for key positions. (Supports Tasks 2 and 7)

- Tasking letters were written from the Nevada Operations Office to the design agencies and support contractors to identify information for the exercise/activity plan for an upcoming event. (Supports Task 7)

- Meetings were held between Headquarters, operations offices, Y-12, and national laboratories to establish the requirements and criteria for the archiving program. (Supports Task 5)

2.0 Implementation Plan Schedule

Deliverables completed during the third quarter calendar year (CY) 1994:

Commitment	Description
5.1	Established the Headquarters overall management structure to oversee and coordinate the archiving efforts (July 1994);

Deliverables scheduled for the third quarter CY 1994 but under review for resolution of DNFSB comments are listed chronologically:

Commitment	Description
1.1	Identified critical functional areas supporting safe dismantlement and modification procedures, including the performance of relevant safety analyses at Pantex (August 1994);
2.1.1	Identified key positions associated with the critical safety activities, functions, and operations for nuclear testing operations (August 1994);
3.1	Conducted a review of the effect of the recent loss of Headquarters personnel (August 1994); and
7.1.1	Readiness Exercise/Activity Schedule for nuclear testing operations issued (July 1994).

Deliverables scheduled for the third quarter CY 1994 but are not complete are listed chronologically:

Commitment	Description
1.2	Formal approach developed to identify skills and knowledge for critical safety functional areas (September 1994),
5.2	Developed a program to document the experience and knowledge of personnel (September 1994),
6.1	Stockpile Evaluation Program supporting documentation provided (September 1994), and
6.2	Nuclear Weapons Dismantlement schedule reviewed and issued (September 1994).

Deliverables scheduled for completion during the fourth quarter CY 1994 are listed chronologically:

Commitment	Description
1.3	Report any critical functional areas which may need immediate attention or feedback (November 1994),
2.1.2	Identify and document the skills and knowledge of the key personnel for an underground nuclear test (November 1994),
4.1	Developed DOE policy statement to provide guidance for access to departed personnel for underground testing operations (October 1994),
6.3	Documented process for developing safe dismantlement and modification procedures (October 1994), and
9.1	Review Y-12 list of critical functional areas and associated skills and knowledge requirements (November 1994), and
9.2	Reviewed the Y-12 process to capture and document the skills and knowledge of critical functions of Full-Time Equivalents (October 1994).

Due to the interrelationship of several of the commitments, the Implementation Plan and due dates are being reviewed. Details of schedule impacts will be the subject of further coordination. Any proposed change will be discussed with the DNFSB Staff and included in subsequent quarterly reports.

3.0 COMMITMENT STATUS

Commitment	Due Date	Status	Dependent Commitments
1.1	Aug 94	Rejected (1)	
1.2	Sep 94	Open	1.1
1.3	Nov 94	Open	1.2
2.1.1	Aug 94	Rejected (1)	
2.1.2	Nov 94	Open	2.1.1
3.1	Aug 94	Rejected (1)	
3.2	Jan 95	Open	1.2, 2.1.2
3.3	Jan 95	Open	3.2
4.1	Oct 94	Open	
5.1	Jul 94	Complete	
5.2	Sep 94	Open	5.1
5.3	Mar 95	Open	5.2
6.1	Sep 94	Open	
6.2	Sep 94	Open	
6.3	Oct 94	Open	3.2
6.4.1	After 6.3	Open	6.3
6.4.2	Sep 95	Open	6.3, 6.4.1
7.1.1	Jul 94	Rejected (1)	
7.1.2	Jan 95	Open	3.2, 7.1.1
7.1.3	Jan 95	Open	
8.1	Feb 95	Open	
9.1	Nov 94	Open	
9.2	Oct 94	Open	
9.3	Jan 95	Open	9.1, 9.2

Notes: (1) DNFSB letter of September 14, 1994, requested results of this commitment to be revised. The DNFSB comments are being reviewed for resolution. For further information, see Section 4.0, Activities.

4.0 ACTIVITIES

This section of the report provides a brief discussion of actions being taken on the nine task areas and related initiatives in the Implementation Plan. Section 4.10 highlights the reporting period meetings, and Section 4.11 discusses related activities.

4.1 Identify Disassembly Skills and Knowledge

Commitment 1.1: Critical functional areas and their supporting elements were developed in July and August 1994.

Resolution of comments from the DNFSB letter of September 14, 1994, is in progress.

Commitment 1.2 Identify and document the skills and knowledge required for critical functional areas.

Tasking letters requiring identification and documentation of the skills and knowledge required for critical functional areas have been issued. The tasking letters are designed to initiate action under this commitment. Numerous interagency discussions and two formal meetings have provided a forum to exchange lessons learned, formalize consistency, and for DOE to provide additional guidance. Verbal and written DNFSB comments have been reviewed and incorporated, where appropriate, via these formal meetings.

Commitment 1.3 Reported critical functional areas which require attention and reported to Headquarters.

The actions necessary to compile the input and perform a comparison review to identify areas which may need attention have been started. However, completion of Commitments 1.1 and 1.2 is required, and additional updates will be discussed in upcoming quarterly reports.

4.2 Identify Personnel Resources

Commitment 2.1.1 Identified key positions associated with the critical safety activities, functions, and operations for nuclear testing operations.

Resolution of comments from the DNFSB letter of September 14, 1994, is in progress.

Commitment 2.1.2 Description of skills and knowledge for each key position.

The actions necessary to identify and document the

skills and knowledge required for key positions have been started. Additional updates and progress will be discussed in upcoming quarterly reports.

4.3 Identify Personnel Resources

Commitment 3.1 Conducted a review of the effect of the recent loss of Headquarters personnel.

Resolution of comments from the DNFSB letter of September 14, 1994, is in progress.

Commitment 3.2 List of the number of key position/critical function FTEs with years of professional experience.

Activity on schedule for this commitment.

Commitment 3.3 Policy statement that requires an annual review and report that updates the lists in Sections 4.1, 4.2, and 4.3.

Activity on schedule for this commitment.

4.4 Maintaining Access

Commitment 4.1 Department of Energy policy statement that provides guidance for access to departed personnel where skills and knowledge, identified in Sections 4.1, 4.2, and 4.3, are critical to safe dismantlement, modification, disassembly, and testing operations.

Draft policy statement was developed and is currently in the coordination process. Deliverable will be provided in separate report.

4.5 Documentation of Skills and Knowledge

Commitment 5.1 Established the Headquarters overall management structure to oversee and coordinate the archiving in July 1994. This completes Commitment 5.1.

Commitment 5.2 Develop a program to document the experiences and knowledge of personnel.

Work in progress to complete deliverable in an acceptable manner.

Commitment 5.3 Archiving program status report comparing accomplishments against the program developed in Commitment 5.2.

Action on Commitment 5.3 will start once Commitment 5.2

is complete.

4.6 Development of Weapons Disassembly Procedures and Laboratory Support to Pantex

Commitment 6.1 Provide Stockpile Evaluation Program supporting documentation.

Department of Energy/Albuquerque Operations Office memorandum dated September 21, 1994, provides an explanation concerning the Stockpile Evaluation Program. See attachment 1 for memorandum.

Commitment 6.2 Issue a Nuclear Weapons Dismantlement schedule.

Work in progress to complete deliverable in an acceptable manner.

Commitment 6.3 Documented process for developing safe dismantlement and modification procedures.

Process development is well underway. A revision of Chapter 3.7, "Qualification Evaluation Weapon Assembly/Disassembly Safety," of the Albuquerque Operations Office Supplemental Directive, AL 56XB, Development and Production Manual, was issued on September 23, 1994. This chapter provides the foundation for developing safe dismantlement procedures. An Engineering Procedure that provides step-by-step action is in draft form. It is being used as a "proof of concept," in the development of B61 dismantlement procedures and tooling. It will be issued when validated.

Commitment 6.4.1 Notification, prior to First Dismantlement Unit for each retired system, that the disassembly procedures have been validated and updated using the formalized process.

An example of a memorandum which authorizes a specific operation to proceed at Pantex is attached. This type of memorandum will be forwarded to the DNFSB to provide the required notification for Commitment 6.4.1.

Commitment 6.4.2 Notification, for each retired system, that the disassembly procedures have been validated and updated using the formalized process.

Activity on schedule for this commitment.

4.7 Nuclear Test Safety Readiness Capabilities

Commitment 7.1.1 Readiness Exercise/Activity Schedule for nuclear testing operations issued in July 1994. This completes Commitment 7.1.1.

Nevada Operations Office has added another column, Critical Safety Element, to the Readiness Exercise/Activity Schedule. This column will show the critical safety element that each activity is exercising. Nevada Operations Office has also developed working groups to answer the following questions: (1) What are the critical tasks to be evaluated for each functional area? (2) How should the critical tasks be evaluated, i.e., by use of checklists, documents, records, etc.? and (3) What facilities, hardware, and software systems are associated with the critical tasks? Once the groups answer these questions, the information will be used to supplement the current and future schedules.

The DNFSB requested the Readiness Exercise/Activity Schedule be revised to indicate the critical safety elements which are applicable to a particular exercise/activity. See attachment 2 for draft schedule.

Commitment 7.1.2 Test Readiness Exercise/Activity Plan.

Activity on schedule for this commitment.

Commitment 7.1.3 Annual Completion Report

No action has been started on Commitment 7.1.3.

4.8 Administrative Controls/Engineered Safeguards

Commitment 8.1 Applicable recommended changes will be incorporated into the hydronuclear program or integrated exercises authorized and conducted under Section 4.7.

The Task Eight Working Group set bounds on the study for the comparison between the positive measures in place at NTS and a modern fielded nuclear weapon. The group found that the comparison could readily be made concerning the timing and firing (T&F) and installation and emplacement (I&E) activities at the test site. Other areas concerning assembly and transportation could not be readily compared. The group agreed to limit the analysis to the T&F and I&E operations.

The Task Eight Working Group prepared a draft (outline) of the final report deliverable. The laboratory draft

inputs were supplied to the Task Leader, and this data will be finalized by November 1994. Compilation and drafting of the final report will be accomplished in November 1994.

4.9 Preservation of Assembly and Disassembly Skills at Oak Ridge

Commitment 9.1 Y-12 will review its list of existing critical functional areas and associated skills and knowledge requirements and methods used.

Support for Commitment 9.1 is reduced while resolution of conduct of operation issues at Y-12 is in progress.

Commitment 9.2 Y-12 will review its process to capture and document the skills and knowledge from critical functional FTEs.

Support for Commitment 9.1 is reduced while resolution of conduct of operation issues at Y-12 is in progress.

Commitment 9.3 Y-12 list of critical functional Full-Time Equivalents with years of professional experience.

Support for Commitment 9.1 is reduced while resolution of conduct of operation issues at Y-12 is in progress.

4.10 Meetings During this reporting period, the following meetings were held:

- Representatives from Headquarters, Y-12, and the national laboratories met at Sandia National Laboratories, Albuquerque, on August 16, 1994, to develop the requirements and criteria for the archiving program.
- The Executive Management Team for Dismantlement met on August 24, 1994, to review progress in meeting DNFSB Recommendation 93-6 Implementation Plan commitments.
- The Task Eight Working Group met in Albuquerque, NM, on September 8, 1994.
- Representatives from Headquarters, Y-12, AL, Pantex, and the national laboratories met at Lawrence Livermore National Laboratory from September 20-23, 1994, to continue the development of the requirements and criteria for the archiving program.
- Representatives from Nevada Operations Office, Y-12, Management & Operating contractors, and the national laboratories met to develop the Exercise Schedule for CY 1995.
- A meeting was held at the Albuquerque Operations Office on September 29, 1994, with representatives from Pantex and the design

laboratories to assess the progress and to assure consistency concerning identification of skills and knowledge and documented the approach. This meeting supported Commitments 1.3 and 3.2.

Meetings planned for the fourth quarter CY 1994 are as follows:

- o A common format for identification of skills and knowledge for disassembly of nuclear weapons was reviewed at the meeting held on October 12, 1994.

- o The Executive Management Team for Dismantlement met on October 26, 1994, to review progress in meeting DNFSB Recommendation 93-6 Implementation Plan commitments.

4.11 Related Activities The following related activities occurred during the reporting period:

- o Defense Programs (DP) DNFSB Recommendation Coordination Team began development of the interrelationships of the DP-related recommendations. Twelve operational areas were developed as a basis to determine the relationships between the recommendations. Several draft matrices were developed to arrive at the desired results.

  The first draft matrix is a general view of the operational areas versus the overall recommendations. This matrix provides an indication of what operational areas a recommendation is working or which require initial coordination.

  The second phase is to break down the individual recommendations by commitment and place the commitment against an operational area. The draft matrix of this phase is in progress. This matrix will allow the recommendation points of contact to see where other commitments interface. See attachment 3 for detailed information.

- o Recommendations 93-6 and 93-3 personnel helped with the development of the Nuclear Explosive Safety Qualification Standard on October 4-5, 1994.

ATTACHMENT 1, COMMITMENT 6.1

The Albuquerque Operations Office will provide supporting documentation on the Stockpile Evaluation Program (including the Accelerated Aging program) to the Board.

Deliverable: Letter to the Board that summarizes the programs.

DOE F 1325.8

United States Government | Department of Energy

memorandum

Albuquerque Operations Office

DATE:

REPLY TO ATTN OF: WQD:WEB:RJL

SUBJECT: DNFSB Recommendation 93-6, Commitment 6.1

TO: Martin J. Schoenbauer, DP222, HQ

This memorandum to intended to provide the Defense Nuclear Facilities Safety Board(DNFSB) information regarding the Department of Energy's(DOE) Stockpile Evaluation Program(SEP) and how this program provides relevant safety information for each weapon system that will be modified or dismantled. The SEP is administered within the DOE complex through AL Order 56XC and as delegated by the Deputy Assistant Secretary for Military Application for Defense Programs through a memorandum entitled " Quality Management Policy for Nuclear Weapons dated 11/20/89. AL Order 56XC sets forth the basic principles and policies and assigns responsibilities for the conduct of the SEP.

The primary objective of the SEP as stated in AL 56XC is " to assure that War Reserve(WR) material conforms to design and reliability requirements throughout production and stockpile life as set forth in the Military Characteristics. If product fails to conform, an evaluation is conducted to determine if corrective action should be initiated. New material and stockpile flight and laboratory testing, and surveillance testing are designed to provide continuous input to the reliability assessments of WR nuclear weapons, provide data for use in the improvement of future weapon designs, and offer timely detection of impending malfunctions or deterioration which might lead to impaired weapon reliability or safety. "

Systems evaluation of nuclear weapons consists of testing newly built weapons and weapons withdrawn from the stockpile. Both laboratory and flight testing are conducted. The new material test program focuses on uncovering defects during all phases of production, while the focus of the stockpile evaluation program is to establish a program that allows timely detection of aging, handling, processing, and environmental defects in the stockpile after quantity production has been completed.

One of the main tenets of the stockpile evaluation program is to conduct a variety of tests in sufficient number to ensure that any significant problem or problems with a weapon stockpile will be detected in time to avert serious stockpile degradation. With a properly conceived program, assurance of the quality of the stockpile is provided whether problems are observed or not. The absence of observed problems is good indication that no serious problems exist in the stockpile. The appearance of problems in the test program facilitates the action necessary to accommodate or eliminate the adverse effects of the problems.

The stockpile evaluation program emphasizes testing at the highest system or subsystem levels possible, diversification of tests as necessary to address all aspects of weapon performance under all use conditions, and maximum realism in all testing. The program also emphasizes prompt investigation of all indications of stockpile defectiveness, regardless of origin, to assess the impact on weapon requirements and the need for corrective action.

New Material Testing

Sample weapons are randomly selected during production(Phase 5, Limited Production and Phase 6, Quantity Production) or during a retrofit for testing in-flight or in the laboratory. About one sixth of the new material sample weapons are normally scheduled for flight testing the rest of the samples are slated for laboratory testing. New material selections are made from newly built weapons and units that have been rebuilt after new material evaluation. The first unit built is disassembled and inspected and becomes the first laboratory test sample.

In addition to the new material samples, one or two weapons are selected for accelerated aging evaluations. Accelerated aging units(AAU) can provide early information on potential degradation modes or material incompatibilities that may limit system life. Chemical reactions and interactions are thermally accelerated through exposure to thermal cycle, which includes a long high temperature exposure and high-to-low temperature excursions for a specified period(usually one year). AAU temperature extremes are within the Stockpile-To-Target Sequence(STS) extremes. These units undergo an extensive evaluation in which components are destructively sectioned(D-tested) to evaluate chemical processes that may be taking place. Data derived from AAUs is subject to interpretation and the degree to which that data is applicable to the weapon system in stockpile is always in question. The data may, however, provide a warning of impending detrimental processes.

Stockpile Testing

Stockpile testing consists of conducting the same kinds of tests as in new material testing, but uses weapons that have been in the stockpile for at least one year. Stockpile testing begins during Phase 6, the Quantity Production and Stockpile Phase and continues into Phase 7, the Retirement phase, but stops two years before total retirement of the weapon system. The Department of Defense is notified of the DOE random sample selections one to two years in advance. The DOE begins stockpile testing

approximately two years after production is started during test cycle 3, although flight testing of stockpile material may be conducted earlier if requested by the DOD. One stockpile warhead or bomb is destructively tested per cycle to evaluate the effects of handling and stockpile environments on the nuclear materials. This unit is known as the nuclear D-test unit and results in a decrement of one unit to the stockpile every cycle.

AAUs are also included as part of the stockpile evaluation program in place of a nuclear D-test unit every five years for enduring stockpile systems. The first AAU is part of a randomly selected sample that has been in the stockpile for a period of at least 15 years. A baseline gas sample is taken from the selected unit when it is first received, as long as the sampling does not require the sealed part of the warhead to be opened. The unit is subjected to the weapon system STS temperature extremes for a period of twelve months. The data that is normally derived from the D-test unit is delayed by one year. Data derived from stockpile AAUs is also subject to interpretation and the degree to which that data is applicable to the weapon system in stockpile is always in question. The data may, however, provide a warning of impending detrimental processes.

Results of all weapon system testing activities are published in a number of reports. Each nuclear weapon system has the results of the annual testing activities and the latest weapon reliability assessment published in a cycle report for that system. This report is published at the conclusion of each cycle. When anomalies are discovered Significant Findings Investigations(SFI) are initiated by laboratory personnel(SNL, LANL, or LLNL) and are officially opened with the issuing of a report describing the anomaly discovered and all the circumstances surrounding the discovery of the anomaly. After the SFI is concluded a closeout meeting is held to discuss the weapon system impacts and recommended corrective actions, if required. Approval of the SFI closeout recommendations is required by DOE/AL before the SFI report is issued. These reports provide significant information regarding the safety and reliability of each weapons system to a wide audience within the DOE complex including laboratory personnel assigned to oversee program activities such as weapon system modifications or dismantlement. In all cases the cognizant laboratory organization that has the responsibility for reviewing and approving the procedures that Pantex personnel use in modifying or dismantling nuclear weapons is involved in the SFIs.

Please contact me at FTS 505 845-5081 or Robert J. Lopez at FTS 505-845-5069 if you have any further questions regarding the DOE's New Material and Stockpile Evaluation Program.

Ralph Levine, Chief
Weapon Evaluation Branch
Weapons Quality Division

cc:
D. Monette, WPD, AL

ATTACHMENT 2, COMMITMENT 7.1.1

Readiness Exercise/Activity Schedule that describes the exercise/activity location, purpose, description, and date of every exercise and activity related to the safe conduct of nuclear testing operations.

Deliverable: Readiness Exercise/Activity Schedule

ATTACHMENT 2 IS "**OFFICIAL USE ONLY**"

Attachment 3, Related Activities

OPERATIONAL AREAS

1. Research & Development - Labs
2. Testing - Nevada Test Site (NTS)
3. Production - Maintain Production Line
4. Surveillance (Stockpile Storage)
5. Dismantlement - Pantex Operations
6. Facility Operations
7. Training and Qualification - Personnel Training
8. Nuclear Explosive Safety (NES)
9. Material & Material Storage
10. D & D / Transition - EM involvement
11. Reconfiguration
12. Standards

Department of Energy
Defense Nuclear Facilities Safety Board
Recommendations Coordination

	R&D 1	Test 2	Prod 3	Surv 4	Dsmtl 5	OPS 6	T & Q 7	NES 8	Mtrl 9	D & D 10	Rcnfg 11	Stds 12
90-2	O	O	O	O	O	◐	◐	O	O	O	O	●
91-6	O	O	O	O	O	◐	O		O	O		
92-2	O	O	O		O	◐	◐			O		
92-5	O	O	O		O	◐	O	O		O		
92-6		◐	◐		◐	◐	O	O	O	O	O	
93-3/ 92-7	O	O	O	O	O	◐	◐	O	O	O	O	O
93-1		◐	◐	◐	◐	◐	O	◐				●
93-2	◐		O	O	O	◐	◐	O	●	●	O	●
93-6		◐		◐	◐		O	●				
94-1			◐		◐	◐				●		

Symbols: ◐ *= currently being worked* O *= direct correlation*

D T

SUMMARY OF OPERATIONAL AREAS VERSUS RECOMMENDATION COMMITMENTS

Operational Areas	92-2	93-1	93-3	93-6
Research and Development				
Testing - NTS		2.1, 3.1.1-4, 3.3.2		2.1.1-2, 3.1, 5.2-3, 7.1.1-3, 8.1
Production		2.1, 3.1.1-4, 3.3.2		1.1, 3.1, 5.2-3, 6.3, 6.4.1-2, 9.1-3
Surveillance		3.1.4		1.1, 3.1, 5.2-3, 6.1
Dismantlement		2.1, 3.1.1-4, 3.3.2		1.1, 1.3, 3.1, 5.2-3, 6.2-3, 6.4.1-2, 9.1-3
Facility Operations	1.1-2, 2.1-5, 3.1-7	2.1, 3.1.1-4, 3.1.4-5, 3.5.1	1.2-3	
Training and Qualification	1.3, 4.1-4,	3.1.1, 3.2.1, 3.3.2	2.2-3, 3.1-2, 4.1.4, 4.2.2, 4.4.4, 4.5, 4.8, 5.1.1-2, 5.2, 5.5, 5.6.2	1.2, 2.1.2, 3.1-2, 5.2-3
Nuclear Explosive Safety		2.1, 3.2.1, 3.1.4-5, 3.3.1-3, 3.3.3, 3.5.1-2		1.1, 3.1, 5.2-3, 6.2-3, 6.4.1-2, 7.1.1-3, 8.1
Material and Storage				
D & D/ Transition				
Reconfiguration				
Standards	4.4, 5.1	2.1, 3.1.4, 3.3.2-4, 3.3.3, 3.2.2-4, 3.5.1-2	1.1, 1.4-5, 2.1-4, 3.3, 4.1.1-3, 4.2.1, 4.3, 4.4.1-3, 4.6, 4.7, 5.3-4, 5.6.1, 6.2, 8.2	1.1, 3.1, 3.3, 4.1, 5.1-3
No Applicable Category				

DRAFT