



Lawrence Livermore National Laboratory



RLH:03-063

October 1, 2003

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SUBJECT: NUCLEAR EXPLOSIVE SAFETY IMPLEMENTATION PLAN FOR THE DEVICE ASSEMBLY FACILITY; FORWARDING OF REV. 1 WITH ADDITIONAL INFORMATION


Reference: (a) Lawrence Livermore National Laboratory Letter, RHL-03-027, Nuclear Explosive Safety Implementation Plan for the Device Assembly Facility, dated March 31, 2003
(b) NNSA Letter, NNSD:CWB-03030, Approval of the Nuclear Explosive Safety (NES) Implementation Plan (IP) for the Device Assembly Facility (DAF), dated July 7, 2003.

This letter forwards Revision 1 of the Nuclear Explosive Safety Implementation Plan for the Device Assembly Facility. Reference (a) submitted the original (Rev. 0) Implementation Plan for Nuclear Explosive Safety for the Device Assembly Facility (DAF), which addressed implementation of the DOE 452 series orders through DAF plans and procedures using a graded approach, linked with the implementation of the DAF 10 CFR 830, Subpart b-compliant Documented Safety Analysis (DSA). Reference (b) provided NNSA/NSO approval of the basic concept of this Implementation Plan and requested additional information regarding a more detailed cost estimate, scope determination, and resource loaded schedule with milestones. Reference (b) further stated that the attention to updating the DAF NES Master Study is required. Revision 1 provides this additional information.

ACTION	_____
INFO	<u>NSSD NSO/MGR</u>
NSO/MGR	_____
SC/DD	_____
OFFM	_____
AMTS	_____
AMNS	<u>✓</u>
AMEM	_____

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If you have any questions or require additional information regarding this plan,
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NUCLEAR EXPLOSIVE SAFETY IMPLEMENTATION PLAN FOR THE DEVICE ASSEMBLY FACILITY

DAF-RPT-32
Rev. 1
September 30, 2003

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October 1, 2003
Date

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10/01/03
Date

Record of Revisions

Revision No.	Date	Reason for Revision
Rev. 0	March 28, 2003	Original Issue
Rev. 1	September 30, 2003	To incorporate the information requested by the U.S. Department of Energy, National Nuclear Security Administration, Nevada Site Office (Letter of July 7, 2003)

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ATTACHMENT 4: NUCLEAR EXPLOSIVE SAFETY MASTER STUDY RESOURCE LOADED SCHEDULE

REFERENCES:

1. National Nuclear Security Administration Nevada Site Office Appraisal Report of Los Alamos National Laboratory and Lawrence Livermore National Laboratory U.S. Department of Energy Order 452.1B and 452.2B Requirements Implementation at the Nevada Test Site for the Period August 1999 through March 2002.
2. National Nuclear Security Administration Letter. Approval of the Nuclear Explosive Safety Implementation Plan for the Device Assembly Facility. July 7, 2003.
3. National Nuclear Security Administration (NA-121) Memorandum. Extension of the Nuclear Explosive Safety Master Study of Assembly, Storage, Transportation Operations at the Device Assembly Facility at the Nevada Test Site. July 12, 2002.
4. National Nuclear Security Administration Office of Defense Programs. Program Plan for Test Readiness, Version 3. Fiscal Years 2003-2007. June 5, 2003.
5. National Nuclear Security Administration Letter. Safety Basis Requirements for Test Readiness Activities. September 11, 2003.
6. Lawrence Livermore National Laboratory Defense and Nuclear Technologies Letter AO 2003-017. Nuclear Explosive Safety Internal Assessment Report. July 21, 2003.
7. Lawrence Livermore National Laboratory Letter from James E. Wells, Work Smart Standards Process Leader, to Camille Yuan-Soo Hoo, Livermore Operations. Work Smart Standards, Change Control Board, Change Request to add the National Nuclear Security Administration Nevada Site Office Tri-Lab Work Smart Standard Set into the Lawrence Livermore National Laboratory Work Smart Standard Set. August 15, 2003.

1.0 IMPLEMENTATION PLAN SUMMARY

The Implementation Plan will be considered as a working document and will be revised periodically on an as-needed basis.

- (1) **Exemptions Requested:** None.
- (2) **Total Funding and Sources by Fiscal Year (FY):** Implementation of this plan will coincide with that of Title 10 Code of Federal Regulations (CFR) 830, Subpart B, "Safety Basis Requirements," compliant Documented Safety Analysis (DSA) in FY04. The cost to the Device Assembly Facility (DAF) will be approximately \$758K. A source for the total amount has yet to be confirmed, but it is assumed that adequate funding in FY04 will be identified by the Enhanced Test Readiness Program (see Section 8.0).
- (3) **Significant New Programs/Activities:** DAF plans and procedures developed will be fully implemented to support Nuclear Explosive Safety (NES). Lawrence Livermore National Laboratory (LLNL) single-laboratory ownership of DAF will be reflected in these plans and procedures (see Section 6.0).
- (4) **Significant Impacts to Existing Programs/Activities:** Adequate funding will have to be established at the beginning of FY04 to ensure dedicated personnel to support this plan (see Sections 2.0, 6.0, and 8.0). Approval for Master Study extension to December 2004 is required and is reflected in the schedule. Non-implementation of this plan will result in an expired DAF NES Master Study.
- (5) **Constraints to Implementation:** Lack of sufficient resources due to limited or no funding is a potential constraint.
- (6) **Areas Currently in Full Compliance:** The DAF has an approved and valid NES Assembly, Staging, and Transport (AS&T) Master Study and safety analysis process and has implemented the two-person control concept (see Section 5.0).

2.0 GENERAL INFORMATION

This is Revision 1 of the NES Implementation Plan for the DAF. This implementation plan applies only to the DAF and addresses those NES issues described in Reference 1 and Reference 2. This plan provides the schedule that addresses both NES plan and procedure updates for compliance with the U.S. Department of Energy (DOE) 452 Series Orders and the execution of a DAF NES Master Study consistent with Title 10 CFR 830, Subpart B, "Safety Basis Requirements."

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The DAF is currently identified as a high-explosive facility with plutonium under DOE Order 6430, "General Design Criteria," and a moderate hazard facility under DOE Order 5480.1B, "Environmental, Safety and Health Programs for Department of Energy Operations." With the completion of the Title 10 CFR 830, Subpart B, "Safety Basis Requirements," it will be designated a Category 2 nuclear facility. The DAF mission is to provide necessary facilities for the weapons laboratories to safely and securely conduct nuclear explosive operations in support of their stockpile management and stewardship mission. This includes underground test readiness, damaged nuclear weapons disposition, sub-critical experimental program support and experiments in support of national security interests. With the cessation of nuclear testing, the requirement for the DAF to remain primarily available for nuclear explosive operations has been reduced and the DOE, National Nuclear Security Administration Nevada Site Office (NNSA/NSO) is exploring additional potential missions for the facility. Currently LLNL operates the DAF in support of LLNL and Los Alamos National Laboratory (LANL) stockpile management and science-based stockpile stewardship missions. LANL, Bechtel Nevada (BN) and Wackenhut Services, Inc. provide support to LLNL in the operation of DAF as follows:

- LANL supports DAF operations in fulfillment of its laboratory projects, program goals, and objectives, providing facility staff and subject matter experts as necessary.
- BN provides program support (including engineering, logistics, and emergency response) and dedicated maintenance support for the facility and its equipment.
- Wackenhut Services, Inc. manages the DAF security and safeguards program, ensuring implementation of all NNSA Safeguards and Security Division Requirements.

While single-laboratory ownership of the DAF by LLNL has been approved by NNSA/NSO, it has yet to be fully implemented through facility plans and procedures that integrates LLNL corporate Integrated Safety Management requirements, including NES DOE 452 Series Orders. This has resulted in outdated facility plans and procedures. This implementation plan provides a schedule for updating the DAF plans and procedures compliant with DOE 452 Series Orders and, therefore, satisfies the issues addressed in the above-referenced appraisal report.

In preparation for the 1996 DOE DAF Nuclear Explosive Safety Study (NESS), a DAF NES evaluation was conducted jointly by LANL and LLNL; and the results were documented in the DAF Nuclear Explosive Safety Master Study Integrated Input Document (DAF NES SIID). DOE approved the NESS for the DAF AS&T Operations at the DAF in May 1997 (DAF Master Study). The DAF has not had any ongoing nuclear explosive operations since it was authorized to conduct nuclear explosive operations in May 1997.

The DAF Master Study was conducted in compliance with DOE Order 5610.11, NNSA/NSO Order 5610.11A, and *Nuclear Explosive Safety Study Interim Guidance* (February 1994). During the preparation of the DAF NES SIID, the DOE 452 Series Orders were being

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developed. The NESS was conducted to be consistent with the DOE 452 Series Orders and the appropriate guides and standards.

Master Studies are renewed on a five-year cycle. A DAF NES Master Study was due for renewal May 2002. This date has been extended to May 2004 [Reference 3]. Recently, the NNSA Enhanced Test Readiness effort has determined that a nuclear facility's Title 10 CFR 830, Subpart B, "Safety Basis Requirements," can be substituted for the SIID for Master Studies. NNSA/NSO has directed development of these safety basis documents as well as a resource-loaded schedule for their implementation and use in conducting a NESS [Reference 4, 5]. This plan provides the schedule that integrates both NES plan and procedure updates and execution of a DAF Master Study consistent with DSA Implementation.

3.0 APPLICABILITY TO NUCLEAR SAFETY REQUIREMENTS

LANL/LLNL implementation of DOE 452 Series Order requirements for NTS operations at the DAF focus on the facility plans and procedures. These documents are applicable to the facility and its structures, systems, and components. The applicability of the DOE 452 Series Orders to specific nuclear explosive operations rests with the laboratory sponsoring a project and is not addressed in DAF documentation except where project operations interface with the facility and its operations.

The NNSA/NSO appraisal report [Reference 1] contained three findings:

- 1) LLNL and LANL have not fully implemented and are not in compliance with the DOE and NNSA/NSO 452 Series Orders.
- 2) Plans and procedures relied upon to formalize programs at the DAF fail to fully identify and flow-down appropriate requirements.
- 3) Major institutional program deficiencies hinder establishment and maintenance of a formal, comprehensive, and systematic Nuclear Explosive and Weapons Surety Program.

During January 2003, at the request of DAF Management, a joint LANL/LLNL team performed a self-assessment of the DAF NES plans and procedures relative to compliance with the DOE 452 Series Orders [Reference 6]. A matrix of the NNSA/NSO appraisal issues related to these findings, including reference criteria and recommended actions was provided [Attachment 1]. All requirements are applicable and no exemptions are anticipated.

4.0 SAFETY AND IMPLEMENTATION GUIDES AND TECHNICAL STANDARDS

This implementation plan is developed to comply with specifications of DOE-STD-1062-94, "DOE Standard Preparation, Review, and Approval of Implementation Plans for Nuclear Safety Requirements." During the course of implementation, it is expected that the Nevada Tri-Lab Work Smart Standards (WSS) set will be implemented through the LLNL contract [Reference 7]. This WSS set includes DOE Orders 452.1B, "Nuclear Explosive and Weapons Surety Program," and 452.2B, "Safety of Nuclear Explosive Operations." Once implemented through the contract, the Tri-Lab WSS set will serve as the contractual Environment, Safety, and Health requirements for performing work safely by LLNL personnel under the purview of NNSA/NSO. These WSSs will be used in the update of NES plans and procedures. Future changes to the NNSA/NSO Tri-Lab WSS set will be reviewed by the LLNL Change Control Board and be subject to Livermore Site Office approval before modification of the LLNL contract.

5.0 BASELINE COMPLIANCE

The DAF has been comprehensively reviewed and evaluated to identify hazards, potential accidents and to establish design, construction, and operational means to protect the public, worker health and safety, and the environment. The DAF successfully completed an Operational Readiness Review in 1997. It is currently operating under an approved Safety Analysis Report based on DOE Order 5481.1B, "Safety Basis Requirements." This Safety Analysis Report is currently being upgraded to a Title 10 CFR 830, Subpart B-compliant DSA. The DAF also has a DAF-RPT-01, "Environmental Assessment," and a DAF-RPT-12, "Finding of No Significant Impact."

The DAF has an approved and valid NES Study Report. The DAF NES AS&T Master Study was approved in 1997.

DAF has implemented the two-person concept according to the requirements of DOE O 452.2B, "Safety of Nuclear Explosive Operations," and NNSA/NSO instructions. DAF-PLN-SF-01, "Nuclear Explosive Safety Plan," defines the two-person concept and states that it applies to all nuclear explosive operations at DAF. DAF-PRC-TO-04, "Two-Person Control," implements the concept for DAF operations.

The DAF safety analysis process and documentation are according to the requirements of DOE O 452.2B, "Safety of Nuclear Explosive Operations." The DAF Safety Analysis Report and AS&T Master Study process and documentation are consistent with the DOE 452 Series Order requirements.

6.0 ACTIVITIES REQUIRED TO MEET REQUIREMENTS

6.1 Plans and Procedures

The following is a sequential set of actions to transition the DAF and its NES plans and procedures into LLNL and Nevada Test Operations (NTO) programs in order to comply with DOE 452 Series Orders:

- 1) Determine the subset of plans and procedures that are specific to the implementation of the DSA and NES.
- 2) Determine appropriate NTO programs to be developed or revised to include DAF. Determine which programs should be consolidated at the NTO level.
- 3) Identify plans and procedures that can be eliminated with minimal impact on its operations and revisions to integrate DAF into the LLNL Environmental Safety & Health Manual (ES&H) Volume VI.
- 4) Rewrite and issue DAF and NTO plans and procedures.

A review of current DAF plans and procedures against the DAF DSA, LLNL documentation, and the action items recommended to resolve the NNSA/NSO appraisal issues (Attachment 1), identify the set of DAF plans and procedures that need to be modified and/or deleted. The NES-specific procedures that will be revised and/or developed are shown in Attachment 3.

6.2 DAF Nuclear Explosive Safety Study Group Master Study

The following activities are required for an updated NES Master Study:

- 1) Develop an integrated schedule that factors the submission, review and NNSA approval of the DAF, Title 10 CFR 830, "Occupational Radiation Protection" compliant DSA. This schedule should meet Enhanced Test Readiness Program requirements.
- 2) Receive an extension of the NES DAF Master Study until December 2004.

The current two-year Master Study extension, based on a remediation plan approved by NA-12, expires May 2004. Part of that remediation plan requires that NES topics be addressed in the forthcoming DAF DSA, and that requirement has been substantially fulfilled [Reference 2]. The resource-loaded schedule for updating DAF NES Master Study and brief work scope is shown in Attachment 3.

7.0 GRADED APPROACH

This plan only implements those plans and procedures that are linked to both DSA and DOE 452 Series Orders.

The DAF submits to NNSA, no later than October 10, 2003, its Title 10 CFR 830, "Documented safety Analysis," for approval. This plan assumes DSA approval by mid-January 2004 (hence the need for Master Study extension to December 2004). The schedule provided is based on this assumption. The DSA will be the single integrated input document for the NES Master Study, and it is not necessary for the safety basis documents to analyze a specific weapon configuration. The plan assumes, under a graded approach, that the NES Master Study Group will start their review while implementing procedures for the DAF DSA and Technical Safety Requirements are being developed.

8.0 RESOURCE ASSESSMENT

Resource loading of the integrated schedule has identified a funding requirement of \$ 758K. Revision of the DAF plans and procedures and preparations for a new Master Study can be completed assuming that sufficient funding is available in FY04. A source for the total \$758K has yet to be confirmed. Resources are estimated to be a total of 6-7 full-time equivalents at approximately 12 months to implement. Since the DAF is resource-limited in most of its core positions, personnel have been identified from LLNL, LANL, BN, and outside consultants to support this effort. No exemptions are anticipated nor have been requested for this implementation plan.

9.0 PRIORITIZATION

Implementation of this plan will be identified as a work breakdown structure activity in the DAF Integrated Schedule. This schedule is updated and reviewed biweekly by DAF Management.

10.0 MILESTONES AND SCHEDULES

Attachment 2 provides the brief description of activities identified in Attachment 4. Attachment 4 provides the schedule milestones and resources in dollars.

11.0 EXEMPTIONS

The DAF requests no exemptions from the DOE 452 Series Orders.

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12.0 COMPENSATORY ACTIONS

Until the DAF DSA is approved and implemented, DAF will continue to operate under its current approved authorization basis. The LLNL NES program will be used in the interim to address and adjudicate any technical NES issues arising at the DAF.

13.0 TRACKING PROGRESS

NES implementation is a focus action area for DAF Management. Implementation of this plan and schedule will be reviewed by DAF Management (see Section 9.0) to ensure continued monitoring and sustained progress.

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Attachment 1, NES Self-Assessment Evaluation Criteria and Recommendations

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
A-1	01	Major differences exist between the two sets of NES Standards; therefore, it cannot be determined that this appraisal element will be met at the DAF.	DAF-PLN-SF-01, Rev 1 Section 5.1.4 – Update reference from 452.1A to 452.1B. DAF-PLN-MG-02, Rev 1 Section 5.0 & 5.1 – (5.0) if reference to nuclear explosive safety standards is appropriate, update to DOE O 452.1B; (5.1) Determine if reference to and reproduction of NES standards is even necessary. If required, then update to DOE O 452.1B.	DAF-PLN-SF-01 updated Jan 24, 2002. DAF-PLN-MG-02 last revision Nov 1998. Need to be evaluated against B-3 list and revised to incorporate most recent orders.
A-2	01/03	The requirement to conduct appropriate hazard analyses is not established by DAF documents and may not be fully met.	DOE O 452.1B, para 4h(2), DAF-PLN-MG-02 – Does this document have to identify the requirement for an Operation Hazard Analysis, DOE STD 3016 and the NTS Operational Analysis Report (OAR) Handbook for nuclear explosive operations? DAF-PLN-SF-01 – Look at wording with respect to requirements for hazards for nuclear explosive operations; update reference to DOE O 452.1B.	DAF-PLN-MG-02 Section 3.2.2 – Add 2 bullets to include DOE-STD-3016 and the NNSA/NSO OAR.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
A-3	01/02/03	Appropriate readiness reviews for specific nuclear explosive operations (NEOs) are not required and may not be conducted.	<p>DAF-PLN-SF-07 – Is it inconsistent for Operational Safety Requirements (OSRs) to be derived from the safety assessment (Chapter VI of the DAF Safety Analysis Report if DAF is a non-nuclear facility?)</p> <p>DAF-PRC-FA-01 - #1: What items are identified as positive measures in the DAF AS&T Master Study for nuclear explosive areas? #2: Do these positive measures have to be addressed in the Facility Checklist included as an attachment to the Procedure? #3: Is specific acceptance criteria delineated in Facility Checklist in order to determine if adequate safety measures will be provided?</p>	<p>See comments for B-27 below. Positive measures are identified in pp. 39-41 of DAF AS&T Master Study. An activity specific Hazard Action Report (HAR) would be required to identify positive measures and acceptance criteria.</p>
A-4	01	Integrated NEWS appraisals are not conducted as required.	<p>DOE O 452.1B, para 4i – #1: Contractor self-assessment? #2: Oversight surveillance (by NNSA/NSO)? #3: Performance-based appraisals of the overall effectiveness of the DAF NEWS Program (by NNSA/NSO)?</p>	<p>Develop self-assessment schedule for DAF.</p> <p>When NNSA/NSO initiates oversight surveillance and performance-based appraisals, coordinate DAF support.</p>
A-5	03	Appraisal process does not meet DOE G 414.1-1A	<p>DOE O 452.1B, para 4i(1) DOE G 414.1-1A – Is implementation of the guidance inconsistent with DOE O 414.1?</p>	<p>Work with NNSA/NSO on the development and implementation of an appraisal schedule that meets the guidance of DOE O 414.1-1A.</p>

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
A-6		Contractor self-assessments do not fully meet the established requirements.	DOE O 452.1B, para 4i(2) - #1: Has NNSA/NSO conducted appraisals to ensure that contractor self-assessments include a review of the implementation of NEWS requirements? #2: Have self-assessments been performed by LLNL? #3: Have self-assessments been performed by LANL? #4: Is there a schedule for self-assessments?	Establish and implement NES self-assessment program.
A-7	03	Oversight surveillance activities do not fully meet the established requirements.	DOE O 452.1B, para 4i(3) - Has NNSA/NSO documented oversight surveillance activities that consisted of monitoring NEWS documentation, walk-downs, contractor internal safety reviews, and special functional audits?	NNSA/NSO action required.
A-8	01	The appraisal process does not evaluate the completeness of the NEWS program.	DOE O 452.1B, para 4i(4) - The completeness of the NEWS implementation at the DAF has not been evaluated through the NNSA/NSO NEWS appraisals.	NNSA/NSO action required.
A-9	03	Integration of NES concerns into the process to assess ES&H implementation is not provided.	DOE O 452.1B, para 4i(4)(a) - As stated in the report, discussions with NNSA/NSO personnel revealed that there is no integrated NEWS Appraisal Program at NNSO/NSO.	Work with NNSA/NSO personnel to establish integrated NEWS appraisal program.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
A-10	01/03	There is no identified process to perform a NES review of all corrective action plans generated as an outcome of assessments.	DOE O 452.1B, para 4i(4)(b) DAF-PRC-AD-04 - Is there a formal process to ensure that NES personnel evaluate all corrective action plans for nuclear explosive operations, associated activities, and associated facilities to ensure that proposed actions do not adversely affect NES?	Establish formal process according to NNSA/NSO O 452.2B to ensure that NES personnel evaluate all corrective action plans for NEO, associated activities, and associated facilities to ensure that proposed operations do not adversely affect NES.
A-11	01/02	Training and qualification requirements for appraisal personnel are not fully established.	DOE O 452.1B, para 4i(5) - #1: Does NNSA/NSO have a training and qualification program for appraisal personnel? #2: Does DAF-PLN-MG-03 prescribe a training and qualification program for appraisal personnel who perform program appraisals as specified in DOE O 452.1B, para 5.1.1?	Revise DAF-PLN-MG-03 to include DAF Quality Officer. Identify appraisal personnel for self-assessments. Identify training for appraisal personnel.
A-12	01/03	Records are not made and maintained as required.	DOE O 452.1B, para 4.j. DAF-PRC-AD-03 DAF-PRC-AD-18 - Are records (documentation) maintained according to National Archives and Record Administration-approved DOE or site-specific records retention and disposition schedules per DOE O 200.1?	Review DOE O 200.1 for compliance and incorporate into DAF-PRC-AD-03.

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No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
A-13	01/03	NEWS qualified support personnel are not adequately available.	DOE O 452.1B, para 5.I. – Is the NEWS program supported by providing qualified personnel to support the NEWS Program and related activities, such as readiness reviews, HAR and safety analysis report preparation, Nuclear Explosive Safety Study Group activities, program appraisals, and providing technical advice and expertise?	When requested by DAF Management, qualified DA personnel are available to support the NEWS program and related activities. Routine administration and maintenance of the DAF NES program requires personnel assignment by DAF Management.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-1	01/03	There is no comprehensive safety program for NEO and associated activities.	DOE O 452.2B, para 4.a.(2) – Does the operations office (NNSA/NSO) have a comprehensive safety program for NEO and associated activities under their purview and ensure contractor implementation?	The DAF safety program is established within the comprehensive safety program maintained by the NNSA/NSO. DAF Plans SF-02 through SF-07 identify the DAF safety program. In addition, the documented safety analysis in development analyzes fire safety scenarios and identifies requisite controls.
B-2	01/03	The experience feedback requirements are not fully met.	DOE O 452.2B, para 4.b.(1) DAF-PLN-MG-05 DAF-PRC-AD-15 – #1: Does DAF examine the safety lessons to be learned from critical evaluations of operating experience and other sources to ensure a continuous enhancement process is in place? #2: If evidence is found that may affect the validity of the safety basis of one or more ongoing NEO, is it treated as a potential unreviewed safety question (USQ) under the terms of Title 10 CFR 830, Section 203? #3: Is such new information evaluated for NES implications as specified in paragraph 4d of DOE O 452.2B?	Integrated Safety Management implemented at DAF in DAF-RPT-30. USQ program implemented in DAF-PRC-AD-04. The combination of these programs meets the experience feedback requirements of the order.

No.	Finding(s)	NNSANSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-3	01/03	The conduct of operations requirements are not fully met.	DOE O 452.2B, para 4.b.(2) DAF-PLN-MG-07 DAF-RPT-20 -- Are DAF operations conducted according to DOE O 5480.19?	DAF-PLN-MG-07 para. 4.3.1 requires the DAF Manager to ensure currency of conduct of operations by conducting prescribed reviews of the guidelines and related DAF documentation referenced in DAF-RPT-20. DAF-PRC-AD-01 specifies at least biennial review of DAF plans and procedures. DAF-RPT-20 and DAF-PLN-MG-07 have not been reviewed since 1996.
B-4	01/03	The requirements for safety controls are not fully met.	DOE O 452.2B, para 4.b.(3) DAF-PLN-MG-07 DAF-PLN-SF-07 -- #1: Are NEO and associated activities conducted and associated facilities operated in accordance with a system of documented controls? #2: Is this system of documented controls derived from facility- and operation-specific hazard analyses that incorporate the philosophies of independence, redundancy, and defense-in-depth? #3: Are multiple layers of protection used to prevent accidents and/or to mitigate the consequences of an accident?	While it appears that the present DAF SAR did not incorporate master study controls into the OSRs, the new DSA to comply with Title 10 CFR 830 will integrate all analysis and controls. In addition, operation specific controls will be documented in any operation specific HARs. The DSA and the HAR will be part of the authorization basis and reflect redundancy, independence and defense-in-depth.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-5	01/02/03	<p>The DOE O 452 Series Orders specified nuclear facility training and qualification requirements are not fully met.</p>	<p>DOE O 452.2B, para 4.b.(5) DAF-PLN-MG-03 DAF-RPT-05 DAF-PRC-TO-17 DAF-PRC-TO-07 DAF-PRC-TO-06 DAF-PLN-SF-01 DAF-RPT-29 - #1: Are training and qualification programs established for personnel who manage, oversee, perform, or directly support NEO and associated activities including management and technical support personnel, Personnel Assurance Program supervisors, Personnel Assurance Program medical personnel, and operations and maintenance personnel? #2: Are requirements for selecting, training, and qualifying personnel involved with NEO and associated activities and for ensuring their continuing fitness for duty applied according to DOE O 452.2B and Title 10 CFR Part 7117 #3: Does training for personnel involved in NEO and associated activities comply with applicable portions of DOE O 360.1A? #4: Does the DAF training and qualification program comply with DOE O 5480.20A, except Chapters II and III (Reactor Operations), and develop requirements equivalent to those in Chapter IV? #5: Is radiation safety training for individuals exposed to ionizing radiation provided according to Title 10 CFR 835, Section 901?</p>	<p>DAF-PLN-MG-03 revised April 2001 defines a comprehensive training program for DAF personnel. Specific issues in the appraisal that require resolution are: #1: DAF acceptance of its designation as a nuclear facility per DOE O 452.2A and the applicability of training and qualification requirements, including certification, as specified in DOE O 5480.20A; #2: Review DAF-RPT-05 to ensure that it includes all staff positions necessary to support safe conduct of operations and that the major duties and responsibilities for those positions are correctly described; #3: evaluate whether the DAF supervisor should be classified as technical staff per DOE O 5480.20A.</p>

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-6	01/02/03	The DOE O 452 Series Orders specified DOE nuclear facility maintenance program requirements are not fully met.	DOE O 452.2B, para 4.b.(6) DAF-PRC-MN-04 DAF-PLN-MG-04 DAF-PRC-MN-07 – Is the maintenance program established for facilities, tooling, and equipment used for NEO and associated activities in accordance with the nuclear facility requirements in DOE O 4330.4B?	DAF maintenance program is defined in DAF-PLN-MG-04, DAF-PRC-MN-04, DAF-PRC-MN-07, and DAF-PRC-AD-22 (Master Equipment List). These documents need to be reviewed to ensure compliance with DOE O 4330.4b, especially Chapter II. Update MEL (7/9/97) and ensure that special tools are included as required by DAF-PRC-MN-07.
B-7	01/03	The DOE O 452 Series Orders configuration management program requirements are not fully met.	DOE O 452.2B, para 4.b.(7) DOE-STD-1073-93 DAF-PLN-MG-10 DAF-RPT-03 DAF-PRC-AD-22 DAF-RPT-13 – #1: Does the DAF configuration management plan address the measures for managing the configuration of nuclear explosive assemblies? #2: Tooling? #3: Equipment? #4: Procedures? #5: The interface with the facilities in which these operations and activities are conducted? Used in NEO and associated activities? Does DAF have an established configuration management program based on the DOE standard 1073? Are all proposed changes reviewed for potential impact on nuclear explosive safety per paragraph 4d of DOE O 452.2B?	Update DAF configuration management plan as defined in DAF-PLN-MG-10 (1996) to ensure incorporation of DOE-STD-1073-93 (B-3 List). MG-10 and other documents incorporated by reference implement a configuration management program. The DAF DSA and the operational HAR will determine the structure, system or components to be included with the configuration management program after review of all equipment and tooling that is part of that process.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-8	01/03	The DOE O 452 Series Orders issues management requirements are not fully met.	DOE O 452.2B, para 4.b.(8) DAF-PRC-AD-08 DAF-PRC-AD-21 – Is there an established corrective action and commitment tracking system to assist in identifying, tracking, and monitoring required actions related to the safety of NEO and associated activities and facilities?	DAF-PRC-AD-06 defines the issues management system. Change control procedures are addressed in issue # B-13 below.
B-9	01/03	The Doe O 452 Series Orders occurrence reporting requirements are not fully met.	DOE O 452.2B, para 4.b.(9) DAF-PRC-AD-09 DOE O 232.1A DOE M 232.1A-1A DAF-PRC-FA-13 DAF-PLN-MG-13 DOE O 151.1A– Are operational occurrences #1: Reported, #2: Evaluated for safety implications, and #3: Processed according to DOE O 232.1A and DOE M 232.1-1A.	References in DAF-PRC-AD-09 and DAF-PLN-MG-13 need to be updated. DAF-PLN-MG-13 needs to incorporate emergency occurrences in DOE 452.2B when DOE O 452.2B is added to the B-3 list.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-10	01/03	The DOE O 452 Series Orders performance indicator requirements are not fully met.	<p>DOE O 452.2B, para 4.b.(10) – Has DAF established NES performance indicators tailored to the specific operations and site-unique facilities and conditions?</p> <p>DOE O 452.2B, para 4.b.(10)(a) – Has DAF implemented a performance indicator program for nuclear explosive operations according to DOE O 210.17</p> <p>DOE O 452.2B, para 4.b.(10)(b) – Have performance indicators been added or deleted as appropriate, based on a review of operations, appraisal results, and management assessments?</p>	<p>Has DAF submitted NES performance indicators to the NNSA/NSO for approval?</p> <p>Note: If not, it may be helpful to contact Pantex to obtain a copy of previously approved indicators.</p>
B-11	01/03	The DOE O 452 Series Orders positive verification requirements are not fully met.	DOE O 452.2B, para 4.b.(11) DAF-PRC-FA-01 – Is a verification process established to ensure use of #1: Correct equipment, #2: Qualified personnel, #3: Operationally ready facilities, and #4: Current procedures?	Update DAF-PRC-FA-01 to reflect applicable orders on the B-3 list. Ensure the positive verification process required by DOE O 452.2B is approved by NNSA/NSO as specified in NNSA/NSO O 452.2B.
B-12	01/02/03	The DOE O 452 established safety basis requirements are not fully met.	DOE O 452.2B, para 4.c. – Is the Safety Basis established and maintained according to Title 10 CFR 830?	The safety basis requirements of DOE O 452.2B will be met by the DSA currently in development and future operational HARs.

No.	Finding(s)	NNSANSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-13	01/02/03	The DOE O 452 Series Orders established requirements for change control are not fully met.	DOE O 452.2B, para 4.d. DAF-PLN-SF-01 DAF-RC-AD-04 - #1: Has DAF implemented the NNSANSO change control process for NEO and associated activities and facilities? #2: Is the USQ process augmented by the additional NES evaluations specified in para 4.d.? #3: Are NES evaluations completed before the change is implemented? #4: Are all proposed changes to NEO and associated facilities evaluated against applicable NES documents by laboratory personnel assigned NES responsibilities?	Update DAF-PRC-AD-04 to reflect applicable DOE Orders on the B-3 list. Verify implementation of the provisions of DAF-PRC-AD-21 in DAF, especially the NES review and approval process. Update DAF-PRC-AD-04 to incorporate requirements of NV O 452.2B, para. 4. d.
B-14	01/03	The current NES Standards are not properly identified.	DOE O 452.2B, para 4.e.(1) - Has the operations office implemented a formal, comprehensive NES Program that includes DOE NES Standards?	Refer to NNSANSO comprehensive NES safety program. Either update DAF-PLN-MG-02 reference to standards or remove the standards from MG-02.
B-15	01/03	The current General Nuclear Explosive Safety Rules are not properly identified.	DOE O 452.2B, para 4.e.(2) - Has the operations office implemented a formal, comprehensive NES Program that includes General Nuclear Explosive Safety Rules?	Refer to NNSANSO comprehensive NES Safety program. Either update DAF-PLN-MG-02 reference to NESRs or remove the NESRs from MG-02.
B-16	01/03	The current Supplemental Nuclear Explosive Safety Rules are not properly identified.	DOE O 452.2B, para 4.e.(3) - Has the operations office implemented a formal, comprehensive NES Program that includes Supplemental NES Rules?	Refer to NNSANSO comprehensive NES Safety program and/or Attachment 3 to NNSANSO O 452.2B. Either update DAF-PLN-MG-02 reference to Supplemental NESRs or remove the Supplemental NESRs from MG-02.

No.	Finding(s)	NNSANSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-17	01/03	The DOE O 452 Series Orders PAP requirements are not fully met.	DOE O 452.2B, para 4.e.(6) – Has the operations office implemented a formal, comprehensive NES Program that includes a Personnel Assurance Program (PAP)?	The institutional PAP programs are well established at LANL, LLNL, Sandia National Laboratory, and Pantex. DAF management should ensure that the PAP requirements in NNSANSO 452.2B are met for PAP personnel working in DAF. Update DAF-PRC-TO-04 to reflect changes in DOE 452.2B.
B-18	01/03	The DOE O 452 Series Orders established Reader Worker procedures are not fully met.	DOE O 452.2B, para 4.e.(8) – Has the operations office implemented a formal, comprehensive NES Program that includes Reader Worker Procedure and Checkoff?	The design laboratories are prepared to specify the appropriate application of Reader Worker procedure and checkoff when NEO are required at DAF. Per NNSANSO O 452.2B this information will be presented to the NES Study Group and included in the input document.
B-19	01/03	The DOE O 452 Series Orders established equipment and tooling requirements are not fully met.	DOE O 452.2B, para 4.e.(9) – Has the operations office implemented a formal, comprehensive NES Program that includes Tooling and Equipment?	When DOE O 452.2B is added to the B-3 list, DAF will update tooling and procedures.
B-20	01/03	The DOE O 452 Series Orders established procedures requirements are not fully met.	DOE O 452.2B, para 4.e.(10) – Has the operations office implemented a formal, comprehensive NES Program that includes procedures?	When DOE O 452.2B is added to the B-3 list, DAF will update DAF-PLN-AD-01.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-21	01/03	The DOE O 452 Series Orders established requirements for the control of electrical testers and equipment are not fully met.	DOE O 452.2B, para 4.e.(11) – Has the operations office implemented a formal, comprehensive NES Program that includes Control of Electrical Testers/Equipment?	Update DAF-PRC-TO-11 general requirements to reflect current DOE order, NNSA/NSO O 452.2B supplemental directive electrical tester criteria in Attachment 2.
B-22	01/03	The DOE O 452 Series Orders established requirements for on-site transportation of nuclear explosives not fully met.	DOE O 452.2B, para 4.e.(13) – Has the operations office implemented a formal, comprehensive NES Program that includes On-site Transportation of Nuclear Explosives?	At present, no requirement exists for on-site transport of nuclear explosives that involve DAF. A NESS is required prior to onsite operations.
B-23	01/03	The DOE O 452 Series Orders established NELA requirements are not fully met.	DOE O 452.2B, para 4.e.(14) – Has the operations office implemented a formal, comprehensive NES Program that includes Nuclear Explosive-like Assembly Requirements?	Update DAF-PRC-TO-6 to reflect DOE O 452.2B (when added to the B-3 list) and NNSA/NSO O 452.2B requirements
B-24	01/03	The configuration verification requirements are not fully met.	DOE O 452.2B, para 4.e.(16) – Has the operations office implemented a formal, comprehensive NES Program that includes Configuration Verification?	When DOE O 452.2B is added to the B-3 list and NEO are required, configuration verification will be addressed.
B-25	01/03	The Explosives Safety Manual requirements are not fully met.	DOE O 452.2B, para 4.e.(17) – Has the operations office implemented a formal, comprehensive NES Program that includes the Explosive Safety Manual?	When DOE O 452.2B is added to the B-3 list and NEO are required, the Explosive Safety Manual requirements will be addressed.
B-26	01/03	The DOE O 452 Series Orders established requirements for internal safety reviews are not fully met.	DOE O 452.2B, para 4.f. – Are there established internal, objective, and independent safety reviews of nuclear explosive operations and associated activities?	Update DAF-PLN-SF-01 to include the requirement to conduct nuclear explosive internal safety reviews.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
B-27	01/02/03	The DOE O 452 Series Orders established requirements for readiness reviews are not fully met.	DOE O 452.2B, para 4.g.(1)(a) -- #1: Were readiness reviews for DAF (hazard category 2) performed according to DOE O 425 Series Orders and Operations Office implementing directives and procedures? DOE O 452.2B, para 4.g.(1)(b) -- #2: Have there been changes to the facility or its safety basis that will require a facility readiness review when a new NEO is introduced? DOE O 452.2B, para 4.g.(2)(b) -- #3: Has the Operations Office developed and implemented a readiness review process that addresses nuclear explosive operations?	Determine if DAF-PLN-MG-08 (presently archived) should be reviewed for compliance with DOE O 425.1B, LLNL ES&H Manual, DOE O 452.2A/B, NNSA/NSO O 452.2B and reissued. Note: DAF-PRC-FA-01 does not apply to readiness reviews.
B-28	01/03	The DOE O 452 Series Orders established Occupational Safety and Health requirements are not fully met.	DOE O 452.2B, para 4.h. DOE O 231.1 -- #1: Is DOE O 231.1 implemented at DAF? DOE O 440.1A -- #2: Is DOE O 440.1A implemented at DAF? Title 10 CFR 835 -- #3: Is Title 10 CFR 835 implemented at DAF?	A table listing applicable DOE Orders and Standards DAF implementing directives should be available in DAF-PLN-MG-02. Verify implementation of these 3 orders. This issue will be addressed in the new DSA in process.
B-29	01/02/03	The DOE O 452 Series Orders established exemption request requirements are not fully met.	DOE O 452.2B, para 4.j. -- #1: Have any exemptions been requested for release from requirements? #2: If an exemption was requested, was it prepared according to Title 10 CFR 820?	No record of exemptions was available. Need to identify exemption request process in DAF management plan (PLN-MG-02?).
B-30	01/03	The DOE O 452 Series Orders established documentation maintenance requirements that are not fully met.	DOE O 452.2B, para 4.k. -- Are DAF records maintained according to National Archives and Records Administration-approved DOE or site-specific records retention and disposition schedules?	See A-12 above

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
C-1	01/03	The NNSA/NSO O 452.2A established requirements to consider and evaluate other Nevada Test Site hazardous operations for their effect on NEO that are not fully met.	NNSA/NSO O 452.2A	Requirement not found in NNSA/NSO O 452.2B. However, the new DSA and future NEO HARS will address this issue. If requirement is validated, flow down into DAF-PLN-SF-01 or DAF-PLN-MG-02.
C-2	01/03	The NNSA/NSO O 452.2A established requirements for Conduct of Operations that are not fully met.	NNSA/NSO O 452.2A	For "Experience Feedback," see B-2 above. There are no NNSA/NSO O 452.2B requirements for conduct of operations. Refer to B-3 above for DOE O 452.2B requirements.
C-3	01/03	The NNSA/NSO O 452.2A established requirements for administrative controls that are not fully met.	NNSA/NSO O 452.2A	There are no NNSA/NSO O 452.2B requirements for safety controls. Refer to B-4 above for DOE O 452.2B requirements.
C-4	01/02/03	The NNSA/NSO O 452.2A established requirements for maintenance of facilities, tooling, and equipment that are not fully met.	NNSA/NSO O 452.2A	Refer to B-6 above for DOE O 452.2B requirements. Review DAF-PRC-MN-04 to ensure incorporation of NNSA/NSO O 452.2B requirements for "concurrency by design agency prior to conduct of maintenance operations at DAF."
C-5	01/03	The NNSA/NSO O 452.2A established requirements for configuration management that are not fully met.	NNSA/NSO O 452.2A	Refer to B-7 above, DOE O 452.2B requirements. NTO should establish a configuration management program in conjunction with supporting contractors for approval by NNSA/NSO.

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No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
C-6	01/03	The NNSA/NSO O 452.2A established requirements for quality assurance that are not fully met.	NNSA/NSO O 452.2A	There are no NNSA/NSO O 452.2B requirements for quality assurance. DAF is required to comply with Title 10 CFR 830 Subpart A.
C-7	01/03	The NNSA/NSO O 452.2A established requirements for issues management that are not fully met.	NNSA/NSO O 452.2A	Refer to B-8 above for DOE O 452.2B requirements. There are no NNSA/NSO O 452.2B requirements for issues management.
C-8	01/03	The NNSA/NSO O 452.2A established requirements for occurrence reporting that are not fully met.	NNSA/NSO O 452.2A	Refer to B-9 above for DOE O 452.2B requirements. Ensure requirement from NNSA/NSO O 452.2B to report occurrences to Director, NSSD, within 24 hours is incorporated into DAF-PRC-AD-09.
C-9	01/03	The NNSA/NSO O 452.2A established requirements for performance indicators that are not fully met.	NNSA/NSO O 452.2A	Refer to B-10 above for DOE O 452.2B requirements. There are no NNSA/NSO O 452.2B requirements for performance indicators.
C-10	01/03	The NNSA/NSO O 452.2A established Supplemental Nuclear Explosive Safety Rules that are not properly identified.	NNSA/NSO O 452.2A	Refer to B-16 above for DOE O 452.2B requirements.
C-11	01/02/03	The NNSA/NSO O 452.2 established NES Change Control Process requirements that are not fully met.	NNSA/NSO O 452.2A	Refer to B-13.

No.	Finding(s)	NNSA/NSO Appraisal Issues	Reference Criteria	Evaluations and Recommendations
C-12	01/03	The NNSA/NSO O 452.2A established requirements for control of electrical testers and equipment that are not fully met.	NNSA/NSO O 452.2A	Refer to B-21.
C-13	01/03	The NNSA/NSO O 452.2A established NELA requirements that are not fully met.	NNSA/NSO O 452.2A	Refer to B-23.
C-14	01/03	The NNSA/NSO O 452.2A established requirements for Process Design (Defense in Depth) that are not fully met.	NNSA/NSO O 452.2A	Note: DOE O 452.2B and NNSA/NSO O 452.2B eliminated the detailed requirements listed in DOE O 452.2A. However, DAF should consider referencing DA Design Safety Standards in DAF-PRC-MN-06.
C-15	01/03	The NNSA/NSO O 452.2A established requirements for a Readiness Review and Oversight Program that are not fully met.	NNSA/NSO O 452.2A	Refer to B-27 above. Insert requirements from NNSA/NSO O 452.2B para 4.g.(2)(c)1 into DAF document DAF-PLN-MG-08.
C-16	01/03	The NNSA/NSO O 452.2A established requirements for As-Built Certification that are not fully met.	NNSA/NSO O 452.2A	Insert requirements from NNSA/NSO O 452.2B para 4.g.(2)(c)2 into DAF documents – possibly DAF-PLN-SF-01 and/or DAF-PLN-MG-02.
C-17	01	The NNSA/NSO O 452.2A established requirements for an implementation plan that are not fully met.	NNSA/NSO O 452.2A	The requirements for implementation of DOE O 452.2A/B and NNSA/NSO O 452.2A/B will be addressed in the DAF DSA implementation plan currently in development.

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Attachment 2, Brief Description of Work Scope Identified in Attachment 4

Gap Analysis:

The gap analysis reviews the requirements of the DOE 452 Series Orders against the recently completed DAF DSA to ensure that the requirements by the DOE Series Orders 452 are addressed in the DAF DSA. Identify, if any, requirements that are either partially covered or not covered in the DAF DSA. This will provide a crosswalk of the interface matrix that compares the requirements in the DOE 452 Series Orders with the recent DAF DSA.

Review of 1997 Master Study:

The 1997 NES Master Study will be reviewed to determine how the 20 recommendations identified by the NESSG have been incorporated into the DAF documentation. If any of the recommendation is not fully incorporated, then define the action plan to resolve the issue.

Generic Equipment Validation:

All the facility specific equipment necessary for AS&T of nuclear explosive will be evaluated to make sure that they all are adequate for future use. Existing baseline documents will be reviewed and updated as appropriate.

Review Supportive NTS Master Studies:

The other existing NTS Master Studies (e.g., Transportation, Safeguard & Security, etc.) will be reviewed to determine other requirements for the DAF NES Master Study and no unnecessary work is duplicated.

Implementation of NES Related Plans & Procedure:

After reviewing the NES requirements and the action items recommended to resolve the NNSA/NSO appraisal issues, a list of NES Master Study specific plans and procedures that needs to be revised and/or developed was prepared. This list is shown in Attachment 3. To simplify and to have some flexibility, these plans and procedures were divided into three groups:

1. Group A Plans & Procedures
These are expected to require more significant revision.
2. Group B Plans and Procedures
These are expected to require moderate revision.
3. Group C Plans and Procedures
These are expected to require least revision.

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DSA/Supplemental Documents to Nuclear Explosive Safety Study Group:

DAF DSA will be the primary document, which will serve as replacement of a SIID. A preliminary crosswalk of the DSA and 1996 SIID has indicated there is some supplemental documentation that may need to be addressed further. These documents will be submitted to NESSG along with the DSA.

**Attachment 3, List of Plans and Procedures That Will Be Revised and/or Developed for
NES Master Study**

Group A

DAF-PLN-MG-08, Requirements for Readiness (Presently archived. Should be reviewed.)
DAF-PLN-MG-04, Maintenance Plan
DAF-PLN-MG-07, Conduct of Operation Plan
DAF-PLN-MG-10, Configuration Management
DAF-PLN-SF-01, Nuclear Explosive Safety Plan
DAF-PRC-AD-22, Master Equipment List
DAF-PRC-MN-07, Maintenance Operations Manual
DAF-PRC-MN-04, Work Control
DAF-PRC-AD-03, Document Control & Record Management
DAF-PRC-AD-01, Preparing, Revising DAF Plans & Procedures
DAF-PRC-AD-04, Un-reviewed Safety Question

Group B

DAF-PLN-SF-06, Industrial Safety
DAF-PLN-SF-07, Operational Safety Requirements
DAF-PRC-AD-06, Commitment and Action Tracking
DAF-PRC-TO-06, Marking & Controlling NELAs
DAF-PRC-TO-11, Control, Storage & Use of Electrical Equipment in NEOs.
DAF-PRC-FA-01, Pre-Operational Facility Reviews and Daily Checks
DAF-RPT-30, Integrated Safety Management
DAF-RPT-20, Conduct of Operations/Related Documents

Group C

DAF-PLN-MG-13, DAF Emergency Plan
DAF-PLN-MG-02, Technical Operations Plan
DAF-PLN-MG-03, Training & Qualification Plan
DAF-PLN-MG-05, Quality Management Plan

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DAF-PLN-SF-02, Criticality Safety Plan
DAF-PLN-SF-03, Radiation Protection
DAF-PLN-SF-04, High Explosives Safety
DAF-PLN-SF-05, Firearm Safety
DAF-PRC-AD-09, Occurrence Investigating and Reporting
DAF-PRC-AD-18, Master Document List Procedure
DAF-PRC-AD-21, DAF Approval Process
DAF-PRC-TO-04, Two-Person Control
DAF-PRC-MN-06, Vendor Manual Program

ATTACHMENT 4, Nuclear Explosive Safety Master Study Resource Loaded Schedule

Activity ID	Activity Description	Orig Dur	Rem Dur	%	Early Start	Early Finish	PROJ	SEC	Budgeted Cost	Period														
										Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
NES - Master Study																								
NES2001	HASB ROCK- NES Master Study Plan	377	377	10	28/01/03	28/02/04	NES	WFLU	0.00															
NES2002	HASB ROCK- NES Review & Approval	64	64	8	03/03/03	03/04/03	NES	WFLU	0.00															
NES2003	ESRT Review	32	32	0	03/03/03	03/03/03	NES	WFLU	0.00															
NES2004	NESA Approval	18	18	0	03/03/03	03/04/03	NES	WFLU	0.00															
NES2005	Design Cap Analysis Report	100	100	10	28/01/03	03/03/04	NES	WFLU	36,000.00															
NES2006	HASB ROCK- Prepare Supplemental Documents	227	227	0	03/03/03	03/03/04	NES	WFLU	0.00															
NES2007	Review Supplemental Documents of NES Master Study	62	62	0	03/03/03	03/03/04	NES	WFLU	62,500.00															
NES2008	Obtain Design Supplemental Documents	48	48	0	03/03/03	03/04/03	NES	WFLU	114,000.00															
NES2009	Review Supporting Master Studies	48	48	0	03/04/03	03/05/03	NES	WFLU	0.00															
NES2010	Prepare Program Support Documents	48	48	0	03/04/03	03/05/03	NES	WFLU	108,000.00															
NES2011	HASB ROCK- NES Supplemental Documents Review & Approval	247	247	0	03/03/03	03/03/04	NES	WFLU	0.00															
NES2012	Design Cap Analysis Review & Approval	32	32	0	03/03/03	03/04/03	NES	WFLU	124,000.00															
NES2013	Design Cap Analysis Review & Approval	76	76	0	03/04/03	03/05/03	NES	WFLU	108,000.00															
NES2014	Design Cap Analysis Review & Approval	73	73	0	03/05/03	03/06/03	NES	WFLU	84,000.00															
NES2015	NES Meeting Meetings as Required	102	102	0	03/03/03	03/03/04	NES	WFLU	0.00															
NES2016	Submit Supplemental Documents to NESA	91	91	0	03/04/03	03/05/03	NES	WFLU	105,000.00															
NES2017	NES Review of DCA	34	34	0	03/05/03	03/06/03	NES	WFLU	0.00															
NES2018	Prepare NESA Study	43	43	0	03/05/03	03/06/03	NES	WFLU	0.00															
NES2019	NESA Approval of Master Study	28	28	0	03/06/03	03/07/03	NES	WFLU	0.00															
NES2020	NESA-2 Program Management	288	288	0	03/06/03	03/06/04	NES	WFLU	86,400.00															
000001		370	370	2	28/01/03	28/02/04	NES	WFLU	787,000.00															

Start Date	03/01/03	Early Bar	NES2	Sheet 1 of 1	Date	Reviewed	Checked	Approved
Print Date	28/09/03	Program Bar						
Draw Date	03/03/03	Critical Activity						
Rev Date	03/03/03							

DAF Integrated Schedule
NES Project
16 Sep 03

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