



The Deputy Secretary of Energy
Washington, DC 20585

2005 MAY 11 AM 11:55
FACILITY SAFETY BOARD

May 10, 2005

The Honorable A. J. Eggenberger
Acting Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW
Washington, D.C. 20004-2901

Dear Dr. Eggenberger:

Thank you for the Defense Nuclear Facilities Safety Board's letter requesting a report on the use of conditions of approval in safety evaluation reports for nuclear facility safety bases submitted to meet 10 CFR Part 830, *Nuclear Safety Management*.

Enclosed is the report responding to that request. As stated in the report, we will revise DOE Standard (STD) 1104, Change Notice 1, *Review and Approval of Nuclear and Facility Safety Basis Documents (Documented Safety Analyses and Technical Safety Requirements)* to include guidance on:

1. What constitutes a basis for rejection of the safety bases versus conditions of approval,
2. Writing a condition of approval including the need to specify the closure date or condition and examples of appropriate conditions of approval, and
3. Tracking and verifying conditions of approval to closure.

In order to ensure that we have the benefit of recommendations from the breadth of the DOE complex and consistent with the procedures of the DOE Technical Standards Program (TSP), the changes to DOE STD-1104 will be processed through the electronic review and comment process (RevCom) for TSP to refine the guidance. We expect to be able to issue the proposed revisions to DOE STD-1104, by December 2005. In the interim, the Office of Environmental Management took a proactive measure to ensure more consistent application of conditions of approval at their facilities by sending additional guidance to the field on April 19, 2005.



If you have any questions, please contact Mr. John Spitaleri Shaw, Assistant Secretary for Environment, Safety and Health, on (202) 586-6151 or members of your staff may contact Mr. Richard Black on (301) 903-0078.

Sincerely,

A handwritten signature in black ink that reads "Clay Sell". The signature is written in a cursive style with a large initial "C" and a long, sweeping tail.

Clay Sell

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Enclosure**Report on Conditions of Approval****1. Background**

In 10 CFR Part 830, *Nuclear Safety Management*, the definition of Safety Evaluation Report (SER) states that the SER documents "...the basis for approval by DOE of the safety basis for the facility, including any conditions for approval." Furthermore, Appendix A to 10 CFR Part 830, Subpart B states, "A documented safety analysis must contain any conditions or changes required by DOE." Consequently, the conditions of approval documented in the SER for the safety basis become part of the safety basis for the facility.

The following sections provide DOE's responses to the Defense Nuclear Facilities Safety Board's (DNFSB's) letter of January 31, 2005 requesting specific information regarding conditions of approval. The individual responses from the National Nuclear Security Administration (NNSA) and Office of Environmental Management (EM) site offices to the first three requests are documented in the Table at the end of this report.

2. What Constitutes Appropriate Conditions of Approval Versus Basis for Rejection?

DOE did not develop generic criteria for what constitutes an acceptable condition of approval versus basis for rejection. In general, each site made that determination when performing safety evaluations.

However, the following criteria constitute a basis for rejection of approval of either the Documented Safety Analysis (DSA) (items 1 through 6) or the individual condition of approval (items 7 & 8).

1. There is insufficient information to document the conclusion that there is reasonable assurance of adequate protection of the worker, the public, and the environment.
2. The DSA does not meet the regulatory requirements of 10 CFR Part 830 and does not have an approved exemption in accordance with 10 CFR Part 820, Subpart E.
3. Significant issues were identified during the acceptance review that would prevent conducting a successful technical review.
4. The base information contained in the DSA is insufficient to describe the activities, processes, or systems to enable the hazard analyst to identify a complete set of hazards for the covered facility/activity/program.
5. The Hazard Analysis (HA) is incomplete (e.g., there are missing hazards; the weapon response is incomplete, unavailable, or misapplied).
6. The Accident Analysis (AA) is incomplete (e.g., a scenario does not bound the hazard from the HA, there are incorrect calculations supporting the AA conclusions).
7. The condition of approval would allow a condition where the facility/activity/program is outside of the approved safety basis.

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8. The condition of approval is inconsistent with law or other requirements.

As stated in DOE Standard (STD)-1104-96, *Review and Approval of Nuclear and Facility Safety Basis Documents (Documented Safety Analyses and Technical Safety Requirements)*, each condition of approval must have a condition (e.g., next DSA update) or date for closure. In addition, as indicated several places in DOE STD-1104-96, the documented basis for the acceptance of the safety basis in the SER must include the conditions for approval.

3. **What is the Mechanism in Place at Each Operations or Site Office for Tracking Open Conditions of Approval?**

Per the definition for the SER in 10 CFR 830.3, the SER must include any conditions of approval. The SER should also identify the completion date for the condition of approval. Each site has its own process for tracking conditions of approval. The provisions of 10 CFR 830.202(c) (2) require contractors to update the safety basis annually. Some sites track the conditions of approval through those SER updates. For example, the Sandia Site requires the conditions of approval to be completed by the next annual update of the DSA and includes the review of their completion in the review of the updated DSA. In addition, some sites use individual tracking systems, such as the Excel spreadsheet used at Livermore Site Office and the Y-12 Site Office database.

In some cases conditions of approval are used to move forward with a DSA that is not up to the standards that DOE would like to see, but represents a substantial improvement over the DSA currently in place. In such cases DOE generally requires conditions of approval actions to be implemented before the next annual update of the DSA.

4. **What is the Mechanism in Place at Each Operations or Site Office for Verifying the Adequacy of Actions Taken by the Contractor to Close Each Condition of Approval?**

Typically at our sites there are two types of conditions of approvals:

Pre-start - those that need to be complete before implementation of the safety basis.

Post-start - those that do not need to be completed before implementation of the safety basis.

Pre-start conditions of approval are tracked to completion before implementing the safety basis or starting the facility.

The post-start conditions of approval often are required to be completed before the next annual update. In those cases, such as the Sandia conditions of approval discussed in the previous section, closure is ensured as part of the review and approval of the updated DSA. Typically, DOE requires contractors to inform DOE when the actions for a condition of approval are completed along with justification to close the action so that

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DOE can initiate the verification and closure process. Depending upon the issue, verification for closure can be done through walkdowns or document reviews.

Depending upon the site and the issue, verification may be performed by:

- Facility representative
- Person qualified to do the original DSA review
- Safety Basis Review Team (SBRT)
- Closure official
- Cognizant reviewer
- Lead engineer
- Verification review process (IVR-Richland & PPPO)
- Responsible project manager (Nevada & LLNL)
- Safety Basis Lead Reviewer (Pantex)
- Subject Matter Experts (SMEs)
- Facility engineer

As indicated in the response from the Pantex Site Office, they have elected to postpone resolving the post-start conditions of approval in order to stabilize the safety basis documents to support implementation of the technical safety requirements (TSR) controls at the site. Control implementation will be completed this year and the balance of the conditions of approval will be closed in the subsequent annual update to all documented safety analyses.

For most conditions of approval DOE personnel are responsible for verifying and validating the adequacy of actions taken to close them. DOE must issue and maintain documentation for the basis of closure for each condition of approval in the SER.

5. Whether Revisions to the Salient DOE Directives and Standards, Particularly DOE Standard 1104-96, are Warranted to Provide More Specific Requirements and Guidance with Regard to Developing, Tracking, and Closing Conditions of Approval for Safety Basis Documents?

As stated previously, the provisions of 10 CFR Part 830 already require conditions of approval to be documented in the SERs. DOE Standard (STD) 1104-96 already contains some guidance on the use of conditions of approval in SERs. In particular, the standard states that the conditions are part of the safety basis (DSA or TSR) and that the expected schedule for completion should be specified.

While we believe that it is appropriate for the actions to track and close conditions of approval to be site specific (e.g., the site should be permitted to use current issue management systems for tracking rather than develop a new tracking system for this issue), we will modify DOE STD-1104-96 to provide additional guidance as follows:

1. The additional guidance will list the specific criteria listed in Section 2 of this report which constitute a basis for rejection of approval of either the condition of approval or the DSA.

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2. We will provide guidance on writing conditions of approval including that:
 - a. Conditions of approval should be written in such a manner that the conditions required to be met and/or actions required to be implemented are clearly articulated;
 - b. Durations, implementation periods, and/or completion dates should also be specified so that it is clear when compliance with the condition of approval is expected to occur; and
 - c. Examples of what constitutes good conditions of approval.
3. In addition, the guidance will state that each site should have a documented procedure for tracking each condition of approval to closure and verifying satisfactory closure of the condition of approval.
4. Finally, the guidance will state that the basis for the closure should be documented in the next update of the SER for the safety basis.

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Site/Office	Clarification from DOE on what constitutes appropriate conditions of approval versus basis for rejection.	The mechanism in place at each operations or site office for tracking open conditions of approval	The mechanism in place at each operations or site office for verifying the adequacy of actions taken by the contractor to close each condition of approval
<p>Y-12 NNSA</p>	<ol style="list-style-type: none"> 1. Conditions of Approval (COAs) are written against those issues which in the judgment of the Y-12 Site Office (YSO) will help to ensure the facility operates safely and within the bounds of the safety basis. However, they are not written against issues, which in the judgment of YSO, were not properly addressed in the safety basis such that failure to resolve the issues could result in the facility operating outside the established safety basis. This constitutes a basis for rejection of the safety basis documents. YSO may impose COAs to enhance margin of safety, from that stated in the Contractors analysis, typically in the form of some restriction in operations or an enhancement in a stated control. 2. COAs cannot cause actions to be taken that are in conflict with meeting requirements of the safety basis. 3. It should be noted that safety basis documents are reviewed by a team of YSO personnel and comments are resolved with the contractor prior to 	<p>Contractor Activities</p> <ol style="list-style-type: none"> 1. Contractor's review process for Safety Evaluation Reports (SERs) captures the conditions of approval into their issues management systems for development and tracking of needed actions. 2. Contractor takes appropriate actions to meet the requirements of the COA. 3. When the need for the COA has been eliminated, the contractor will provide the basis for this, and request the removal of the COA via a formal letter to YSO. <p>YSO Activities</p> <ol style="list-style-type: none"> 1. SERs (written by the Authorization Basis Team) containing COAs are coordinated within YSO (Programs and Operations organizations) before distributed to contractor. 2. YSO maintains a database of COAs. 3. Database amended as necessary to add new COAs and delineate appropriate contractor actions to implement COAs after verification of 	<ol style="list-style-type: none"> 1. Verification of contractor actions taken to justify elimination of COAs is the responsibility of the YSO Authorization Basis Team. Other YSO Staff (Facility Representatives, Subject Matter Experts (SMEs), Safety System Oversight personnel, etc.) may be involved to assist in verification as necessary. 2. Since the contractor will submit a letter to justify the elimination of the COA, the letter will be entered into the YSO Pegasus system, and an action for the Authorization Basis (AB) Team will be generated to verify the COA elimination. Thus, a process exists to ensure YSO follow-up to the contractor's actions. 3. Verification based on evaluating contractor actions taken against the intent of the COA. In practically all cases, communication between YSO and the contractor as the

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	<p>submission by the contractor of the final documents. Thus, any basis for rejection would have been resolved with the contractor prior to document submittal.</p>	<p>contractor actions.</p> <p>4. Procedure YSO-5.20 defines YSO process for approval of contractor safety basis documents and includes SER formatting specifics for COAs. Revision planned to better define the process for tracking and verifying COAs.</p> <p>5. COA database to be integrated with YSO Pegasus system. Pegasus is the YSO system utilized to track actions, assessments against contractor, self assessments, correspondence, etc. Additionally Pegasus utilized to identify assessment findings to contractor for corrective action.</p>	<p>contractor develops the implementation actions is necessary to ensure proper implementation and appropriate use of resources.</p> <p>4. Revision of procedure YSO-5.20 necessary to define the verification process.</p>
Livermore Site Office NNSA	<p>As stated in the Livermore Site Office (LSO) procedure for Review and Approval of Nuclear Safety Documents the acceptance or rejection of nuclear safety basis documents is determined by the approval authority. It is the job of the review Team Lead and review members to provide an informed recommendation based on the review of the safety basis document. Significant issues identified during the acceptance review that would prevent or impair the conduct of a technical review should</p>	<p>Nuclear Safety Team (NST) is currently maintaining the responsibility for compiling and maintaining the master list of COAs. It is currently being performed by an officially assigned member of NST. Through the use of an Excel spreadsheet, the COAs are recorded from the various SERs and letters maintained as reference material by NST. The information is recorded in the following categories: Facility, SER Date, ID#, COA description, Status, NNSA Lead,</p>	<p>Team Leads or review members will go through the task of verifying the closure of the COA either by: agreement to the Labs response to the COA, walkthroughs where verification of modification or changes are applicable, relevant documentation provided by the Lab that addresses the COA, and a final check may be performed to see if the changes were addressed or incorporated into a revised submittal or next annual update. Confirmation</p>

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	<p>result in the rejection of the nuclear safety document. Generally most COAs stem from review comment records (RCRs) that DOE is unable resolve at the time of the approval of the safety basis document. To prevent further delays, COAs are implemented and required to be completed by a specific timeframe or next annual update.</p> <p>Examples:</p> <ol style="list-style-type: none"> 1. DOE wants comprehensive and preservation of assumptions throughout the Hazard and Accident Analyses. 2. A request to perform further analyses on activities or structures, systems and components (SSCs) that DOE deems lacking or inadequate. 3. A request to perform a task determined by DOE considered important to bring the Lab in compliance with the rule. <p>Certain conditions of operations for limited/non-operation of SC/SS SSC or activities not covered in the safety basis. Inclusion of DSA/TSR page changes deemed important by DOE.</p>	<p>and Due Date. The document is continuously updated and is distributed when requested or appropriate.</p>	<p>of activities outside the responsibilities of a review member may sometimes be verified by the respective Facility Representative for each facility.</p>

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<p>Los Alamos National Laboratory NNSA</p>	<p>Uses DOE STD 1104 and 10 CFR Part 830. COAs are used at the Los Alamos Site Office (LASO) for documented safety analyses (DSAs) submitted by the Los Alamos National Laboratory (LANL) when it is deemed necessary, for overall risk reduction, to expedite approval of the DSA without requiring immediate revision. This approach was used successfully for several DSAs at LANL and has provided an overall risk reduction. In one such case the existing DSA was shown to be outdated, incomplete, and inaccurate. There were numerous hazards not identified, missing controls for safety, and safety controls identified at the wrong level. The previously approved DSA allowed operations that were identified as unsafe. To correct this problem NNSA required LANL to update the DSA to comply with 10 CFR 830 requirements and to correct previous deficiencies. After several iterations a DSA was submitted that still contained numerous deficiencies, yet, provided a much improved safety basis than the previously approved document when combined with COAs in the SER. The</p>	<p>At LASO the Facility Operations Office is the responsible DOE entity assigned with the task of verifying implementation of the controls identified in the Safety Basis, which explicitly includes tracking and verification of COAs imposed in the SER or other formal Safety Basis approval document. Per the approved SABB procedure this condition of approval is clearly stated on all Safety Basis approval documents whether they are SERs, Unreviewed Safety Questions (USQs), or other documentation. Because of this required COA and the strength of the requirements governing the DOE Facility Representative program it is clear that definitive guidance has been provided for the tracking and closure of COAs. While it is alleged that the discussion of the use of COAs provided in DOE Standard 1104-96 is weak, the fact remains that DOE Standard 1104-96 in combination with other DOE standards and orders (DOE Order 414.1B and the associated guide DOE G 414.1-1A, DOE Order 425.1C and DOE Standard 3006 implementation guide, etc.)</p>	<p>At LASO the Facility Operations Office is the responsible DOE entity assigned with the task of verifying implementation of the controls identified in the Safety Basis, which explicitly includes tracking and verification of COAs imposed in the SER or other formal Safety Basis approval document. Per the approved SABB procedure, and the LASO Management procedure the Office of Facility Operations is identified to the contractor as the responsible DOE organization with the authority to determine the level of readiness verification necessary for operations to start.</p>

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	<p>decision by the LASO Safety Authorization Basis Manger to approve the DSA with significant COAs and completely revised technical safety requirements (TSRs) was based on the implicit risk that DOE was accepting for operations under the previously approved and inadequate DSAs. This is but one example of how COAs can be used to enhance the overall nuclear safety at a facility.</p>	<p>provide both implicit and explicit guidance for tracking and verifying closure of the COAs. Additional specific guidance on the tracking and verification of closure of COAs appears to be redundant and inappropriate since there are ample guides, standards, and DOE requirements for DOE personnel to ensure that the Safety Basis requirements are implemented. In addition, 10 CFR 830 requires contractors to comply with COAs and to maintain records as necessary to substantiate compliance, which are then subject to assessment and audit by DOE.</p>	
<p>Sandia NNSA</p>	<p>This is determined primarily from DOE-STD-1104-96, CN1, and through discussions with safety basis review teams (SBRTs) and the approval authority. The basis for rejection is based on failure to meet the regulatory requirements in 10 CFR Part 830, Subpart B, which are assessed by the SBRT by validating the following:</p> <ol style="list-style-type: none"> 1. The conditions, safe boundaries, and hazard controls necessary to protect workers, the public, and the 	<p>At this time, SSO does not have a formal mechanism in place for tracking open COAs. However, for each of the SERs issued, SNL was directed to complete the COAs by the next annual update of the DSA/TSR and as part of the review of the annual update safety basis review teams verify adequacy of closure of any COAs previously identified.</p>	<p>Currently SSO utilizes the SBRT review of the safety basis annual update to verify the adequacy of closure of any COAs previously identified.</p>

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	<p>environment as documented in the DSA provide reasonable assurance of adequate protection from identified hazards.</p> <p>2. Performing work consistent with the SB provides reasonable assurance of adequate protection of workers, the public, and the environment.</p> <p>3. The rigor and detail of the DSA are appropriate for the complexity and hazards expected at the nuclear facility.</p> <p>4. The provisions of the methodology used to prepare the DSA have been adequately followed.</p> <p>5. The DSA criteria set forth in 10 CFR 830.204(b) have been met using the DOE-STD-1104 approval bases as the measure of acceptance.</p> <p>6. The TSR criteria set forth in 10 CFR 830.205(a) have been met using the DOE-STD-1104 approval bases as the measure of acceptance.</p> <p>Based on the "graded approach"</p>		

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	<p>outlined in 10 CFR 830 and the rigor within which the DSA and TSRs adequately addressed the above the SBRT may conclude that conditions of approval (COAs) are appropriate in lieu of requiring that the safety basis document(s) be revised (e.g., currently SNL is in the process of performing a site-wide air craft crash analysis rather than addressing the event facility-by-facility – this would generate a condition of approval in the individual facility safety basis to include a summary of the analysis once the analysis is completed or the next annual update whichever occurs first).</p> <p>When issuing the SER, the approval authority may deem it necessary to specify COAs (e.g. to impose a compensatory measure or alterations of commitments) that must be adhered to beyond those already documented in the DSA and TSRs.</p> <p>The Sandia Site Office (SSO) utilizes the following process:</p> <ol style="list-style-type: none"> 1. Clear communication of requirements and expectations, early planning meetings and phased reviews are some of the methods used at SSO to 		

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	<p>facilitate reviews and resolve significant issues.</p> <p>2. The SBRTs validate the above six items as part of the review process. Significant issues form the basis for rejecting a safety basis document, based on the judgment of the SBRT, if the volume and magnitude of significant issues precludes a defensible approval.</p> <p>3. In general, conditions/issues identified via review comments are to be incorporated into the DSA/TSRs as opposed to identifying numerous COAs.</p> <p>4. However, the approval authority can expedite approval by defining specific COAs in the SER without requiring immediate revision of the DSA and TSRs (DOE-STD-1104-96, page 15), e.g.: additional compensatory measures (e.g. to reduce MAR) and alterations of stated commitments (e.g., requiring development of system design descriptions)</p>		
Pantex NNSA	The base assumption is that the Safety/Hazard Analysis Reports are developed in accordance with the	At Pantex, there are three types of conditions of approval, 1) Pre-starts – those issues that must	At Pantex, we have elected to postpone resolving the Post-start COAs in order to stabilize the Safety

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	<p>requirements in 10 CFR 830 (i.e., using an acceptable methodology for preparing a documented safety analysis per Table 2 of the CFR). Given this, and the fact that the Pantex site wide safety analysis report (SAR) contains the complete DSA information for all chapters except two through five, the DSAs for Nuclear Materials, Bays/Cells, Transportation, Staging, Special Purpose Facilities, and Weapon programs at Pantex are evaluated for the content of Chapters two through five. During that review, the following list of items is cause for rejection of the submittal versus issuing a condition of approval.</p> <ol style="list-style-type: none"> 1. The base information contained in Chapter 2 is insufficient to describe the activities/processes or systems to enable the Hazard Analyst to capture a complete set of hazards for the covered facility/weapon program 2. The Hazard Analysis (HA) is incomplete (e.g., there are missed hazards, weapon response is incomplete, unavailable, or misapplied) 	<p>be resolved prior to implementation of controls or issuing the safety basis document,</p> <ol style="list-style-type: none"> 2) Post-starts – those issues that have no impact on safety and can be addressed at the next annual update to the DSA, and 3) Findings – issues identified in DSAs submitted for annual review which must be closed within 30 days of identification (not safety related, or they would be addressed via the USQ -> potential inadequacy of the safety analysis or PISA process). <p>These conditions of approval are delineated in the SER or SER addenda as either Pre-start, Post-starts, or Findings and, upon Pantex Site Office (PXSO) approval, are routed to the Contractor with a copy to PXSO Operations Division. Both the contractor and the PXSO Operations Division maintain separate databases listing all COA. The PXSO database tracks the following information for each condition of approval:</p> <ul style="list-style-type: none"> ➤ AB Change Number ➤ Safety Basis Document affected 	<p>Basis Documents to support implementation of the TSR controls at the site. Control implementation will be completed this year and the subsequent annual update to all documented safety analyses will involve closure of all the Post-start COAs in the COA tracking database. The process will be similar to that currently followed for closure of Pre-start COAs, which is as follows.</p> <p>The Contractor receives a SER with COAs and transfers each COA to a Pantex Form (i.e., PX-4850) and on that form proposes a resolution/disposition to the COA. The form is then sent via letter to PXSO for our concurrence. Any changes to the DSA are then drafted by the contractor and sent to PXSO for concurrence. Most of the time, these two steps are completed simultaneously via one letter since the contractor communicates with PXSO safety basis lead reviewers informally discussing the acceptance of proposed resolutions to COAs. Once PXSO has received</p>

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	<p>3. The Accident Analysis (AA) is incomplete (e.g., a scenario does not bound the hazard from the HA, incorrect calculations supporting the AA conclusions) in Chapter 3</p> <p>If the previous issues (i.e., issues that directly affect the determination of safety) do not exist, then subsequent review of the structures, systems, and components in Chapter 4 and the controls selected as technical safety requirements in Chapter 5 is completed and any issues that can be directed changes are documented in the SER as Pre-start Conditions of Approval. All other issues identified in Chapters 2-5 that are documented in the SER are classified as Post-Start Conditions of Approval.</p>	<ul style="list-style-type: none"> ➤ SER date ➤ Type of COA (i.e., Pre-start, Post-start, Finding) ➤ Summary of Issue delineated in COA ➤ Contractor Proposed Resolution/Disposition ➤ PXSO concurrence with Proposed Resolution/Disposition ➤ PXSO concurrence with Safety Basis Document Change pages ➤ Closure Status and date of closure (i.e., when safety basis document is issued with correct change pages) 	<p>the formal proposed resolution/disposition and safety basis document change pages and the Safety Basis Lead Reviewer has concurred, a letter is sent to the contractor indicating such. Then, when the safety basis document is issued with the correct change pages, the COA is considered closed.</p>
<p>Nevada NNSA</p>	<p>The National Nuclear Security Administration (NNSA or NA) Nevada Site Office (NSO) has developed directives that define what constitutes appropriate Conditions of Approval (COA) versus basis for rejection of Documented Safety Analyses (DSAs). NSO M 421.X, <i>Nuclear Facility Safety Management</i> and PAD-001 <i>Safety Basis Document Review and Approval</i></p>	<p>NSO is currently transitioning the responsibility of tracking open COAs from the line organizations (e.g., Assistant Manager for National Security) to the Assistant Manager for Safety Programs. A database will be developed and maintained to track these open items including responsible organizations for closure, duration of open items, as well any issues that</p>	<p>The NSO safety basis approval authority appoints a closure official to verify the adequacy of actions taken to "closeout" a COA. As appropriate, through the readiness review process, the implementation of a closed COA is verified.</p>

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	<p><i>Process, are two of these directives. Collectively, these directives provide the following guidance for NSO.</i></p> <p>The Safety Basis Review Team (SBRT) DSA review will consider the extent the DSA addresses the criteria set forth in 10 CFR 830, <i>Nuclear Safety Management</i>, Subpart B, Sections 801.202, <i>Safety basis</i> and 801.204, <i>Documented safety analysis</i>. Additionally, the DSA must adequately satisfy the methodology provisions used to prepare the DSA as discussed in DOE-STD-1104-96. The SBRT review process includes:</p> <ul style="list-style-type: none"> • Reviewing the technical adequacy of the safety analysis methodology and results using technical judgment, applicable technical support documentation, and walkdowns of the facility and operations; • Reviewing the adequacy of safety analysis by reviewing the assumptions used, ensuring all relevant hazards, accident scenarios and controls are identified, and that reasonable and 	<p>may arise to prevent closure in a reasonable timeframe.</p>	

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	<p>conservative likelihood of occurrence estimates have been applied to unmitigated accident scenarios; and</p> <ul style="list-style-type: none"> • Reviewing the proposed controls for the prevention or mitigation of potential accident scenarios and the designation of their importance to safety. <p>Less than adequate documentation for the areas of base information, hazard and accident analyses, safety SSCs, derivation of TSRs, and safety management program characteristics are significant issues that have the potential of bearing COAs. NSO defines significant issues to be those that impact the adequacy of TSR level controls, alternative non-approved safety analysis methodologies, or incomplete analysis of operations.</p> <p>In general, significant issues that are not adequately resolved during the review process require disposition by the SBRT. This may take the form of a COA to the SER as provided by 10 C.F.R. 830.202(c) (3) or as specified actions to be addressed in the next</p>		

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	<p>annual update of the DSA/TSR. The development of COAs is performed by the SBRT members during the review and documented in the SER.</p> <p>It is important to note that NSO conducts unique, short duration activities at the NTS (e.g., executing a Subcritical Experiment (SCE)). An SCE DSA life-span may be less than six weeks from Safety Evaluation Report (SER) approval to experiment execution. Therefore, in some instances, NSO may utilize COAs to address issues or additional commitments in the SER to expedite approval without requiring revision of the DSA and TSRs that is preferred in DSAs for permanent nuclear facilities typical at other NNSA sites.</p> <p>Significant issues are also utilized as the basis for rejecting a DSA. If, in the judgment of the SBRT, the volume or magnitude of significant issues prevents a defensible approval the DSA may be rejected. Clear communication of requirements and expectations, early planning meetings and phased reviews are some of the methods used at NSO</p>		

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	to facilitate reviews, resolve significant issues and prevent occurrence of rejected or large numbers of COAs in DSAs.		
Savannah River Site NNSA	There are currently no DSAs for the Tritium Facilities with COAs. A review of the past seven SERs (from 1999 to present) generated by Savannah River Site Office (SRSO) (or its predecessor organizations) indicated that none of these documents listed any COAs.	If there were COA, the contractor would be required to enter the corrective actions into the Site Tracking, Analysis, and Reporting (STAR) database, the Savannah River Site commitment action tracking system. The status of the corrective actions would be tracked until closure by the contractor. The completed record is maintained/archived using the STAR database. There is currently no formal SRSO procedure that requires tracking of COAs. SRSO is evaluating institutionalizing this requirement.	An SRSO staff member would be assigned the responsibility for the verification/validation of the completed corrective action via the local Executive Commitment Action Tracking (ECAT) system. Documentation of verification/validations would be maintained in ECAT for record purposes.
Carlsbad EM		COAs are tracked in the Waste Isolation Pilot Plant's Commitment Tracking System with status monitored by the Carlsbad Field Office (CBFO).	The Carlsbad Facility Office (CBFO) verifies that the requirements of the COAs have been resolved, thus closing the issue.
Fernald EM	Each SER lists as a COA the requirement to maintain 10 CFR 830 compliant DSAs, the maintenance of an Integrated Safety Management (ISM) compliant safety program, and resubmittal of DSAs when there is a significant change in the nuclear		DOE Facility Representatives (FRs) provide daily oversight and monitor facility conditions, and additional support is provided by DOE SMEs.

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	hazards.		
Idaho EM	There are no explicit policies in Idaho Operations Office's review and approval procedure that govern the development, tracking, and closing of COAs.	There are no explicit policies in Idaho Operations Office's review and approval procedure that govern the development, tracking, and closing of COAs.	In those cases where the COAs are significant, the directions (in the approval letter) to the contractor for demonstrating completion are specific. COAs limited to specific wording changes are verified by a Facility Engineer or FR when the documents are issued by the contractor.
Lawrence Livermore National Laboratory EM	COAs from a previous review which have not been addressed in an annual update are a basis for rejection of a laboratory submittal. If a COA has been addressed, but the proposed resolution is not satisfactory, the review team documents the status in the current SER and carries the COA forward.	The Livermore Site Office's (LSO's) Nuclear Safety Team maintains a master list of COAs, including those relating to Environmental Management (EM) facilities. This database is LSO's tracking system for completion of COAs.	An acceptance review is conducted upon receipt of all Lawrence Livermore National Laboratory's (LLNL's) DSAs and TSRs to ensure that COAs from the previous reviews have been addressed. Completion of COAs are addressed in the SER as well as in the DSA/TSR Review Checklist included in the SER package. The process for closing out of "old" COAs, i.e., COAs remaining from pre-10 CFR 830 compliant DSAs is to assign a COA to an FR, SME, or Project Manager (PM). The responsible individual walks down the COA and documents its status/closure in a FISHE report. The tracking of responsible

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			individuals and closure of these COAs is documented in the Nuclear Safety Team COA master list. Also, FRs do random walkdowns of DSA COAs that result in additional TSR level controls or changes. As part of the TSR Implementation Review, LSO is conducting a more rigorous review of COAs as well.
Miamisburg EM	There are no COAs in any current SERS.		
Nevada EM		The Nevada Site Office (NSO) EM has had no complex or lengthy COAs that require a tracking system to manage them. If there were a need to track a COA, Nevada Site Office (NSO) would utilize their oversight tracking system called CaWeb.	For any complex or lengthy COA, the responsible PM would submit the finding to respond to the COA as an action, and then Bechtel Nevada would assign this action to a responsible manager, implement necessary corrective actions and notify NSO when the implementation was complete. The NSO PM would verify implementation and, if verified, close the issue in CaWeb.
Oak Ridge EM		Bechtel Jacobs Company, LLC, (BJC) places the COA into their Management Concern tracking system. The DOE Project Coordinator has access to the BJC system and periodically prints out the listings of the COA status to maintain a hard copy which is filed in a notebook for DOE. Periodically DOE	Some COAs are of a nature that requires DOE approval (e.g., changes to Safety Basis documentation) prior to closure. For these, the Oak Ridge Operations Office-EM generally uses SER addendums to document DOE's approval of the change.

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		Safety Basis review staff verifies the completeness and accuracy of the file.	
Ohio EM		DOE-Ohio Operations Office uses their local DOE Action/Commitment Tracking (ACT) Log to track the COAs. The contractor uses an Open Items Tracking System (OITS) to track their COAs.	DOE actions to the contractor also generate a "J-2 Form". Actions on a J-2 Form must be approved by DOE prior to closing the item on the contractor's OITS. Prior to the contractor sending DOE the J-2 Form, the contractor must perform an implementation review to confirm COAs in the SER were implemented. Once DOE receives the J-2 Form, DOE reviews the contractor's verification and also performs a documented review of the implementation of the COAs in the SER. The item is then approved by DOE and is closed in both the OITS and the ACT Log.

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Office of River Protection EM	<p>There are two types of COAs, those associated with the Construction Authorization, and those associated with AB amendment requests (ABAR). The Construction Authorization COAs are detailed in the Authorization Agreement (AA), and the ABAR COAs are transmitted with the letter conditionally approving the ABAR. All COAs have a due date, changes to which are approved in correspondence when adequately justified. Failure to meet an AA COA due date could, hypothetically, lead to stoppage of work, but in practice has always resulted in an extension of the due date. Failure to meet an ABAR COA, means that the change is not being completed properly; DOE and the contractor work to eliminate such occurrences, which are unusual.</p>	<p>All the AB related conditions of approval are tracked by the Office of River Protection (ORP) on the single-purpose manual entry database. The contractor maintains a different system that includes COAs. When the contractor thinks they have satisfied a COA, they send a letter to ORP to that effect.</p> <p>The status of the COAs is reviewed periodically by ORP. The database is updated weekly. There are no written procedures describing this process.</p>	<p>ORP reviews the letter, associated references, and when satisfied that the condition has been met, issues a letter to the contractor closing the COA.</p>

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Portsmouth/Paducah Project Office EM		The COAs currently in use for the Portsmouth/Paducah Project Office (PPPO) are managed through the annual update process, the Implementation Verification Process (IVR), and the DOE oversight program.	Depending on the nature of the COA, the contractor is required to either complete an action prior to implementing the document or prior to the next annual update. COAs that are required to be completed prior to the implementation of a DSA are verified by the contractor through the IVR process. DOE PPPO staff members observe the contractor's IVR process and perform follow-up assessments as necessary to confirm that the COAs are satisfied. COAs that are required to be addressed within the next annual update are verified during the preparation of the DOE SER.
Richland EM	It is Richland's policy to require a date for completion of the COAs within the SER.	For COAs that must be completed prior to implementation, they are tracked by the facility in their tracking system. For COAs that are relevant over the long run but not necessary prior to implementation, they are completed by the next annual update (occasionally an intermediate date is given). These COAs are also tracked by the individual facility in a tracking system; however, they are completed at the	For COAs that must be completed prior to implementation, they are verified as completed during the Implementation Verification Review (IVR) Process which is a formal process similar to a RA but at a lower level of formality. These are overseen by the Richland Operations Office (RL), both the FR and the assigned Authorization Basis (AB) person. There may be other personnel, namely Safety

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		next annual update, submitted to RL as part of the update, and reviewed and approved by RL as part of the update. Because these are tracked by the facility and the AB group has an individual assigned to that facility, RL remains aware of the status of the COA.	System Oversight personnel, involved from RL to oversee the IVR process depending on the controls relied on and the COA. For COAs that are relevant over the long run but not necessary prior to implementation, they are completed by the next annual update (occasionally an intermediate date is given). These COAs are also tracked by the individual facility in a tracking system; however, they are completed at the next annual update, submitted to RL as part of the update, and reviewed and approved by RL as part of the update. Because these are tracked by the facility and the AB group has an individual assigned to that facility, RL remains aware of the status of the COA and verifies the adequacy of their completion.
Rocky Flats EM	At this point in the closure project, the Rocky Flats Project Office has no AB documents with outstanding COAs and feels that the tracking of COAs is not applicable to their site.	Not applicable.	Not applicable.
Savannah River EM	DOE-Savannah River Operations Office uses a cover letter when transmitting the	An Electronic Mail Control Tracking System tracks the letter-directed	The lead engineer associated with the facility/safety basis document

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	SER to the contractor. The letter directs the contractor to incorporate COAs into their safety basis document prior to actual distribution by Document Control and implementation.	action; the COAs are added to the project docket.	follows to completion.
Tank Farms EM	During the review and approval of the Tank Farm DSA, COAs reflecting unresolved reviewer comments were included in the July 31, 2003, approval. In a few cases, required changes identified after formal submittal have been imposed by requiring the implementation of specific page changes which are included in the SER as a COA. As a result, COAs are infrequent and fairly simple to execute in Tank Farm SERs.	Each COA was published in the Tank Farm Safety Basis Action List (database) and sent to the contractor for resolution. As each item was completed, a completion/verification form was filled out and initialed by the cognizant reviewer and placed in the file. The database was then updated to reflect the change in status of the item. By October 17, 2003, all COAs had been verified complete so none were called out in the October 17, 2003, SER. There were no formal procedures for this process. Since that time, we have typically reviewed and resolved comments on the contractor's proposed changes to the DSA and TSR before formal submittal and they are generally approved without COAs.	As each item was completed, a completion/verification form was filled out and initialed by the cognizant reviewer and placed in the file.