

REQUEST FOR BOARD ACTION BY A BOARD MEMBER

Requester: Daniel J. Santos September 7, 2017

Brief description of Requested Action: I request the Board:

1. Task the Office of the Technical Director (OTD) to perform in-house independent engineering calculations (independent from DOE) regarding the criticality safety event that occurred in the Los Alamos National Laboratory Plutonium Facility casting room on August 18, 2017. Specifically, the following questions are to be answered and accompanied by supporting calculations:
 - a. How close did the event come to actual criticality?
 - b. What were the barriers to prohibit actual criticality? Were these barriers challenged and how?
 - c. How much was the margin of safety reduced?
2. Task OTD to generate a technical report (can be a classified report, if necessary) including all assumptions, methodologies, calculations, references, and conclusions.
3. Task OTD to provide this technical report to the Board within 45 days of approval of this action.

Justification: To gain a better understanding of the technical aspects associated with this event and the potential impact associated with the criticality hazard.

Attachments (init) _N/A_

Summarize any time sensitive considerations:

Requestor signature signature on file September 7, 2017

Assistant Executive secretary signature on file September 7, 2017

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICPATING	COMMENT	DATE	Final
Sean Sullivan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
Bruce Hamilton	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
Jessie H. Roberson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
Daniel J. Santos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
Joyce L. Connery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
Disposition Summary							
Executive Secretary signature _____ Click here to enter a date.							

AFFIRMATION OF BOARD VOTING RECORD

SUBJECT: RFBA by Board Member Santos to Task OTD to Perform Calculations Regarding the Criticality Safety Event at LANL

Doc Control#2017-300-113

The Board, with Board Member(s) Sean Sullivan, Bruce Hamilton, Jessie H. Roberson, Daniel J. Santos *approving*, Board Member(s) Joyce L. Connery *disapproving*, Board Member(s) none *abstaining*, and Board Member(s) none *not participating*, have voted to approve the above document on September 15, 2017.

The votes were recorded as:

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIPATING*	COMMENT	DATE
Sean Sullivan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	09/14/17
Bruce Hamilton	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	09/14/17
Jessie H. Roberson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	09/15/17
Daniel J. Santos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	09/14/17
Joyce L. Connery	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	09/14/17

*Reason for Not Participating:

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Board Members.


Assistant Executive Secretary to the Board

Attachments:

1. Voting Summary
2. Board Member Vote Sheets

cc: Board Members
OGC
OGM Records Officer
OTD

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
NOTATIONAL VOTE RESPONSE SHEET


FROM: Sean Sullivan

SUBJECT: RFBA by Board Member Santos to Task OTD to Perform Calculations Regarding the Criticality Safety Event at LANL

Doc Control#2017-300-113

Approved *X* **Disapproved** **Abstain**
Recusal – Not Participating

COMMENTS: **Below** **Attached** **None** *X*



Sean Sullivan
 9/14/17

Date

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
NOTATIONAL VOTE RESPONSE SHEET

FROM: Bruce Hamilton

SUBJECT: RFBA by Board Member Santos to Task OTD to Perform Calculations Regarding the Criticality Safety Event at LANL

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Approved X Disapproved Abstain

Recusal – Not Participating

COMMENTS: Below Attached None X


Bruce Hamilton

14 SEPT 2017
Date

**DEFENSE NUCLEAR FACILITIES SAFETY BOARD
NOTATIONAL VOTE RESPONSE SHEET**


FROM: Jessie H. Roberson
SUBJECT: RFBA by Board Member Santos to Task OTD to perform Calculations Regarding the Criticality Safety Event at LANL

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Approved X Disapproved Abstain
Recusal – Not Participating

COMMENTS: Below X Attached None

I support the Board Member’s information request assuming some of the approaches proposed by the Technical Director for accomplishing the tasks is acceptable. The questions raised in the RFBA are certainly reasonable questions and it is reasonable to expect that the DNFSB could produce such analysis in a reasonable time. Based on the identified potential impacts on the proposed FY18 Work Plan, now would be the time to decide on the use of resources for this purpose so that it can be incorporated into the work plan during the Board’s review and approval process.



Jessie H. Roberson
Sept 15, 2017

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
NOTATIONAL VOTE RESPONSE SHEET

FROM: Daniel J. Santos

SUBJECT: RFBA by Board Member Santos to Task OTD to Perform Calculations Regarding the Criticality Safety Event at LANL

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Approved Disapproved _____ Abstain _____

Recusal – Not Participating _____

COMMENTS: Below Attached _____ None _____

I remain concerned about the state of criticality safety programs at various DOE Defense Nuclear Facilities including concerns regarding implementation of criticality controls and work practices when there is a criticality hazard present. It is important in my role as Board Member to be able to evaluate answers to the type of technical questions contained in this action. This information combined with other related information would help me independently assess whether or not there are issues that could threaten adequate protection of public health and safety that should be communicated to the Secretary of Energy. The event at LANL Plutonium Facility on August 18, 2017 that challenged criticality safety presents an opportunity for the Board to continue to demonstrate the value of its independent investigative and oversight functions to all stakeholders. Independent of this action, the Board should pursue a better understanding of the technical aspects associated with this event in a timely manner to help provide public confidence in the measures in place at LANL that provide adequate protection to the public health and safety.



Daniel J. Santos

9/14/17

Date

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
NOTATIONAL VOTE RESPONSE SHEET

FROM: Joyce L. Connery

SUBJECT: RFBA by Board Member Santos to Task OTD to Perform Calculations Regarding the Criticality Safety Event at LANL

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Approved _____ **Disapproved** X **Abstain** _____

Recusal – Not Participating _____

COMMENTS: **Below** X **Attached** _____ **None** _____

I agree that the event at Los Alamos is concerning and deserves careful review by the staff and the Board. The incident, however, was a failure of Conduct of Operations and not of criticality safety evaluations or procedures. The significant amount of time that the staff would spend replicating the CSE is not worth the opportunity cost of not focusing on the more significant issue of the ConOps failures and the delays of other reviews that are focused on higher priority issues.

While independent calculations are an important function of the Board staff, and should be used in our independent analysis when it makes sense to do, I do not believe this is such a case as (1) the inputs (exact placements) would be imprecise given the nature of the incident and (2) this isn't a calculation the contractor failed to make, or the Feds didn't review--this would replicate work that is already completed.

Joyce L. Connery

Joyce L. Connery

9/14/2017
Date

Member voted by e-mail dated September 14, 2017.