

memorandumAlbuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87544

DATE: AUG 28 2001
REPLY TO: SAST: LK006
ATTN OF: UNAUTHORIZED LANL OPERATION OF A CATEGORY II NUCLEAR FACILITY (TA-55, PF-185)
SUBJECT:

TO: Timothy George, NMT Division Director, LANL, MS-E500
Anthony R. Stanford, FWO Division Director, LANL, MS-K492
ATTN: Derek J. Gordon, NMT-13 Group Leader, LANL, MS-E578
Kent Sasser, FWO-OAB Office Director, LANL, MS-K559

This memorandum transmits notice to the Los Alamos National Laboratory (LANL) that the Los Alamos Area Office (LAAO) of the National Nuclear Security Administration (NNSA) will not approve the Unreviewed Safety Question (USQ) submitted to LAAO July 18, 2001, regarding the discrepant-as-found condition for PF-185 at TA-55.

Background: On July 18, 2001, LAAO received a USQ (Attachment 1) from NMT requesting Departmental approval of the USQ and Potential Inadequate Safety Analysis (PISA) for temporary storage/staging of transurania (TRU) and mixed waste in building PF-185 at TA-55 in support of PF-4 operations. The USQ requested an approval to store/stage up to 20 kilograms of ²³⁹Pu equivalent material in the form of waste packaged in DOT Type A 55-gallon drums and solid waste boxes (SWBs). The USQ stated that NMT-7 had begun storing/staging special nuclear material (SNM) in the form of waste in Building PF-185 in the 1998 time frame. From Attachment 1, it is clear the inventory in building PF-185 exceeded Category II threshold quantities of ²³⁹Pu as outlined in DOE-Standard-1027. The requesting memorandum stated that the discrepant-as-found condition was discovered during the ongoing TA-55 Final Safety Analysis Report (FSAR) upgrades project.

LANL personnel have stated verbally and in writing (see Attachment 2) to LAAO Safety Authorization Basis Team (SABT) staff that drum storage operations in building PF-185 were mentioned in the current approved 1996 FSAR. While reviewing the current approved 1996 FSAR for PF-4 and accompanying Safety Evaluation Report (SER), NNSA/LAAO found the following statements in the Executive Summary on Pages ES-2 and ES-3 respectively, "This FSAR does not cover the Isotopic Fuels Impact Test Facility, the Nuclear Materials Storage Facility (PF-41), the Drum Storage Building (PF-185), or on-site transportation activities after material enters or exits the basement of PF-4," and "Nuclear operations are only conducted in PF-4, which is the primary emphasis of the FSAR." Additionally, Section 3.1 of the current PF-4 FSAR, Page 3-2 states, "PF-185 was not operational at the time of the HA and is covered by separate safety analysis and transportation activities are covered by separate safety analysis."

LAEO does not recall ever seeing a safety analysis for the drum operations associated with building PF-185. Therefore, LAEO agrees that the discrepant-as-found condition discussed in the USQ constitutes an inadequate safety analysis because accident scenarios for the storage/staging of up to 20 kilograms of ^{239}Pu equivalent material outside of building PF-4 and in building PF-185 were not analyzed.

NNSA/LAEO Concerns:

In addition to the inadequate safety analysis discussed previously, LAEO has numerous concerns regarding the subject USQ:

1. The storage/staging of SNM material in building PF-185 (circa 1998) constituted the startup and operation of a new Category II nuclear facility as categorized by DOE-Standard-1027 without DOE authorization,
2. According to DOE-O-425.1B the initial startup of a new Category II nuclear facility can only be authorized by the Secretary of Energy or his designee following DOE and contractor Operational Readiness Reviews (ORRs) that to LAEO's knowledge have never occurred,
3. The USQ process is not designed to approve the startup of a new Category II nuclear facility,
4. As stated in #3, the internal LANL quality assurance review of the USQ/PISA did not detect the inappropriate use of the USQ process prior to its being submitted to LAEO for review and approval,
5. This attempt to embed a new Category II nuclear facility in an FSAR upgrade project marks the second of such attempts by LANL (reference Decontamination Volume Reduction System [DVRS] at TA-54),
6. LAEO also has a concern regarding the unrestricted staging of an increasing number of waste drums in PF-4 basement. From LAEO's perspective, the problem appears to be due to inefficient management of the waste management process for TA-55. LAEO would like to see LANL's long term plan for the prevention of waste container buildup at TA-55, and
7. Additional concerns about review adequacy include:

The lack of a criticality safety analysis having been performed on PF-185 and submitted with the USQ,

Refueling operations allowed within 20 feet of building PF-185,

Assumed percent of combustible material makeup in the accident analyses,

Values of the ARF/RF used in the accident analyses, and

Combustible loading in PF-185, and

Etc.

Conclusions:

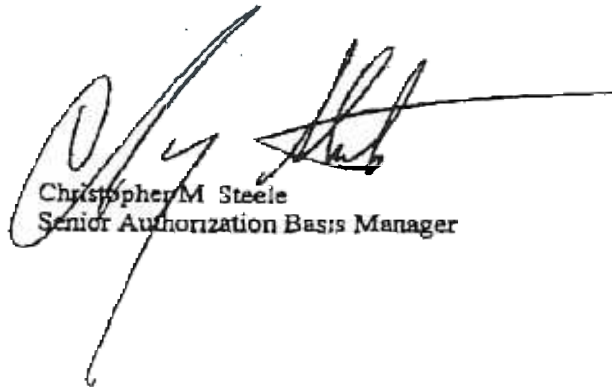
Because the storage/staging of SNM materials in Building PF-185 at TA-55 constitutes the startup and operation of a new Category II nuclear facility and because DOE-O-425.1B states that only the Secretary of Energy or his designee can startup a new Category II nuclear facility, LAEO does not possess the authority to approve the USQ submitted for review and approval. However, LAEO does have some questions it wants answered and items completed:

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1. What date did the initial inventory in PF-185 exceed the Category III thresholds of DOE-S-1027, and what date did the inventory initially exceed the Category II thresholds of 1027?
2. LAAO would like to see a USQD verifying that the facility is inside its current FSAR with regards to the movement of material from PF-185 into the PF-4 basement. Examples of topics which should be addressed in the USQD include: addressing the assumptions regarding MAR in the basement of PF-4 compared to the MAR now stored in the basement, accident analyses regarding storage of waste in the basement compared to the increased MAR now in the basement, and leak path factors regarding accidents in PF-4 basement.
3. In Attachment 1, the facility stated they had stored SNM and mixed waste in building PF-185. In a phone conversation with the NMT division director August 22, 2001, it was stated by the facility that no mixed waste had ever been stored in building PF-185, and that the information in the USQ was incorrect. Since the conversation, LAAO has been advised that mixed waste had been stored in building PF-185. LAAO is requesting that NMT division supply accurate information regarding storing mixed waste in building PF-185 since 1998, and if they did, state the quantities, types, dates, and containers used.

Recognizing the importance of the above requests, the Department would like the information transmitted to LAAO not later than September 7, 2001.

If you have any questions regarding this memorandum, you may contact Lee Knoell of my staff at 665-3161 or myself at 667-3418.



Christopher M Steele
Senior Authorization Basis Manager

Cc list on separate page.

Timothy George

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Cc w/attachments:

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D. Beck, DP-20, HQ
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X. Ascanio, DP-24, HQ/GTN
D. Dunsworth, DP-24, HQ/GTN
D. Chung, DP-45, HQ/GTN
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Cc w/o attachments:

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