

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 1998

TO: G. W. Cunningham, Technical Director

FROM: R. F. Warther, M.T. Sautman

SUBJ: RFETS Activity Report for Week Ending April 3, 1998

Personnel Changes. Bob Tiller's retired this week, and his last day was Thursday April 2. No replacement has been identified as of this time, although K-H is looking.

Radiological Sabotage. DOE-HQ and RFFO are clarifying the current policy regarding radiological sabotage assessments. The revised policy will focus on adversaries and consequences. DOE-NN will take the position that safeguards will be maintained for those scenarios where the workers and public could receive a "large" (not specifically defined) dose. In the event sufficient quantities of material could be vulnerable to a radiological sabotage or diversion, then field offices will be required to conduct a vulnerability assessment. The results of the vulnerability assessment will be used to establish a control set to interrupt scenarios. For scenarios where the workers and public could receive "small" doses (not specifically defined), access controls will be provided to mitigate the likelihood of an event. The Site Reps will continue to follow this issue and periodically report on progress.

Beryllium Issues. Be hazards and control of Be hazards has been a concern to the Site Reps based on the findings of the B779 Management Review. Our specific concerns include: (1) Be is potentially harmful in extremely small quantities, (2) no on-site means to measure Be to these low levels exists, and (3) workers and management did not seem to recognize the extremely small quantities of Be that could be harmful to a small percentage of the workers. With regard to the second point, samples must be sent off site (to NY or IL) and analyzed. Sample result turnaround times vary from four days to one month depending on the priority and backlog.

K-H has wrote a Be Program Plan to address these issues, and an implementation plan is expected soon. An expert from RFFO (Dr. Bob Bistline) gave a presentation to personnel in B779 regarding the health effects and safety issues associated with beryllium. This presentation was very well-received and heightened many of the Be concerns in B779. The final control set for B779 has not been reviewed by the Staff or RFFO in detail. This should be completed this coming week.

STLs. On April 1, DOE-NN-51 and an EM representative were on site to discuss the latest RFETS plan for terminating safeguards for the salts, ash and other residues destined for WIPP. The path forward as described in the plan is as follows: (1) Residues containing >10% by weight Pu will be blended with <10% weight Pu residues of like composition or virgin materials to reduce the plutonium concentrations to below 10%. This blending will reduce the safeguards and proliferation attractiveness of these residues. The blended residues will be placed in pipe components, packaged into 55 gal drums and placed in interim storage under appropriate safeguards at RFETS until they are shipped to WIPP. Once shipments to WIPP begin, limited quantities of the packaged residues will be removed from safeguards. Safeguards will terminate when the packaged residues are placed in TRUPACTs for off-site shipment. Those residues that

cannot be blended because of physical or chemical characteristics or because of operational difficulties will be shipped to SRS or LANL for Pu recovery. This plan is expected to be submitted to HQ next week in the form of an STL variance request. Senior personnel from NN, EM and other DOE offices will meet next week to discuss and agree to the path forward. A high level briefing to the Deputy Secretary of Secretary may follow.

Recommendation 94-1. The Site Reps met with RFFO to discuss the proposed modifications to the 94-1 Implementation Plan. Text has since been added to define the process for reclassifying high risk residues as low risk, to add flexibility to the combustibles' commitments to reflect current initiatives, and to ship combustibles as a high priority to WIPP. However, the milestone dates continue to slip with each draft revision and the milestone for shipping combustibles does not reflect their higher priority. Milestones for starting activities are needed for some activities since this has been effective in the past. Finally, milestones are needed to ensure that RFETS residues are processed at LANL and SRS in a timely fashion.

As expected, RFFO formally directed K-H this week to install and operate the packaging system of the Plutonium Stabilization and Packaging System in B371 along with sufficient manual furnaces to accomplish stabilization of the site's plutonium oxide.

Recommendation 95-2. As discussed in the March 20 weekly report, Building 771 has been shutdown for violating two limiting conditions for operations (LCO). The LCO violations occurred because the new surveillance procedures did not capture the requirements of the SER and BFO. These omissions were not detected during subsequent procedure reviews in the approval process or the BFO Implementation Management Review. Subsequent reviews of the other LCOs identified eight discrepancies between the Basis for Operations (BFO) and the Safety Evaluation Reports (SER).

RFFO intends to reject the contractor's BFO Restart Plan and require that K-H perform an independent validation of BFO implementation for several reasons. At this time, there are enough examples to question whether the BFO has been adequately implemented. The restart plan did not commit to verify administrative control requirement implementation, resolve discrepancies between the BFO and SERs, or establish a process for implementing future BFO revisions before restarting. RFFO will allow some non-intrusive operations to restart prior to completing the readiness review, but will hopefully reject some of the contractor's inappropriate proposals (e.g., transfer of high Pu concentration solution bottles). RFFO has not selected the appropriate level of readiness review to be performed, but will require that the review's plan of action be submitted to RFFO for approval.

As shown in nearly every readiness review performed recently, the Site Reps believe there is a site-wide problem with properly incorporating safety controls into procedures. These controls can be defined in the facility authorization basis, Activity Control Envelopes, criticality evaluations and other safety basis documentation.