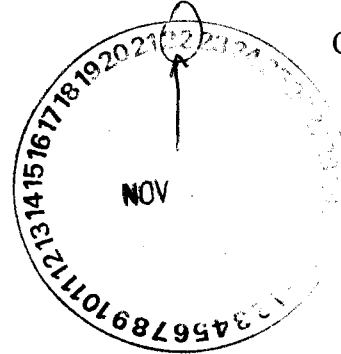


November 11, 2010

C-2010-0392



Mr. Brian Monson
Hazardous Waste Program Manager
Waste Management and Remediation Division
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255

Subject: 15-Day Written Incident Report for the Advanced Mixed Waste Treatment Project's Mixed Waste Incident in the Supercompactor Glovebox at the Advanced Mixed Waste Treatment Facility on October 28, 2010 – LSS-20-10

Dear Mr. Monson:

This letter provides the 15-day written report required by the Idaho Administrative Procedures Act (IDAPA) 58.01.05.008 [Title 40 of the Code of Federal Regulations (CFR) Part 264.56(j)] and Section G-8 of Attachment 7 of the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation Recovery Act (RCRA) Permit (EPA ID Number ID4890008952) for the response to a pressure event that occurred on October 28, 2010, in the Supercompactor Glovebox. This incident was originally reported by telephone on October 28, 2010, to Natalie Clough of the Idaho Department of Environmental Quality (IDEQ) at approximately 2:30 p.m.

- *Name, address, and telephone number of the Mixed Waste Management Unit (MWMU) owner or operator:*

Bechtel BWXT Idaho, LLC (facility operator)
Jeffrey D. Mousseau, P.E.
President and General Manager
850 Energy Drive, Suite 200
Idaho Falls, ID 83401-1502
(208) 557-6404

DOE-ID Operations Office (facility owner)
Rick Provencher, Manager
U.S. Department of Energy
1955 N. Fremont
Idaho Falls, ID 83401
(208) 526-5665



- *Name, address, and telephone number of the MWMU:*
Bechtel BWXT Idaho, LLC
Ted Griffith, Acting Plant Manager
Transuranic Storage Area
Scoville, ID 83415
(208) 557-6456
- *Date, time, and type of incident:*
On October 28, 2010, at approximately 1111 hours, the Supercompactor Glovebox in WMF-676 experienced alarms for low-inflow flow and low depression, followed by a trip of the light curtain that shut down compactor operation. This condition was created by a release of pressure from a drum undergoing supercompaction at the time.
- *Location and cause of the incident:*
The incident occurred in the Supercompactor Glovebox located in WMF-676. Cause has been determined as a sudden release of pressure from a pressurized fire extinguisher in the drum being compacted.
- *Name and quantity of material(s) involved:*
One confirmed and probably two other fire extinguishers (approximately 30-pound units) were in the silver drum being compressed. The waste stream in the silver drum was from Box 10010056, which was an IDC 480 box (miscellaneous metals) from Rocky Flats.
- *Extent of Injuries, if any:*
No personnel were injured.
- *Assessment of any actual or potential hazards to human health or the environment:*
The event was contained in the Supercompactor Glovebox, with an indication of minor potential release to the ventilation-controlled area/room which contains the glovebox. Four personnel were present in the room at the time the Continuous Air Monitors (CAMs) alarmed (approximately 1130 hours). All personnel were screened out of the room by Radiation Control Technicians, with no contamination found on them. The rooms were subsequently characterized with swipes and air samples. Over 300 swipes were performed, and three were determined to show contamination above 20 dpm (all below 100 dpm and none were repeatable). One swipe was from a known, controlled Contamination Area. Air samples were also pulled and analyzed. The maximum potential airborne exposure to any individual was determined as 13.2 DAC (Derived Air Concentration) hours. This potential exposure is below all health and regulatory thresholds (i.e., a potential exposure of 40 DAC hours requires bioassay monitoring for an actual exposure determination). The four individuals involved will be bioassayed. Upgraded characterization was also conducted with 11.7 electrovolt Photoionization Detectors for detection of potential chemical vapors, and none were detected. The room was determined cleared and released back to normal operations.

The glovebox was evaluated by engineering for integrity, and no abnormal conditions or breaches were discovered. All installed gloves were inspected, and two gloves were determined to have minor contamination and one glove had a pinhole (outside the knot). These gloves were replaced. This is not an unusual result for a quarterly glove inspection. The Supercompactor Glovebox also received a complete criticality/incompatible clean-out. No liquids were in the collection sump at the time of the clean-out.

Based on the data from the event, the upgraded characterization activities, and subsequent inspections of the systems, there are no determined hazards to human health or the environment.

- *Estimated quantity and disposition of material recovered from the incident:*
No additional waste was generated from this incident.
- *General Description of the Incident:*
At 1111 hours on Thursday, October 28, 2010, the Supercompactor Glovebox in WMF-676 experienced alarms for low-inflow flow and low depression, followed by a trip of the light curtain that shut down compactor operation. Operations personnel went to the supercompactor to determine the issue and reset the light curtain in accordance with established procedures. This was accomplished and compaction completed on the drum in the supercompactor when a CAM on the third level of the room alarmed, followed by a CAM on the first level. This was at 1130 hours. Operations were secured and Radiation Control technicians contacted to perform full-body screens on the four personnel to exit the room. These screens found no contamination on any of the personnel.

Upgraded characterization, with Radiation Control personnel and Safety personnel, was initiated to identify any contamination and hazard within the room. Plant Shift Manager and Emergency Action Manager, Mike Loftus, along with the Acting Plant Manager, Ted Griffith, initiated a review of the tapes of the glovebox and determined that there had been an unexpected pressure release from the drum during the compaction cycle that had resulted in the identified alarms and tripped light curtain. They issued a Step Back/Stop Work for the supercompactor and boxline operations. Notifications were made to the Nuclear Facility Manager, David Griggs, and the Department of Energy representative of the incident status. Emergency actions required were reviewed with the Emergency Manager, and no Emergency Action Limits were exceeded. The upgraded characterization found three swipes with detectable concentrations of contamination out of over 300 swipes performed. None of the swipes were repeatable (any contamination present was removed by the swipe). One swipe was from the third level at 33 dpm. A second swipe was from the first level at 90 dpm. The third swipe was from an area between the second and third level in a posted Contamination Area at 55 dpm. Air monitoring was also conducted for both organic vapors and radiological contamination and was negative. Initial readings of the filters from the CAMs indicated some Radon present. A long-term count of the filters ultimately showed a small amount of contamination present for a maximum potential

exposure to the four individuals of 13.2 DAC hours. This potential exposure is below all health and regulatory thresholds (i.e., a potential exposure of 40 DAC hours requires bioassay monitoring for an actual exposure determination).

Based on upgraded characterization, the room was returned to general access. At this time engineering performed a glovebox integrity inspection and determined no breach of integrity. A complete inspection of the inserted gloves was also conducted. This found two gloves with some minor contamination and one glove with a pinhole to the outside of the knot (all were replaced). This is a normal result for a quarterly glove inspection. In addition, a close inspection of the suspect compacted puck was completed; and no scorching, burns, or other indication of any deflagration was observed on the puck or in the glovebox.

A review of the boxline tapes was initiated for the drum involved in the incident. This review ultimately confirmed that one fire extinguisher and two other packages that probably contained fire extinguishers were placed in the drum being compacted.

Immediate actions as a result of this incident included a Stop Work for boxline operations and supercompactor operations until corrective actions could be determined. In addition, a complete review by Visual Examination Experts (VEE) of all the silver drums filled that shift by the Operators/Visual Exam (VE) technicians involved in loading the drum with the fire extinguishers was completed. This was a total of 18 silver drums. Of these 18 drums, eight had been compacted, including the drum involved in the incident, and ten remained uncompacted. This resulted in the identification of six compacted drums (including the one involved in the incident) that contained fire extinguishers. Of the ten uncompacted drums, one drum was identified with a potential for issues due to the placement of an unopened bag in the container. These drums were all placed on Nonconformance Reports for remediation and resolution prior to disposition.

As a result of the determination of inadequate/improper job performance by these two operators, a larger review was conducted of all uncompacted silver drums currently in the facility with available recordings. This involved 48 additional silver drums for which boxline recordings were reviewed by the VEEs. As a result of these reviews (which included the drums packaged by the majority of the other operators/VE technicians for the boxline), there were two more silver drums that were placed on Nonconformance Reports for further investigation of items (a bag and a pipe) that the VEEs were unable to determine the status from the limited view of the recording.

As a result of this larger review and two recent surveillances of this operation (one in July and one in October by Quality Assurance personnel) with no findings or issues, it was determined that there was not a programmatic issue but that clearly the two operators involved had not performed in accordance with training and procedural requirements. This has resulted in additional corrective actions that include a minor change in procedure to

Mr. Brian Monson
November 11, 2010
C-2010-0392
Page 5

further reinforce the requirement for intrusive investigation (e.g., opening all bags) and an additional briefing (two hours) to all the affected crews on the procedural requirements and review of this incident to reinforce why these requirements are in place. In addition, an Operator Proficiency Program for VE operators is being developed, and there is an emphasis on additional surveillance and oversight of the VE operators by the VEEs. The VE qualifications for the two operators involved have been removed, and an additional action is under consideration. Finally, Corrective Action Report (CAR) 56646 has been opened on this incident to track all short- and long-term corrective actions, and it will require a formal root-cause analysis.

Based on these corrective actions, the boxline and supercompactor operations were restarted on November 5, 2010, with additional Senior Supervisory oversight for at least the first 30 days of operation.

The Contingency Plan has been evaluated to be adequate for this response, and no updates or changes to the Contingency Plan are required.

The AMWTP appreciates your attention and efforts. Please contact either me at (208) 557-6320 or Mr. Neil Brill at (208) 557-7316 with any questions and comments.

Sincerely,



Leonard Sygitowicz
ESS&H Manager
Bechtel BWXT Idaho, LLC
Advanced Mixed Waste Treatment Project

NAB:vh

cc: Neil Brill, BBWI
Nicole Brooks, DOE-ID
Natalie Clough, IDEQ
Ted Griffith, BBWI
William Lattin, DOE-ID
Charles Ljungberg, DOE-ID
Jeffrey Mousseau, BBWI
AMWTP Records Management