



1803 Building
April 27, 2010

The Dow Chemical Company
Midland, Michigan 48674

U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

This report is a follow-up report to Event Report #45795, which was initiated by telephone on 3/26/10. This event was reported due to the inability to locate a sample of radioactive material during the annual physical inventory at Dow Chemical's Midland, Michigan site. The sample that was not located is:

- 5.862 mCi of C-14 in Dipropylene Glycol propyl ether (Dow tracking number RMR 863)

This incident was reported per 10 CFR 20.2201.

The current status of this event is as follows:

- The sample has not been located.
- Additional searches of the laboratories have not found the missing sample.
- Based on Dow inventory disposal guidelines, this sample should have been disposed of in 2009, during the annual physical inventory. There have been no studies conducted since the last physical inventory that would have utilized this material. A review of waste inventory records identified discrepancies in the waste inventory records that cannot confirm or refute whether this sample was disposed of via the normal disposal process.

Although no record could be located to indicate that this sample were disposed of in waste shipments, the most plausible explanation of the lost material is that the samples were disposed of through the normal waste disposal process during the 2009 annual inventory without the proper paperwork being completed to document this disposal.

The following corrective actions have been taken or planned to prevent recurrence of this type of event:

- Tests have been conducted to confirm that RFID tags can be detected from a sample inside a waste pack. A new policy has been implemented to require that all waste packs be scanned for RFID tags prior to disposal.
- The annual physical inventory will be conducted separately from the disposal of old radioactive samples in order to simplify both tasks and ensure that all proper paperwork is completed.
- A second level review will be conducted on the final paperwork associated with the annual disposal of old radionuclides to ensure that all the proper paperwork is completed.

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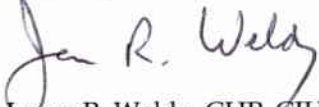
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- Radioactive waste jugs will use lids of a separate color and more visible radioactive labels to ensure that radioactive and non-radioactive waste jugs do not get mixed during the waste collection and disposal process.

There is no reason to believe that any worker or member of the public experienced an exposure due to this incident.

Please contact me if you have any questions.

Sincerely,



James R. Weldy, CHP, CIH
Radiation Safety Officer
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