WAYNE STATE UNIVERSITY

Office of Environmental Health & Safety
5425 Woodward, Suite 300
Detroit, Michigan 48202
(313) 577-1200, FAX (313) 993-4079
http://www.science.wayne.edu/~oehs

HEALTH SAFETY ENVIRONMENTAL

February 25, 2009

To:
James R Mullauer,
The Regional Administrator,
Materials Division,
USNRC, Region III,
2443 Warrenville Road, Suite 210,
Lisle, IL 60532-4352

From:
Maha Srinivasan MS
Health Physicist & Radiation Safety Officer
Office of Environmental Health and Safety
5425 Woodward Avenue
Detroit, MI 48202

Re: Written Incident Report (Report No: 44845)
License No: 21-00741-08
Docket #030-01995

Incident Summary:

On February 10, 2009 at approximately 7:00 p.m Wayne State University Building Facilities Director James Paterson notified the Director of Environmental Health and Safety Tom Perez, that the Radioactive Material Chromium -51 (received by the Principal Investigator Dr Lawrence Lum) was mistakenly picked up and disposed of as regular waste. Dr Lum from the Department of Microbiology and Immunology is an approved radioactive material user since March 2007 and the purpose of Cr-51 is to label target cells and measure lysis.

On February 6, 2009, Office of Environmental Health and Safety delivered two 1mCi lots of H-3 Thymidine, and **one 5.7 mCi lot of Cr-51 Liquid Saline (Sodium Chromate)** (purchased from the vendor MP Biomedicals) to Dr Lum's Laboratory located at 731 Hudson Webber. After delivery, the Lab Manager Elyse Paul placed the two H-3 containers in the refrigerator with a sticker saying "DO NOT USE" because the contamination survey on the inner vials of RAM was not done yet. Elyse also placed a "DO NOT USE" sticker on the Cr-51 Package. Housekeeper/Custodian Jan Conley entered the room to remove the trash and mistakenly removed the package which contained Cr-51 seeing the DO NOT USE sticker. According to Elyse Paul the Cr-51 package was left on the bench top. However according to Jan Conely there were two

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boxes on the floor, one filled with regular trash and the other with the DO NOT USE sticker , one on top of the other and she assumed it was also trash. Jan Conely then took both boxes down to the dumpster on the loading dock for disposal. The dumpster was removed for waste disposal before OEHS was informed about the incident. On the evening of February 10, 2009 Archana Thakur from Dr. Lum's lab performed a contamination survey on both H-3 inner vials, but could not locate the Cr-51 package. Archana asked Jan Conely if she remembered removing those two specific boxes from her lab. Jan said she remembers throwing both boxes into the trash. Archana contacted OEHS by leaving a message to Wendy Barrows, Health Physics Specialist and sent her an email. Archana also informed the Principal Investigator Dr. Lum, and he contacted James Paterson.

OEHS office investigated the whole incident and concluded that the Cr-51 was still in the shipping box and in the leaded pig during disposal. The waste processor Capital Waste removed the waste container from the loading dock on Monday, Feb 9 and it was taken to Riverview Land Preserve where they are immediately compacted and then deposited in the landfill and covered with more waste and then dirt was piled on. There was no physical contact with the package once it was thrown into the waste container. There was no evidence of contamination to the housekeeper Jan Conley, the hauler and inside the truck cab.

Conclusion:

The root cause of this incident was improper receipt and handling of incoming radioactive material by the Lab Personnel. The material should have been leak tested and secured within three hours of receipt. The second cause was housekeeper's lack of awareness regarding any package with a radioactive material label. The third cause is that the housekeeping staff had keys to the room possessing radioactive material. There was no contamination or reportable exposure to the housekeeping staff as the box was intact with lead shielding and disposed of in a short time.

Action Taken:

OEHS office tried to locate the waste container that was removed from Hudson Webber's loading dock and tracked it down to the Riverview landfill and the Director of Capital Waste was informed. Dose estimate was evaluated and found to be less than the public NRC dose limit at safe distance of 20 feet and confirmed that the landfill compact process is done by machinery and could not expose personnel. Radiation Awareness training for the housekeeping staff of Hudson Webber Building was done on February 23, 2009. Staff meeting was conducted by Dr Lum with his lab personal to review the procedures for radioactive package receipt and security. Dr. Lum submitted to our office a letter indicating the corrective actions. Radioactive Material purchased by Dr Lum was put on-hold until these changes were in place. The incident was reported to NRC within 24 hours (The undersigned spoke with Mr Bill Huffman on February 11, 2009 at 3.30 pm). The doors to the RAM storage rooms within Hudson Webber building have been

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re-keyed so housekeeping do not have access to these rooms.

Investigated by: Maha Srinivasan RSO, Wendy Barrows HP Specialist, Ryan Boyd HP Technician, Tom Perez OEHS Director

Further steps will be taken in all laboratories in order to avoid similar incidents.

Any further questions related to this incident can be forwarded to me at (313)-577-0019 or at msriniva@wayne.edu or Ms Wendy Barrows, Health Physics Specialist at (313)-577-9505 or ac5502@wayne.edu.

Sincerely,

Maha Srinivasan

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DETROIT, MI 48202

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MR. JAMES R. MULLAUER
REGIONAL ADMINISTRATOR
MATERIALS DIVISION
USNRC, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

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