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FROM: Tom Guzicki
TO: John Madera

NOTES:

U.S. Army 30 Day Report Pertaining Fire Involving Tritium Devices Anniston Army Depot

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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
UNITED STATES ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND
6901 East 11 Mile Road
Warren, MI 48397-5000
August 31, 2007

AMSTA-CS-CZ
US Army TACOM Life Cycle Management Command

Mr. John Madera
Regional Administrator
U.S. Nuclear Regulatory Commission
Division of Nuclear Safeguards
2443 Warrenville Road Suite 210
Lisle, Illinois 60532-4352

SUBJECT: US Army 30 Day Report Pertaining Fire Involving
Tritium Devices Anniston Army Depot

Dear Mr. Madera:

Reference: NRC License No. 12-00722-06
Incident Report No. 43551

This thirty-day report is in accordance with 10 CFR Part 30.5 (b) (4). The event was reported to the licensee, TACOM-RI on 7 August 2007 by the Anniston Army Depot (AAD) Radiation Safety Officer. The event occurred on 6 August 2007 at Anniston Army Depot, Anniston, AL at the low level radioactive waste storage facility, building 86. On 6 August 2007 at approximately 1930 hours an Anniston security patrol officer noticed smoke coming out of building 86, which is the designated low level radioactive waste storage facility at AAD. The low level radioactive waste building is a secured building. Emergency notification was sent to the AAD Radiation Safety Officer RSO and Anniston Depot Fire Dept. The AAD fire department responded immediately and the AAD RSO was on the scene within 30 minutes. Upon entering the building the fire department discovered a wooded pallet smoldering about 10 feet from the entrance door. Fire personnel fought the fire from a distance of ten feet. The fire was extinguished in approximately 30 minutes. A very limited amount of water was used to distinguish the fire. The wooden container contained several types of tritium fire control devices. Only tritium devices were involved. The Anniston RSO estimated there was 700 curies of tritium

AMSTA-CS-CZ

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involved in the fire. Tritium devices included in the fire were sealed sources in gaseous form. The initial radiation survey after the fire showed removable tritium contamination between 8,000 and 28,000 dpm. The survey was taken ten feet around the perimeter of the wooden container where there was standing water. Surveys were taken from the ceiling of the facility that showed tritium contamination less than 1,500 dpms. A second survey was conducted on the floor around the waste container the day after the incident after the water had evaporated showing removable contamination at about 2,000 dpms. Tritium bioassays were taken from nine personnel (fire fighters and the AAD RSO). No persons involved in extinguishing the fire or RSO had whole body exposure to tritium in excess of 1 mrem.

It was determined by the fire department that the cause of the fire was the result of decontamination media (oily paper towels absorbed with hydrogen peroxide) combusting inside the sealed in zip lock bags. The combination of oily paper towels and ample supply of hydrogen peroxide allowed for the combustion of the material. The decon material was placed in the same container with tritium fire control devices. The AAD RSO has coordinated with the licensee and the US Army Joint Munitions Command Radwaste Disposal Office to hire a contractor to repack and dispose of the burnt fire control devices and fire residue as low level radioactive waste. This work will be completed by the end of October 2007.

The Licensee RSO spoke with the NRC investigator from Region I who performed an onsite investigation of the incident on 7 Aug 2007. The discussion with the NRC inspector indicated that the incident was handled in the correct manner and no findings are expected from the NRC.

Corrective Action:

Hydrogen peroxide will longer be used as a decon solution in performing tritium decontamination. The Army will use other commercially available alkaline detergents that are just

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SUBJECT: US Army 30 Day Report Pertaining Fire Involving
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as effective as hydrogen peroxide to decontaminate.
Decontamination waste materials (rags, cloths) will no longer
be stored in the same waste container with radioactive
licensed commodities. The licensee will provide guidance to
applicable Army activities who may generate decon waste
materials on what decon solution to use to perform
decontamination and how to store the waste material.

The point of contact for this incident is Mr. Thomas G.
Gizicki, Senior Health Physicist, NRC License RSO, TACOM-RI
Safety Office, (309) 782-2965.

Sincerely,


George G. Jarvis
TACOM LCMC Safety Director

CF:

Director of Army Safety, Mr. Mukulski, 223 23d St., Suite 980
Arlington, VA 22202

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