

MARYLAND DEPARTMENT OF THE ENVIRONMENT

MEMORANDUM

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Read File
NPI Lic. MD-31-025-01

To Accident/Incident File ✓ From Raymond Manley *RM* Date 6/21/89
Subject CENTER FOR RADIOLOGICAL HEALTH RESPONSE TO FIRE AT NEUTRON PRODUCTS, INC.

On May 31, 1989 at approximately 1530 hours the Center for Radiological Health (CRH) received notification of an emergency and potential radioactive material (RAM) release at Neutron Products, Inc. (NPI) (MD 31-025-01) located at 22301 Mt. Ephraim Road, Dickerson, Maryland. Information supplied by Mr. Marvin Turkanis, Vice President, NPI, to Mr. Larry Ward, Deputy Assistant Secretary for Toxic's Environmental Science and Health (MDE) indicated that there was a fire in progress within the RAM use and storage area of the Limited Access Area (LAA). A company employed electrician had been severely burned conducting electrical work and had been flown to the hospital via medivac helicopter. Montgomery County firefighters were present at the scene and were addressing the fire.

At 1740 hours that same day this writer and Mr. Steve Stackhouse responded to the scene at the Dickerson facility. Mr. Wayne Costley, Radiation Safety Officer of the hot cell license supplied the following information. At approximately 1440 hours (b)(6) a company electrician, had been working on an electrical panel within the six by fifteen foot laundry area of the LAA in order to create service to a new heat pump. For causes unknown, but probably a defective breaker, (b)(6) hands and face had been severely burned. Additionally, flames from the panel had ignited a storage cabinet of towels and clothing across the room. Since all electrical paneling is located within the LAA, Mr. Dale Repp, LAA engineer, immediately cut all remaining facility power. The source within the MD-31-025-04 licensed irradiator, which had been in routine operation, went to the shielded position via gravity. NPI worker Mr. Joseph Weeden used a facility fire extinguisher to put out the cabinet fire. Fire Department medical and firefighting assistance were called at 1445 hours and prior to their arrival (b)(6) was surveyed with a Gm pancake and no contamination was found. Mr. (b)(6) was transported by ambulance to a helicopter outside of the perimeter fence where he was then flown to the burn unit at Washington Hospital Center. The hospital was notified of a potential contaminated arrival by Mr. Costley so that Nuclear Medicine personnel would be present to conduct surveys. The ambulance was subsequently surveyed by NPI with no contamination noted.

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Entry was made into the LAA courtyard by seven Upper Montgomery County firefighters under the supervision of Lieutenant John Repass using SCBA units because of the high level of smoke. Several firefighters including Lt. Repass, had made previous walk through visits at NPI because of license required emergency training. The fire was found to be extinguished and the smoke was ventilated by opening upstairs windows. A Staplex air sampler was used by NPI to take concentration samples of the area with results indicating no activity with a Gm pancake detector (gamma well down due to fire). Fire Marshall Mr. Michael Owens also entered the LAA and stated that the fire had been accidental and definitely extinguished.

Following exit from the LAA the following contamination controls were implemented:

1. NPI smears of firefighting equipment (results attached)
2. Initial NPI frisking with 15 cm² Gm pancakes.
3. Use of the NPI HECM Helguson gas proportional beta monitor (results attached)
4. Following the use of the HECM this writer conducted a contamination survey on fire fighting personnel using an Eberline E-520, S/N 3148, with a HP 260 pancake detector (approx. 10% efficiency Co-60, results attached).

Entry was made into the LAA with Mr. Costley to examine the fire damage and it was noted that the electrical panel was burnt beyond any future use, the cabinet of clothes that had ignited had been removed from the area, and physical damage was minimal. A NPI report of the incident was requested from Mr. Costley (attached).

CRH Survey of Fire Department Personnel
Eberline E-520 S/N 3148 HP 260 Detector
Approx. 10% Efficiency for Co-60

Background - 100 cpm

(b)(6)

- a. Left wrist palm side - 900 ncpm
- b. Wrist cleaned and resurveyed - Bkg.

(b)(6)

- a. Bottom right sock - 4000 ncpm
- b. Sock removed and survey of foot - Bkg.

(b)(6)

Bkg.

Bkg.

Bkg.

(b)(6)

- a. Sole right shoe - 900 ncpm
- b. Cleaned and resurveyed - Bkg.

(b)(6)