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Event Initial Report

20/20 ND Technology Inc.

Industrial radiography vehicle fire - No damage to exposure device

Commission Meeting

March 15, 2018

Rapport initial d'événement

20/20 ND Technology Inc.

Incendie d'un véhicule de gammagraphie industrielle – aucun dommage à l'appareil d'exposition

Réunion de la Commission

Le 15 mars 2018

Canada

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EVENT INITIAL REPORT (EIR)

E-DOCS-# 5472424

EIR: Industrial Radiography Vehicle Fire – No damage to radiation device	
Prepared by: Directorate of Nuclear Substance Regulation, Nuclear Substances and Radiation Devices Licensing Division	
Licensee: 20/20 ND Technology Inc.	**Location:** Grand Prairie, Alberta
Date Event was Discovered: March 1, 2018	**Have Regulatory Reporting Requirements been met?** Yes ☒ No ☐ **Proactive Disclosure:** Licensee: Yes ☒ No ☐ CNSC: Yes ☒ No ☐

Overview

Reporting Criteria: An occurrence or incident that receives substantial media coverage or that has a high public visibility.

Description: A licensee vehicle containing an exposure device caught fire and most of the rear of the vehicle was damaged as a result. The exposure device, a QSA Global Model 880 Delta, which is also a certified transport package under the *Packaging and Transport of Nuclear Substances Regulations, 2015*, was located in a separate locked compartment at the rear of the vehicle and was not damaged as a result of this fire. There were no injuries and no release of nuclear substances as a result.

At the time of the fire, the exposure device was containing a category 2 sealed source with an activity of 1.56 TBq of iridium-192. At one meter, this source, if unshielded, would deliver approximately176 mSv/hr.

A CNSC inspector visited the licensee in the morning of March 2 and examined the exposure device, confirming that there was no damage to the internal shielding of the exposure device.

Cause(s): Vehicle fire, cause unconfirmed at this time but suspected by the local fire department to have originated in a heater being used to keep the photographic chemicals from freezing overnight.

Impact of the Event

On People:

How many workers have been (or may be) affected? None

How many members of the public have been (or may be) affected by the event? None

How were they affected?

N/A

On the Environment: None.

Other Implications: No other implications

Licensee Actions

Taken or in Progress: The licensee recovered the exposure device after the local fire department had extinguished the vehicle fire. The exposure device was monitored and no release was detected. The licensee returned the exposure device to their licensed location and cleaned up the debris associated from the fire. There was no evidence of damage to the exposure device.

Planned: The licensee will have the exposure device tested to ensure that it is functioning properly, as required by s.21 of the *Nuclear Substances and Radiation Devices Regulations*. In addition a leak test on the sealed source will be conducted.

The licensee will submit a written report to the CNSC by March 22, 2018, as required by s. 29 of the *General Nuclear Safety and Control Regulations*.

CNSC Actions

Taken or in Progress: The CNSC continues to evaluate the information received from the licensee, to ensure that the exposure device was not damaged as a result of this incident.

The exposure device is certified by the CNSC as a Type B package for the purposes of transport. The IAEA regulations requires Type B packages to be subject to tests which simulate the accidental conditions of transport, including a thermal (fire) test (1 hour @ 800 ºC).

A CNSC inspector was coincidentally in the area and visited the licensee's location after the recovery of the radiation device and visually confirmed that there was no damage to the exposure device. The CNSC inspector took radiation measurements of the exposure device and reported that the surface dose rate was measured to be 0.3 mSv/hr, which is typical for this sealed source activity. The markings and labels on the exposure device were seen to be intact.

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The CNSC inspector also visited the private property where the vehicle fire occurred and viewed the damaged vehicle itself. The darkroom component of the truck sustained most of the damage, with little damage to the actual vehicle itself. The inspector noted that some of the control cables used by the operator were damaged in the fire but other equipment, such as the lead tunnel were not damaged. The steel enclosure for the exposure device appeared, to the inspector, to have provided thermal protection. The CNSC posted information (tweet) on this event immediately, as a result of some local media interest. The CNSC posted more substantial information, including a photograph of the undamaged device, on the day following the event. **Planned:** CNSC staff will evaluate the information provided by the licensee as a result of the written report. **Additional reporting to the Commission Members anticipated:** ☐ Yes ☒ No *If Yes, provide method of reporting:* N/A

Name and Title	Signature
Colin Moses **Directorate of Nuclear Substance Regulation**	MAR 0 9 2018 Director General — Date


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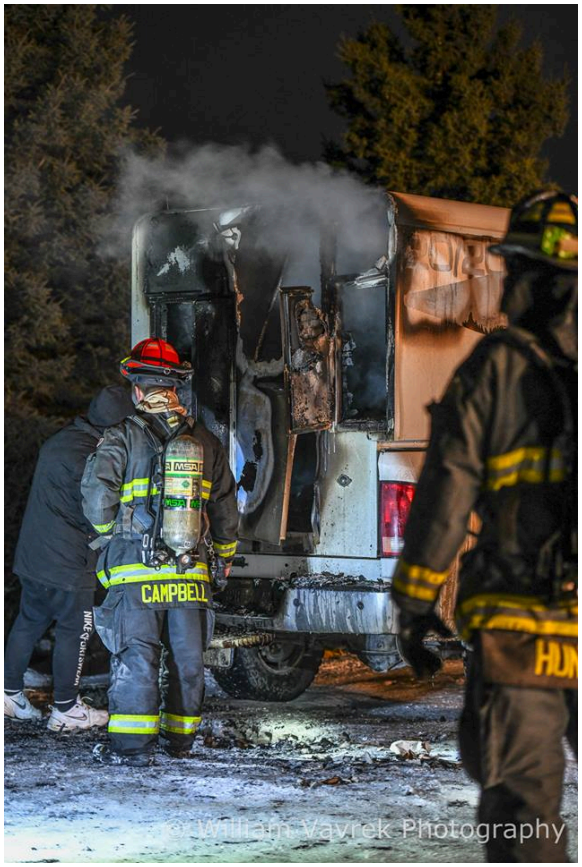
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