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Event Initial Report

Rapport initial d'événement

University of British Columbia

Exposure above regulatory limit of a
non-Nuclear Energy Worker

Université de la Colombie- Britannique

Dépassement de la limite autorisée
pour un non-travailleur du secteur
nucléaire

Commission Meeting

Réunion de la Commission

January 21, 2021

Le 21 janvier 2021

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EVENT INITIAL REPORT (EIR)

E-DOCS-# E-Doc- 6435926 t

EIR: Overexposure to a non-Nuclear Energy Worker (1.3 mSv)	
Prepared by: Directorate of Nuclear Substance Regulation	
Licensee: University of British Columbia 04974-2-22.7	Location: Vancouver, BC
Date Event was Discovered: 2020-11-09	Have Regulatory Reporting Requirements been met? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Proactive Disclosure: Licensee: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> CNSC: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Overview	
Reporting Criteria: Exposure of a person in excess of the applicable radiation dose limits prescribed by the <i>Radiation Protection Regulations</i> .	
<p>Description:</p> <p>On November 9, 2020, the Radiation Safety Officer (RSO) from the University of British Columbia (UBC) notified the CNSC that an action level was exceeded. One of their laboratory workers who is not categorized as a Nuclear Energy Worker (NEW) received a dose of 0.93 mSv for the first quarter of 2020.</p> <p>As per paragraph 6(2)(a) of the <i>Radiation Protection Regulations</i>, the licensee conducted an investigation to establish the cause for reaching the action level. On November 30, 2020, the RSO from UBC submitted a final report for this event.</p> <p>The final report stated that the worker in question did not receive any dose for the second quarter as no lab work was done due to the pandemic. In the third quarter (July to September, 2020), the worker received a dose of 0.37 mSv for a total dose of 1.3 mSv which exceeds the annual limit of 1 mSv for a non-NEW.</p> <p>Cause(s): Due to the pandemic situation, there was a delay in the submission of the dosimeters to the licensed dosimetry service provider, which caused the delay to the licensee becoming aware of the action level exceedance which resulted in the overexposure to a non-NEW. The investigation also revealed that the laboratory worker did not follow the established safe work practices that led to a higher than normal personal dose to the worker.</p>	
Impact of the Event	
On People:	
How many workers have been (or may be) affected? <u>1</u>	
How many members of the public have been (or may be) affected by the event? <u>0</u>	
How were they affected?	
The individual involved received a dose slightly above the annual prescribed limit for persons not identified as a Nuclear Energy Worker (non-NEW worker). At this level of exposure, there is no risk of a radiation-related health effect.	
On the Environment: none	
Other Implications: none	
Licensee Actions	
Taken or in Progress:	
<p>The licensee conducted an investigation of this event. The RSO confirmed that the laboratory worker in question was no longer involved in any work with nuclear substances. A meeting was held with the laboratory worker to review the work performed, the procedures used and the number of times the work was performed during the time period. The discussion determined that in March 2020, the worker performed two (2) labelling reactions using 74 MBq of Indium-111 following standard laboratory procedures except for during the pH adjustment step where the worker did not work behind the shielding as per protocol for about 10 minutes. During the dosimetry period of July to September 2020, the worker performed four (4) more identical procedures again not following the protocol for the pH adjustment step and not working behind shielding.</p> <p>The investigation concluded that the laboratory worker did not follow the established safe work practices during all of the labelling reaction work which contributed to a higher than normal personal dose. However, based on the account of events established through the investigation and the associated dose reconstruction, the full dose recorded on the dosimeter for the first quarter (Q1) of 2020 could not be accounted for. The investigation and dose reconstruction also revealed that the Q3</p>	

