

# INES Event Rating Form (ERF)

Version 1

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**Sender's Name:** Todd Smith  
**Sender's Organization:** Nuclear Regulatory Commission (NRC) (United States of America)

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**Event Title:** Worker Exceeded Annual Dose Limit  
**Event Date:** 2023-12-11  
**Location / Facility:** Romeoville, Illinois/ SOFIE  
**Event Country:** United States of America  
**Event Type:** Other

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**INES Rating:** 2 - Incident (Final)  
**Rating Date:** 2024-08-21

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**Impact on people and the environment**

Release beyond authorized limits?	No
Overexposure of a member of the public?	No
Overexposure of a worker?	Yes

**Impact on the radiological barriers and controls at facilities**

Contamination spread within the facility?	No
Damage to radiological barriers (incl. fuel damage) within the facility?	No

**Degradation of Defence In-Depth?** No

**Other information**

Person injured physically or casualty?	No
Is there a continuing problem?	No

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**Event Description**

On December 11, 2023, a pharmaceutical technician noted a pressure issue with a synthesis cell, which contained 11.29 GBq (305 mCi) of Fluorine-18. The pharmaceutical technician opened the synthesis cell and Fluorine-18 splashed onto their upper chest, neck, and underarm. The pharmaceutical technician could feel wetness after the incident, and decontamination efforts were initiated within 3 to 5 minutes. The skin exposure calculations, based on radiological survey results, indicated that the pharmaceutical technician received an estimated shallow dose equivalent of 0.902 Sv (90.2 rem). The dose to the employee exceeded the U.S. regulatory limit for the annual dose to the skin of the extremities of 0.5 Sv (50 rem). NRC Event Number (EN) 56923

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**Rating Justification**

A Level 2 is warranted for exposure of a worker in excess of statutory annual dose limits. See Section 2.3.1 INES User's Manual 2008 Edition (IAEA-INES-2009) [http://www-pub.iaea.org/MTCD/publications/PDF/INES-2009\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/INES-2009_web.pdf)

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**Press Release Attached:** No  
**Technical Document Attached:** No  
**Further Information on Web:**

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**Contact Person:** Todd Smith  
**Affiliation:** Nuclear Regulatory Commission (NRC)  
**Email:** todd.smith@nrc.gov  
**Telephone:** +13018165100  
**Organization on Web:** <http://www.nrc.gov>

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