

# WYOMING INDUSTRIAL RADIOGRAPHY INCIDENT

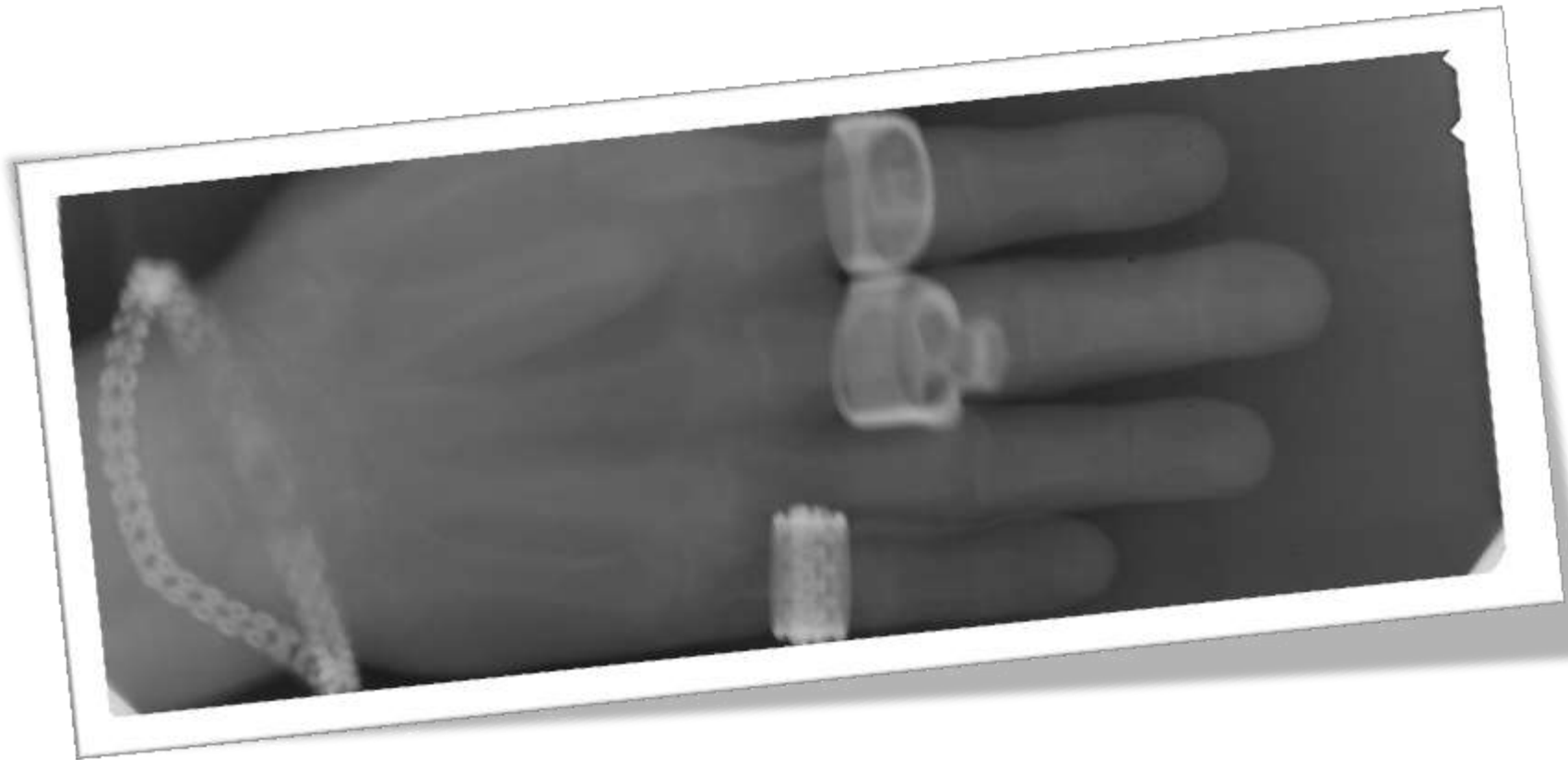
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MATERIALS INSPECTION BRANCH  
NRC REGION III

August 22, 2019

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# Sinclair Job Site





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# Radiography Setup



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# Exposure Estimate

## Licensee Assumptions

Cranked out in front of work bench

Hand 8 inches from source, whole body 12 inches from source

**Uncollimated!**

## Licensee Calculations

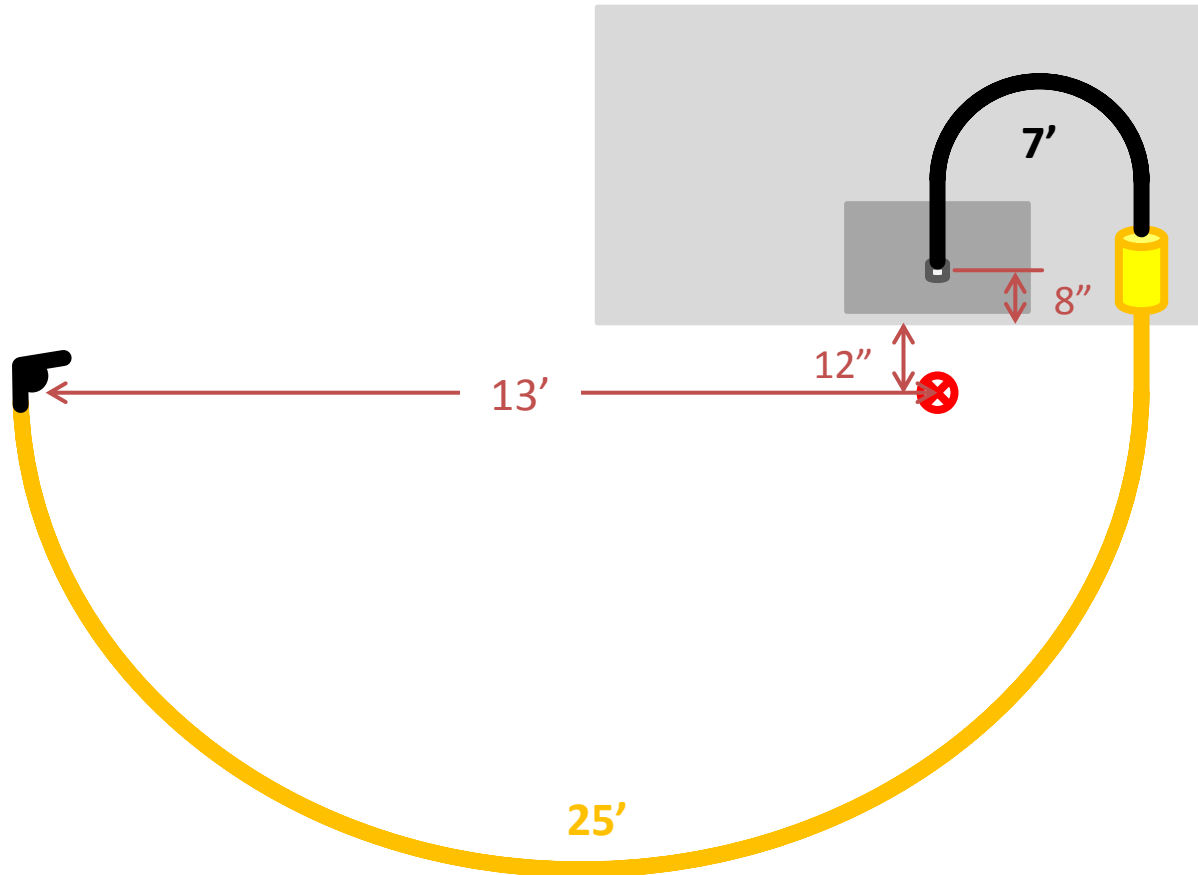
**3732 mrem whole-body**

**8398 rem extremity**

**Accumulated Dose through August: 1164 mrem**

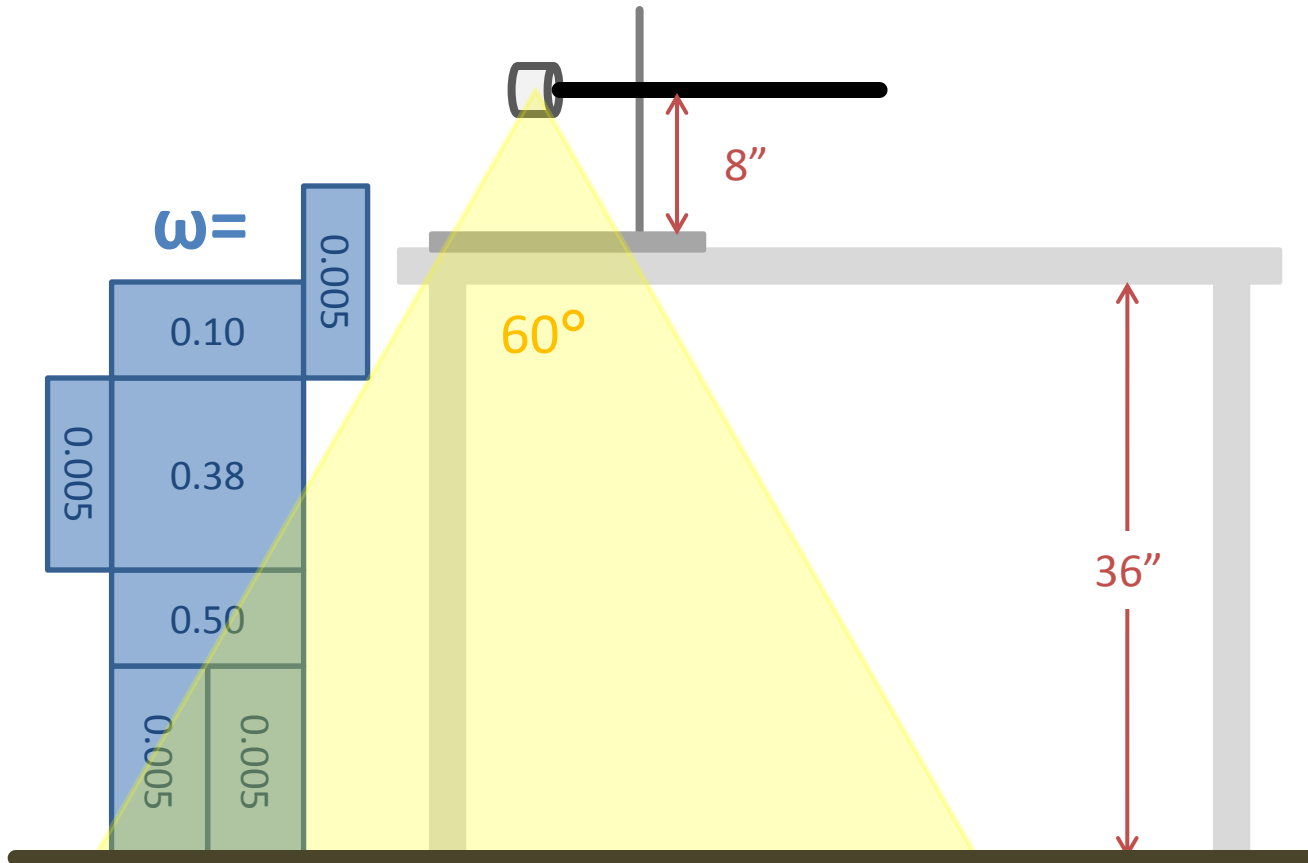
**Estimated Total Dose: 4896 mrem**

# NRC Exposure Estimate





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Phase	Time <i>seconds</i>	Whole-Body <i>millirem</i>	Extremity <i>millirem</i>
1. Crank Out	5	0.14	0.14
2. Walk Over	2	0.91	0.91
3. First Radiograph	8	18.13	2036.01
4. Swap Film	5	11.91	11.21
5. Second Radiograph	15	33.98	3817.51
6. Walk Back	2	0.91	0.91
7. Crank In	5	0.14	0.14
<b>TOTAL</b>	<b>42</b>	<b>66</b>	<b>5867</b>

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# Enforcement Considerations

## 10 CFR 30.34(c)

Each person licensed by the Commission pursuant to the regulations in this part and parts 31 through 36 and 39 shall confine his possession and use of the byproduct material to the locations and **purposes authorized in the license.**



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# ... Or is it?

## 10 CFR 34.41(a)

Whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer **must be accompanied by at least one other qualified radiographer** or an individual who has at a minimum met the requirements of § 34.43(c).

## 10 CFR 34.3

***Radiographic operations*** means all activities associated with the presence of radioactive sources in a radiographic exposure device during use of the device or transport (except when being transported by a common or contract transport), to include surveys to confirm the adequacy of boundaries, setting up equipment and any activity inside restricted area boundaries.

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# Enforcement Outcomes

## Individual

One-year ban from performing radiography in NRC jurisdiction

**THEN** a two-year ban from supervising radiography in NRC jurisdiction

## Licensee

Severity Level III Violation

No civil penalty

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# Food for Thought

What can we do as a National Materials Program to better communicate among each other, align on safety significant matters, and convey a unified message to the regulated community?



# Because this happened too...



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