



charles lowe

## Chapter 11

# Why Do Radiography Accidents Happen?

## Chapter 11: Why Do Radiography Accidents Happen?



### **Preface**

- Industry history and accidents.
- Accidents continue to happen.
- Why?

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**Chapter 11: Why Do Radiography Accidents Happen?**



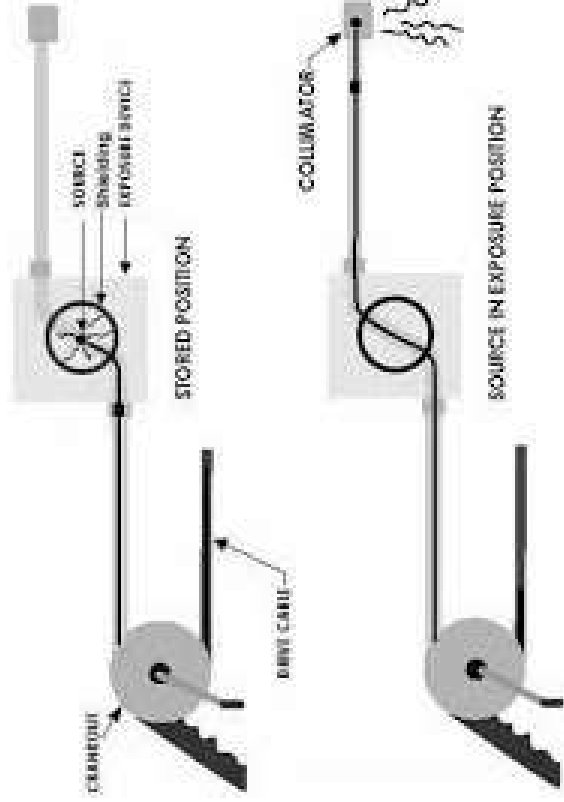
**Preface**

- Industry history and accidents.
- Accidents continue to happen.
- Why?

## Chapter 11: Why Do Radiography Accidents Happen?

### How Radiography Accidents Happen

- A Source is Left Exposed
- Source near entrance of camera.
- Forgetting to retract the source.
- Source jamming in source guide tube.



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### How Radiography Accidents Happen

- The Omitted Survey.
- Use your survey meter and use it properly.
- Survey meter is primary device.



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### How Radiography Accidents Happen

- Not Locking the Camera.
- When not in use, lock the camera to prevent an accidental extraction of the source.

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### But Why?

- Equipment failure?
- Poor training?
- Poor O&E procedures?
- Human Error?

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### But Why?

- Rushed to finish work?
- Stress?

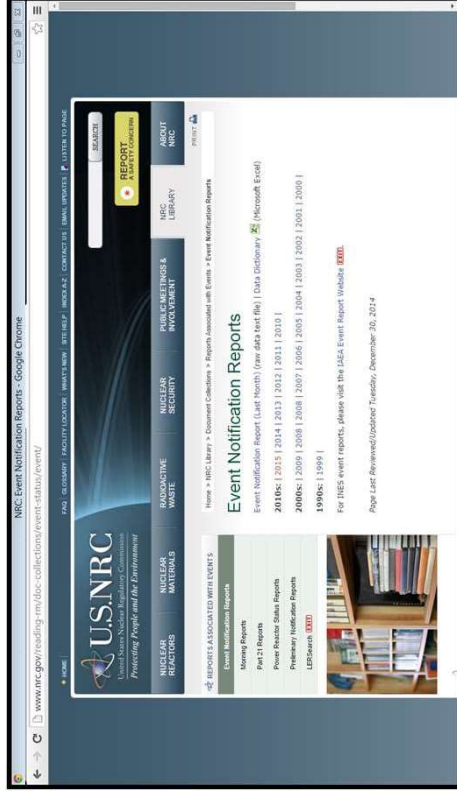
## Chapter 11: Why Do Radiography Accidents Happen?



- ### A Case History
- Recalling case histories discussed thus far.

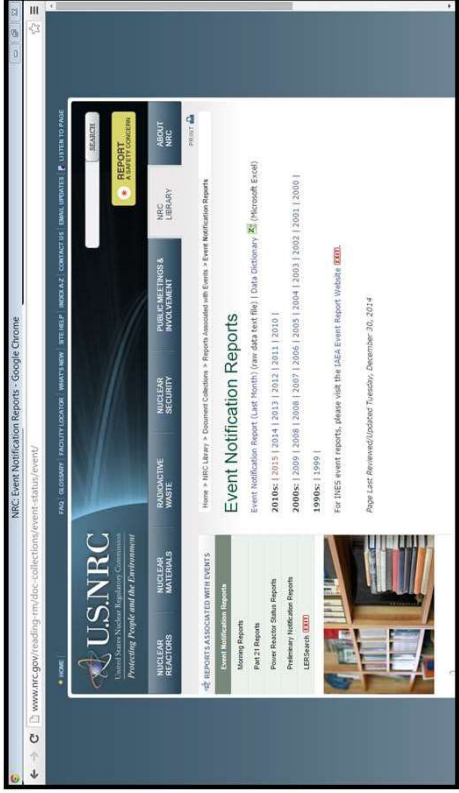
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- **A Case History**  
Take 5 minutes to read the case history on page 101. The case history involves the Radiographer having 32 years experience.



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- **A Case History**
- **RSO left an unqualified person in charge of a source.**
- **Negligence?**



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**A Case History**

- Lessons learned?
- Watch yourself, be careful!
- Review the section “Some Other Examples”

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Absolute Wellness & Rehab of Texas, PA d/b/a Highland Park Wellness & Rehab	X-Ray	R28315	Dallas, Texas	25 TAC §289.204 – Delinquent payment Certificate of Registration	Conditions	12/16/2014
Abubasher M. Faizullah, MD, PA	X-Ray	R14932	Midland, Texas	25 TAC §289.204 – Delinquent payment Certificate of Registration	Revocation	01/28/2015
Access Dental of Saginaw	X-Ray	R31575	Saginaw, Texas	25 TAC §289.204 – Delinquent payment Certificate of Registration	Conditions	12/16/2014
Active Health Center, PC d/b/a Community Chiropractic Center	X-Ray	R22846	Round Rock, Texas	25 TAC §289.227 – Equipment Performance Evaluations	Administrative Penalty \$500.00	06/24/2015
Acuren Inspection, Inc.	Ram	L01774	La Porte, Texas	25 TAC §289.255 – Sealed source and lockout surveys 25 TAC §289.202 – Occupational	Administrative Penalty \$5,750.00	11/12/2014

Revised July 1, 2015

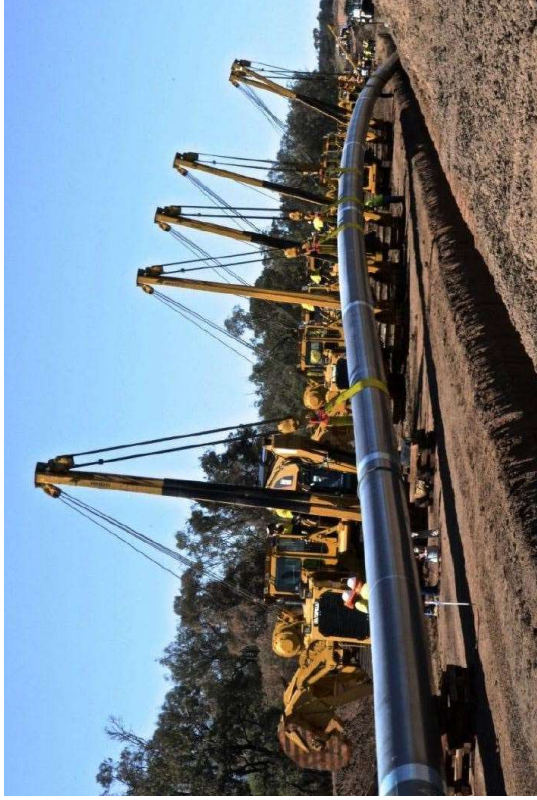
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### The Human Factor

- Rush to finish job.
- Bring stress from home to the job.
- Poor training.

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### The Human Factor

- Not following your training.
- Money on your mind, not safety.
- Depending on others.

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### The Human Factor

- Depending on experience.
- Depending on instinct.
- Depending on equipment to function.

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### The Human Factor

- Distractions.
- Depending on speed.
- Under the influence of alcohol or drugs.

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**The Human Factor**

- Angry at co-worker(s).
- Angry at company.
- Worry.
- Poor health.

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### Final Words

- Ionizing radiation can not be detected by human senses.
- You can get hurt...badly.
- You can be out of work.
- Suffer short and long term health effects.

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### Final Words

- Follow your training.
- Use your detection devices.
- Have a safe, prosperous career!

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### **Making Sense of It All**

- How radiography accidents happen.
- But why?
- Case histories.
- Human factor.

Quiz 1 of 8:

Your survey meter is not working properly. Do you continue working with the malfunctioned survey meter?

**No. You retrieve the spare survey meter, if have a spare. Inform your supervisor to replace the malfunctioned survey meter.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 2 of 8

Quiz 2 of 8:

You're making an exposure. Your phone rings and you answer it. What may happen?

**This is a distraction. A unauthorized person may accidently enter the radiation area. You may also forget to retract the source before approaching the camera.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 3 of 8

Quiz 3 of 8:

The source is jammed inside the source guide tube.  
Are you to attempt to un-jam the source?

**Absolutely not. The RSO or designated person is only allowed to perform an emergency source retrieval.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 4 of 8

Quiz 4 of 8:

After your approach to the camera after an exposure, why must I survey the camera in a 360 degrees fashion and the source guide tube?

**This procedure ensures the source is safely retracted to its shielded position. The only way of knowing the source is shielded is survey the camera and guide tube in this fashion.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 5 of 8

Quiz 5 of 8:

Before working your shift, you find out your paycheck was delayed. How might this event effect your safety?  
**You have bills to pay. You need fun money for tonight. Stress builds up. Your mind is so focused on the paycheck you risk skipping procedural, safety steps when working with RAM . Refocus and work safely.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 6 of 8

Quiz 6 of 8:

You're on a jobsite and witness another Assistant Radiographer not using a survey meter. What are your thoughts?

**You should be thinking: violation, telling him/her to use survey meter, do not copy the Assistant Radiographer, the risks involved with not using a survey meter.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 7 of 8

Quiz 7 of 8:

The source is stuck in the guide tube but at the end of the guide tube where the collimator is located. Is it safe to grab the collimator...the source is shielded, right?

**No. Do not grab the collimator. You may experience a radiation burn, overexposure, etc.**

Chapter 11: Why Do Radiography Accidents Happen?: Quiz 8 of 8

Quiz 8 of 8:

What are your thoughts on a Radiographer having years of experience. Should you depend on the Radiographer for your safety?

**No. Depend on your training and equipment. Watch yourself and be careful. Even the most experienced Radiographer can become complacent. We are all human.**



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**End of Chapter 11**

**Why Do Radiography Accidents Happen?**