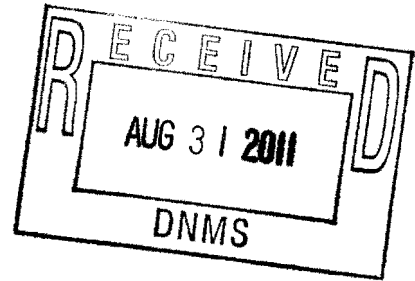




**SOLVAY
CHEMICALS**

INTEROX, FLUORIDES & MINERALS

Date 09/01/2011



United States Nuclear Regulatory Commission
Region IV
Licensing Group
Texas Health Resources Tower
612 E. Lamar Blvd, Suite 400
Arlington, TX 76011-4125

Dear Sir/Madam:

Following is an amendment request for Solvay Chemicals, Inc. Green River, WY, **NRC License number 49-19597-02**. We wish to make the following modifications to the license:

1. 16A: We wish to remove the names of Louis R. Gebbs, Joseph Kristek, and Roger Jones from our materials license. These employees are no longer employed by Solvay Chemicals, Inc.
2. 16A: We wish to add the names of Nate Campos, Leon Cordova, Brandt Gregory, Robert John, and Kyle Koritnik to our material license that have received training outlined in NUREG 1556, including Appendix N. Records of this training are enclosed.

If you have questions please feel free to contact me at 307-872-6616, or our radiation consultant, Sue Engelhardt, President of Engelhardt & Associates, Inc., at 608-213-0113. We thank you in advance for your expeditious attention to this request.

Sincerely,

Curtis Nelson
Radiation Safety Officer

10:AGENDA
SOLVAY CHEMICAL COMPANY
ADVANCED GAUGE USER TRAINING
NON-ROUTINE MAINTENANCE GROUP

DAY ONE

8:15-8:30 layout	Introduction, objectives and explanation of handouts and course
8:30-8:45	Uses of radiation; brief slide overview of all uses
8:45-9:20	Regulatory agencies and why so many agencies regulate radiation
9:20-9:30	Break
9:30-10:15	Radiation principles: Physics and units used in radiation
10:15-10:45 of a gauge	Gauge types and what we have at Solvay (chapter 18); selection
10:45-10:55	Break
10:55-11:45	Gauge types continued (specific level detection from Berthold) Radiation detection and hands on with meters
11:45-12:15	Lunch
12:15-12:45	Exposures to radiation (non-work related)
12:45-1:15	Radiation Dosimetry (allowable limits, ALARA, MOP) Badge wear
1:15-1:45	Radiation biology
1:45-2:00	Break
2:00-2:45	Radiation Protection (warning lights, LOTTO, signs, postings, inventory, calculations, emergency response, NUREG 1556 Vol 4

2:45-3:15

Radiation safety programs , selection of a gauge, licenses, Guides, program for Solvay, maintenance (routine and Non-routine), device registrations

Day Two

8:15-9:00

Cont. of radiation safety programs and procedures, leak tests, i
Inventory, shutter checks, condition of gauge, sign verification,
Indicator lamps if present, security

9:00-9:30

Regulatory inspections and emergency response; responsibilities for
radiation

9:30-10:00

Security and political environment now

10:00-11:00

Exam on the classroom portion of the class

11:00-11:30

Introduction of Robin Tregle and non-routine maintenance

11:30-12:15

Lunch

12:15-1:15

Review of non-routine procedures and who can carry out the
procedures

1:15-3:15

r

Hands on with non-routine maintenance tasks (each person will be
required to demonstrate competency with this requirement

Certificate of Completion

Advanced Gauge User Training

Solvay Chemicals, Inc. – Green River, WY

May 3-4, 2011

This is to certify that

Nate Campos

has been successfully trained and tested on the following topics:

Regulatory Aspects and Regulations; Radiation Physics and Terminology; Gauging Principles/SSDR; Radiation Protection; Dosimetry, Doses and Dose Limits; Biology; Radiation Measurements; Radiation Safety Programs-Operating and Emergency Procedures; Lock-out/Tag-out; Leak testing; Specific Use of Gauges and maintenance; Solvay specific Radiation Protection Program, Operating and Emergency Procedures; Berthold Density Gauge maintenance and operation (including non routine maintenance – only installation, relocation and movement to storage)

RadCon LLC

Nuclear Gauge Consultation



Robin J. Tregle, President



ENGELHARDT & ASSOCIATES, INC.

Susan J. Engelhardt, MS
President, CEO

part of safety course

RADIATION SAFETY TEST

NAME Nathan Carter

DATE: 5-4-11

True or False

- | | | | |
|----|----------------------------------|----------------------------------|--|
| a. | <input checked="" type="radio"/> | F | Radiation is energy |
| b. | <input type="radio"/> | <input checked="" type="radio"/> | Radiation cannot hurt you |
| c. | <input checked="" type="radio"/> | F | $^{137}\text{Cs}/^{60}\text{Co}$ the sources in our Berthold gauges |
| d. | <input checked="" type="radio"/> | F | $^{137}\text{Cs}/^{60}\text{Co}$ are gamma emitters |
| e. | <input checked="" type="radio"/> | F | ALARA stands for keeping exposures As Low As Reasonably Achievable |
| f. | <input checked="" type="radio"/> | F | Dosimetry is the measure of dose |
| g. | <input checked="" type="radio"/> | F | Radiation safety is a part of plant safety and must be treated as such |

Multiple Choice

1. Which of the following is true about ionizing radiation
 - a. Radiation is energy
 - b. Gamma rays are easily detected
 - c. Radioactive materials are unstable
 - ☒ d. All of the above
2. Which of the following are routine maintenance on gauges
 - a. Leak tests
 - b. Shutter checks
 - c. Inventory
 - d. Sign verification
 - e. Detector repairs
 - ☒ f. All of the above
3. What is considered authorized activities with the Berthold gauges (non-routine)
 - a. Removal of the source from its shield,
 - b. Installation
 - c. Relocation
 - d. Removal to storage
 - ☒ e. 3 of the above

Short Answer

1. What action should you take if you see an unknown individual trying to access your gauge storage area where the sources are kept: Call RSO
confirm they are not authorized
2. Who is our RSO? Curtis
3. If you suspect that you have been exposed to radiation, what steps should you take with respect to your dosimeter: Don't panic, have
someone check your dose & see the RSO for more info.

4. What steps would you follow if the meter went off while performing a leak test?

Check source
Turn off instrument and except source, then stand
over time, check source and check with source
check source, then test again. If it goes off, use caution
and alert RSO.

5. Describe the procedure (four steps) for using a survey meter:

Turn on, Check battery, Turn to lowest setting,
then use check source, Turn off.

6. What does ALARA stand for? As low as reasonably Achievable

7. What does Inverse Square mean: Double distance, Decrease exposure

True and False

- ☒ T F Time, distance and shielding are primary methods of radiation protection
- ☒ T F A dose of 400 rem is required to deliver a mean lethal dose to an individual
- ☐ T F Survey meters have to be calibrated every time you change the batteries.
- ☒ T F Leak tests have to be done on your gauges every 3 years or 6 months depending on the device registry requirements
- ☒ T F Surveys have to be done at initial installation of the sources and after a repair to gauges
- ☒ T F Each person is responsible for his radiation safety
- ☐ T ☒ F If a shutter doesn't close easily, just slam it closed with a hammer
- ☐ T F To properly survey an area with a survey meter, you begin with the meter on the lowest scale and scale upward as the readings increase

Matching

- | | |
|--|---------------------------------------|
| a. Radiation dose delivered over a short period of time | <u>B</u> Leak Test |
| b. Check of source integrity | <u>A</u> Acute dose |
| | <u>F</u> Contamination |
| | <u>D</u> Time, distance and shielding |
| c. Radiation dose delivered over a long period of time | <u>E</u> Irradiation |
| | <u>C</u> Chronic dose |
| d. Methods of radiation protection | |
| e. Exposure to energy of the source | |
| f. Presence of radioactive material where it is not supposed to be | |

Multiple Choice

1. What are sources of natural radiation?
- Air
 - building materials
 - rocks and soil
 - ☒ all the above

2. What kind of atoms are known as radioactive?
 - a. stable atoms
 - ☒ b. unstable atoms
 - c. all atoms
3. What is the minimum safe distance in a radiation emergency?
 - a. 6mRem/hr.
 - b. 5mRem/hr
 - ☒ c. 2mRem/hr
 - d. 3mRem/hr
4. Besides time and distance, what is the third principle for minimizing your exposure to radiation?
 - a. Escaping
 - b. Draping
 - c. Adjusting
 - ☒ d. Shielding
5. When you move twice as far away from a source of radiation you reduce your exposure to?
 - ☒ a. one half
 - ☒ b. one quarter
 - c. one third
6. A yellow sign with a tri-foil warns you of?
 - a. nuclear gauge in use
 - b. an area you should not enter unless necessary
 - c. the presence of radiation
 - d. all the above
7. When a red light is on, on a nuclear gauge, what does this tell you?
 - ☒ a. stay away, shutter open
 - b. a part is broken
 - c. call a supervisor
8. When you receive a chest X-ray how many millirem are you exposed to?
 - a. 2
 - b. 100
 - ☒ c. 20
 - d. 500

Matching

A. Rad Worker with badge	<u>B</u> 500 mrem/Yr
B. Rad Worker without badge	<u>C</u> 100 mrem/Yr
C. Member of public	<u>A</u> 5000 mrem/Yr
D. "Caution: Radioactive Material"	<u>F</u> >100mR/Hr
E. "Caution: Radiation Area"	<u>E</u> 5 - 100 mR/Hr
F. "Caution: High Radiation Area"	<u>D</u> Wherever Rad. Used/Stored

9. Describe the procedure to lock out a gauge:

Do a survey, place gauge, set alarm, etc.
Do a survey, place gauge

10. Describe the procedure for removing a gauge from its mounting/ describe the procedure to mount a gauge in a new location,:

See Attached - Dyle

11. Using the equation $D = 6CE/d^2$ where
- D = Exposure rate in R/Hr
 - C = Activity in Curies
 - E = Energy in MeV
 - D = Distance in feet

What is the exposure rate from a 25mCi ^{60}Co source at 1 foot from the source and at 2 feet (remember the energy of ^{60}Co is a total of 2.50MeV)

$$\frac{6(.025)(2.50)}{1^2} = 375 \text{ R/hr}$$

$$\frac{6(.025)(2.50)}{2^2} =$$

93 mR/hr

Using the same equation as above, calculate the exposure rate from a 25mCi ^{137}Cs source at 1 foot from the source and at 2 feet from the source (remember the energy of the ^{137}Cs source is .66MeV)

$$\frac{6(.025)(.66)}{1^2} = 99 \text{ mR/hr}$$

$$\frac{6(.025)(.66)}{2^2} = 24 \text{ mR/hr}$$

CHECK LIST FOR GAUGE USERS TRAINING

RELOCATION/INSTALLATION/MOVE TO STORAGE

Before attempting to install, relocate or move a gauge to storage be sure that the RSO has given approval for the task. NO ACTION can be taken with respect to these activities without RSO approval in writing. ~~in~~

PRE-SAFETY ACTIVITIES

- ____ Wear your radiation dosimetry
- ____ Do survey meter checks and document them
 - ____ Calibration date ____
 - ____ Battery
 - ____ Background
 - ____ Dedicated check source
 - ____ Turn off when through
- ____ *Always start with the meter on the lowest scale
- ____ Make sure that the RSO has approved the task being performed

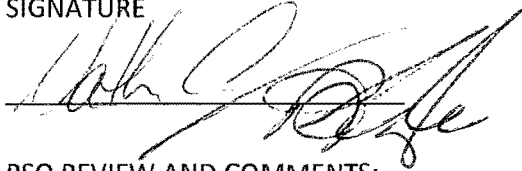
STEPS TO MOVING A GAUGE/INSTALLING A GAUGE

- ____ Close the shutter and lock it out
- ____ Survey the gauge to assure that the shutter is closed
- ____ Check the general condition of the gauge (don't want to move a damaged gauge)
- ____ Verify that the leak test is current on the gauge
- ____ Verify that the new location for the gauge is appropriate for that source and source size (source strength must be appropriate for the new location; could lead to exposures if not for the source strength)
- ____ Place the gauge on a hand truck or cart with the face of the gauge aimed at the ground
- ____ Move the gauge to the new location
- ____ Storage:
 - ____ Add the gauge to the storage inventory and remove it from the active inventory
 - ____ Survey the storage shed outside and forward copy of survey to the RSO
- ____ New location of use
 - ____ Change inventory to note the new location
 - ____ Mount the gauge on the vessel or pipe; mount the detector
 - ____ Remove the shutter lock and do a shutter check
 - ____ ~~Standardize the system (allows you to take measurements of density or flow)~~
 - ____ Mount new Caution Radioactive Material sign or mount the sign that was with the gauge at the original location
 - ____ Perform a leak test on the gauge

____ Notifications: Notify the RSO of the task status as being done and update inventory in the computer.

____ Sign off on all paperwork associated with the gauge move and return it to the RSO

SIGNATURE

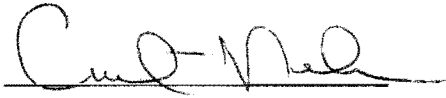
A handwritten signature in black ink, appearing to be "John P. [unclear]", written over a horizontal line.

DATE

5-4-11

RSO REVIEW AND COMMENTS:

RSO SIGNATURE

A handwritten signature in black ink, appearing to be "C. [unclear]", written over a horizontal line.

DATE

5-4-11

Certificate of Completion

Advanced Gauge User Training

Solvay Chemicals, Inc. – Green River, WY

May 3-4, 2011

This is to certify that

Leon Cordova

has been successfully trained and tested on the following topics:

Regulatory Aspects and Regulations; Radiation Physics and Terminology; Gauging Principles/SSDR; Radiation Protection; Dosimetry, Doses and Dose Limits; Biology; Radiation Measurements; Radiation Safety Programs-Operating and Emergency Procedures; Lock-out/Tag-out; Leak testing; Specific Use of Gauges and maintenance; Solvay specific Radiation Protection Program, Operating and Emergency Procedures; Berthold Density Gauge maintenance and operation (including non routine maintenance – only installation, relocation and movement to storage)

RadCon LLC

Nuclear Gauge Consultation



Robin J. Tregle, President



ENGELHARDT & ASSOCIATES, INC.

Susan J. Engelhardt, MS
President, CEO

James J. Greenough

RADIATION SAFETY TEST

NAME James J. Greenough DATE: 5/24/11

True or False

- | | | | |
|----|--------------|---|--|
| a. | T | F | Radiation is energy |
| b. | T | F | Radiation cannot hurt you |
| c. | T | F | $^{137}\text{Cs}/^{60}\text{Co}$ the sources in our Berthold gauges |
| d. | T | F | $^{137}\text{Cs}/^{60}\text{Co}$ are gamma emitters |
| e. | T | F | ALARA stands for keeping exposures As Low As Reasonably Achievable |
| f. | T | F | Dosimetry is the measure of dose |
| g. | T | F | Radiation safety is a part of plant safety and must be treated as such |

Multiple Choice

- Which of the following is true about ionizing radiation
 - Radiation is energy
 - Gamma rays are easily detected
 - Radioactive materials are unstable
 - All of the above
- Which of the following are routine maintenance on gauges
 - Leak tests
 - Shutter checks
 - Inventory
 - Sign verification
 - Detector repairs
 - All of the above
- What is considered authorized activities with the Berthold gauges (non-routine)
 - Removal of the source from its shield,
 - Installation
 - Relocation
 - Removal to storage
 - 3 of the above

Short Answer

- What action should you take if you see an unknown individual trying to access your gauge storage area where the sources are kept: Don't let them in, call security, and report it to the RSO.
- Who is our RSO? James J. Greenough
- If you suspect that you have been exposed to radiation, what steps should you take with respect to your dosimeter: Turn it in immediately, document the exposure, and report it to the RSO.

4. What steps would you follow if the meter went off while performing a leak test?

Stop the test and check the meter
Back away from it
Don't touch it until it's fixed

5. Describe the procedure (four steps) for using a survey meter:

Turn on the meter
Check the battery
Check the scale
Check the range

6. What does ALARA stand for? As Low As Reasonably Achievable
 7. What does Inverse Square mean? Twice the distance, less exposure

True and False

- | | | | |
|----|---|---|--|
| a. | T | F | Time, distance and shielding are primary methods of radiation protection |
| b. | T | F | A dose of 400 rem is required to deliver a mean lethal dose to an individual |
| c. | T | F | Survey meters have to be calibrated every time you change the batteries. |
| d. | T | F | Leak tests have to be done on your gauges every 3 years or 6 months depending on the device registry requirements |
| e. | T | F | Surveys have to be done at initial installation of the sources and after a repair to gauges |
| f. | T | F | Each person is responsible for his radiation safety |
| g. | T | F | If a shutter doesn't close easily, just slam it closed with a hammer |
| h. | T | F | To properly survey an area with a survey meter, you begin with the meter on the lowest scale and scale upward as the readings increase |

Matching

- | | | |
|----|---|---------------------------------------|
| a. | Radiation dose delivered over a short period of time | <u>1</u> Leak Test |
| b. | Check of source integrity | <u>4</u> Acute dose |
| c. | Radiation dose delivered over a long period of time | <u>3</u> Contamination |
| d. | Methods of radiation protection | <u>2</u> Time, distance and shielding |
| e. | Exposure to energy of the source | <u>5</u> Irradiation |
| f. | Presence of radioactive material where it is not supposed to be | <u>6</u> Chronic dose |

Multiple Choice

1. What are sources of natural radiation?
- Air
 - building materials
 - rocks and soil
 - ☒ all the above

2. What kind of atoms are known as radioactive?
 - a. stable atoms
 - ☒ b. unstable atoms
 - c. all atoms
3. What is the minimum safe distance in a radiation emergency?
 - a. 6mRem/hr.
 - b. 5mRem/hr
 - ☒ c. 2mRem/hr
 - d. 3mRem/hr
4. Besides time and distance, what is the third principle for minimizing your exposure to radiation?
 - a. Escaping
 - b. Draping
 - c. Adjusting
 - d. Shielding
5. When you move twice as far away from a source of radiation you reduce you exposure to?
 - a. one half
 - ☒ b. one quarter
 - c. one third
6. A yellow sign with a tri-foil warns you of?
 - a. nuclear gauge in use
 - b. an area you should not enter unless necessary
 - c. the presence of radiation
 - d. all the above
7. When a red light is on , on a nuclear gauge, what does this tell you?
 - a. stay away, shutter open
 - b. a part is broken
 - c. call a supervisor
8. When you receive a chest X-ray how many millirem are you exposed to?
 - a. 2
 - b. 100
 - ☒ c. 20
 - d. 500

Matching

A. Rad Worker with badge	_____ 500 mrem/Yr
B. Rad Worker without badge	_____ 100 mrem/Yr
C. Member of public	_____ 5000 mrem/Yr
D. "Caution: Radioactive Material"	_____ >100mR/Hr
E. "Caution: Radiation Area"	_____ 5 - 100 mR/Hr
F. "Caution: High Radiation Area"	_____ Wherever Rad. Used/Stored

9. Describe the procedure to lock out a gauge:

Clear of all personnel and equipment

10. Describe the procedure for removing a gauge from its mounting/ describe the procedure to mount a gauge in a new location,:

See Attached

11. Using the equation $D = 6CE/d^2$ where
- D = Exposure rate in R/Hr
 - C = Activity in Curies
 - E = Energy in MeV
 - D = Distance in feet

What is the exposure rate from a 25mCi ^{60}Co source at 1 foot from the source and at 2 feet (remember the energy of ^{60}Co is a total of 2.50MeV)

250 R/hr

62.5 R/hr

Using the same equation as above, calculate the exposure rate from a 25mCi ^{137}Cs source at 1 foot from the source and at 2 feet from the source (remember the energy of the ^{137}Cs source is .66MeV)

16.5 R/hr

4.1 R/hr

CHECK LIST FOR GAUGE USERS TRAINING

RELOCATION/INSTALLATION/MOVE TO STORAGE

Before attempting to install, relocate or move a gauge to storage be sure that the RSO has given approval for the task. NO ACTION can be taken with respect to these activities without RSO approval in writing. *[Signature]*

PRE-SAFETY ACTIVITIES

- ____ Wear your radiation dosimetry
- ____ Do survey meter checks and document them
 - ____ Calibration date ____
 - ____ Battery
 - ____ Background
 - ____ Dedicated check source
 - ____ Turn off when through
- ____ *Always start with the meter on the lowest scale
- ____ Make sure that the RSO has approved the task being performed

STEPS TO MOVING A GAUGE/INSTALLING A GAUGE

- ____ Close the shutter and lock it out
- ____ Survey the gauge to assure that the shutter is closed
- ____ Check the general condition of the gauge (don't want to move a damaged gauge)
- ____ Verify that the leak test is current on the gauge
- ____ Verify that the new location for the gauge is appropriate for that source and source size (source strength must be appropriate for the new location; could lead to exposures if not for the source strength)
- ____ Place the gauge on a hand truck or cart with the face of the gauge aimed at the ground
- ____ Move the gauge to the new location
- ____ Storage:
 - ____ Add the gauge to the storage inventory and remove it from the active inventory
 - ____ Survey the storage shed outside and forward copy of survey to the RSO
- ____ New location of use
 - ____ Change inventory to note the new location
 - ____ Mount the gauge on the vessel or pipe; mount the detector
 - ____ Remove the shutter lock and do a shutter check
 - ____ Standardize the system (allows you to take measurements of density or flow)
 - ____ Mount new Caution Radioactive Material sign or mount the sign that was with the gauge at the original location
 - ____ Perform a leak test on the gauge

Survey

____ Notifications: Notify the RSO of the task status as being done and update inventory in the computer.

____ Sign off on all paperwork associated with the gauge move and return it to the RSO

SIGNATURE

W. R. Al

DATE

5-4-11

RSO REVIEW AND COMMENTS:

RSO SIGNATURE

Curt Nelson

DATE

5-4-11

Certificate of Completion

Advanced Gauge User Training

Solvay Chemicals, Inc. – Green River, WY

May 3-4, 2011

This is to certify that

Brandt Gregory

has been successfully trained and tested on the following topics:

Regulatory Aspects and Regulations; Radiation Physics and Terminology; Gauging Principles/SSDR; Radiation Protection; Dosimetry, Doses and Dose Limits; Biology; Radiation Measurements; Radiation Safety Programs-Operating and Emergency Procedures; Lock-out/Tag-out; Leak testing; Specific Use of Gauges and maintenance; Solvay specific Radiation Protection Program, Operating and Emergency Procedures; Berthold Density Gauge maintenance and operation (including non routine maintenance – only installation, relocation and movement to storage)

RadCon LLC

Nuclear Gauge Consultation



Robin J. Tregle, President



ENGELHARDT & ASSOCIATES, INC.

Susan J. Engelhardt, MS
President, CEO

*passed
San Francisco*

RADIATION SAFETY TEST

NAME Brandt Gregory

DATE: 5-4-11

True or False

- | | | | |
|----|----------------------------------|--------------|--|
| a. | <input checked="" type="radio"/> | F | Radiation is energy |
| b. | <input type="radio"/> | F | Radiation cannot hurt you |
| c. | <input type="radio"/> | F | $^{137}\text{Cs}/^{60}\text{Co}$ the sources in our Berthold gauges |
| d. | <input checked="" type="radio"/> | F | $^{137}\text{Cs}/^{60}\text{Co}$ are gamma emitters |
| e. | <input checked="" type="radio"/> | F | ALARA stands for keeping exposures As Low As Reasonably Achievable |
| f. | <input type="radio"/> | F | Dosimetry is the measure of dose |
| g. | <input checked="" type="radio"/> | F | Radiation safety is a part of plant safety and must be treated as such |

Multiple Choice

1. Which of the following is true about ionizing radiation
 - a. Radiation is energy
 - b. Gamma rays are easily detected
 - c. Radioactive materials are unstable
 - ☒ d. All of the above
2. Which of the following are routine maintenance on gauges
 - a. Leak tests
 - b. Shutter checks
 - c. Inventory
 - d. Sign verification
 - e. Detector repairs
 - ☒ f. All of the above
3. What is considered authorized activities with the Berthold gauges (non-routine)
 - a. Removal of the source from its shield,
 - b. Installation
 - c. Relocation
 - d. Removal to storage
 - ☒ e. 3 of the above

Short Answer

1. What action should you take if you see an unknown individual trying to access your gauge storage area where the sources are kept: Contact RSO, ask person who they are and why they are there, Contact Security
2. Who is our RSO? Curtis Nelson
3. If you suspect that you have been exposed to radiation, what steps should you take with respect to your dosimeter: Inform RSO so it can be turned in for analysis. Do not work again until results come back

4. What steps would you follow if the meter went off while performing a leak test?

write down readings, verify shutter is closed, verify count on meter, wipe test

5. Describe the procedure (four steps) for using a survey meter:

Check calibration, Check battery, Start with the lowest setting, Turn off when finished check, check source

6. What does ALARA stand for? as low as Reasonably achievable

7. What does Inverse Square mean: if you double dist you decrease exposure by 4X

True and False

- | | | | |
|----|----------------------------------|----------------------------------|--|
| a. | <input checked="" type="radio"/> | F | Time, distance and shielding are primary methods of radiation protection |
| b. | <input checked="" type="radio"/> | F | A dose of 400 rem is required to deliver a mean lethal dose to an individual |
| c. | T | <input checked="" type="radio"/> | Survey meters have to be calibrated every time you change the batteries. |
| d. | <input checked="" type="radio"/> | F | Leak tests have to be done on your gauges every 3 years or 6 months depending on the device registry requirements |
| e. | <input checked="" type="radio"/> | F | Surveys have to be done at initial installation of the sources and after a repair to gauges |
| f. | <input checked="" type="radio"/> | F | Each person is responsible for his radiation safety |
| g. | T | <input checked="" type="radio"/> | If a shutter doesn't close easily, just slam it closed with a hammer |
| h. | <input checked="" type="radio"/> | F | To properly survey an area with a survey meter, you begin with the meter on the lowest scale and scale upward as the readings increase |

Matching

- | | |
|--|---------------------------------------|
| a. Radiation dose delivered over a short period of time | <u>b</u> Leak Test |
| b. Check of source integrity | <u>a</u> Acute dose |
| c. Radiation dose delivered over a long period of time | <u>f</u> Contamination |
| d. Methods of radiation protection | <u>d</u> Time, distance and shielding |
| e. Exposure to energy of the source | <u>e</u> Irradiation |
| f. Presence of radioactive material where it is not supposed to be | <u>c</u> Chronic dose |

Multiple Choice

1. What are sources of natural radiation?
- Air
 - building materials
 - rocks and soil
 - ☒ all the above

2. What kind of atoms are known as radioactive?
 - a. stable atoms
 - ☒ b. unstable atoms
 - c. all atoms
3. What is the minimum safe distance in a radiation emergency?
 - a. 6mRem/hr.
 - b. 5mRem/hr
 - ☒ c. 2mRem/hr
 - d. 3mRem/hr
4. Besides time and distance, what is the third principle for minimizing your exposure to radiation?
 - a. Escaping
 - b. Draping
 - c. Adjusting
 - ☒ d. Shielding
5. When you move twice as far away from a source of radiation you reduce you exposure to?
 - a. one half
 - ☒ b. one quarter
 - c. one third
6. A yellow sign with a tri-foil warns you of?
 - a. nuclear gauge in use
 - b. an area you should not enter unless necessary
 - c. the presence of radiation
 - ☒ d. all the above
7. When a red light is on , on a nuclear gauge, what does this tell you?
 - ☒ a. stay away, shutter open
 - b. a part is broken
 - c. call a supervisor
8. When you receive a chest X-ray how many millirem are you exposed to?
 - a. 2
 - b. 100
 - ☒ c. 20
 - d. 500

Matching

A. Rad Worker with badge	<u>B</u> 500 mrem/Yr
B. Rad Worker without badge	<u>C</u> 100 mrem/Yr
C. Member of public	<u>A</u> 5000 mrem/Yr
D. "Caution: Radioactive Material"	<u>F</u> >100mR/Hr
E. "Caution: Radiation Area"	<u>E</u> 5 - 100 mR/Hr
F. "Caution: High Radiation Area"	<u>D</u> Wherever Rad. Used/Stored

9. Describe the procedure to lock out a gauge:

wear dosimeter, Do meter checks, close shutter, Surbey
gauge to assure it is closed, install lock on shutter

10. Describe the procedure for removing a gauge from its mounting/ describe the procedure to mount a gauge in a new location,:

See Attached v Dyle

11. Using the equation $D = 6CE/d^2$ where D = Exposure rate in R/Hr

C = Activity in Curies

E = Energy in MeV

D = Distance in feet

What is the exposure rate from a 25mCi ^{60}Co source at 1 foot from the source and at 2 feet (remember the energy of ^{60}Co is a total of 2.50MeV)

$$\frac{6 \times .025 \times 2.50}{1^2}$$

375 mR/hr

$$\frac{6 \times .025 \times 2.50}{2^2}$$

93 mR/hr

Using the same equation as above, calculate the exposure rate from a 25mCi ^{137}Cs source at 1 foot from the source and at 2 feet from the source (remember the energy of the ^{137}Cs source is .66MeV)

$$\frac{6 \times .025 \times .66}{1^2}$$

99 mR/hr

$$\frac{6 \times .025 \times .66}{2^2}$$

24 mR/hr

CHECK LIST FOR GAUGE USERS TRAINING

RELOCATION/INSTALLATION/MOVE TO STORAGE

Before attempting to install, relocate or move a gauge to storage be sure that the RSO has given approval for the task. NO ACTION can be taken with respect to these activities without RSO approval in writing. ~~AS~~

PRE-SAFETY ACTIVITIES

- ☐ Wear your radiation dosimetry
- ☐ Do survey meter checks and document them
 - ☐ Calibration date ☐
 - ☐ Battery
 - ☐ Background
 - ☐ Dedicated check source
 - ☐ Turn off when through
- * Always start with the meter on the lowest scale
- ☐ Make sure that the RSO has approved the task being performed

STEPS TO MOVING A GAUGE/INSTALLING A GAUGE

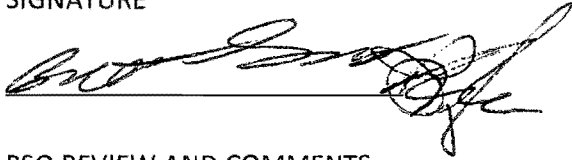
- ☐ Close the shutter and lock it out
- ☐ Survey the gauge to assure that the shutter is closed
- ☐ Check the general condition of the gauge (don't want to move a damaged gauge)
- ☐ Verify that the leak test is current on the gauge
- ☐ Verify that the new location for the gauge is appropriate for that source and source size (source strength must be appropriate for the new location; could lead to exposures if not for the source strength)
- ☐ Place the gauge on a hand truck or cart with the face of the gauge aimed at the ground
- ☐ Move the gauge to the new location
- ☐ Storage:
 - ☐ Add the gauge to the storage inventory and remove it from the active inventory
 - ☐ Survey the storage shed outside and forward copy of survey to the RSO
- ☐ New location of use
 - ☐ Change inventory to note the new location
 - ☐ Mount the gauge on the vessel or pipe; mount the detector
 - ☐ Remove the shutter lock and do a shutter check
 - ☐ ~~Standardize the system (allows you to take measurements of density or flow)~~ ~~AS~~
 - ☐ Mount new Caution Radioactive Material sign or mount the sign that was with the gauge at the original location
 - ☐ Perform a leak test on the gauge

Survey ~~AS~~

____ Notifications: Notify the RSO of the task status as being done and update inventory in the computer.

____ Sign off on all paperwork associated with the gauge move and return it to the RSO

SIGNATURE

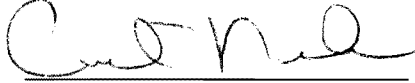
A handwritten signature in black ink, appearing to be "Curt N. [unclear]", written over a horizontal line.

DATE

5-4-11

RSO REVIEW AND COMMENTS:

RSO SIGNATURE

A handwritten signature in black ink, appearing to be "Curt N. [unclear]", written over a horizontal line.

DATE

5-4-11

Certificate of Completion

***Advanced Gauge User Training
Solvay Chemicals, Inc. – Green River, WY***

May 3-4, 2011

This is to certify that

Robert John

has been successfully trained and tested on the following topics:

Regulatory Aspects and Regulations; Radiation Physics and Terminology; Gauging Principles/SSDR; Radiation Protection; Dosimetry, Doses and Dose Limits; Biology; Radiation Measurements; Radiation Safety Programs-Operating and Emergency Procedures; Lock-out/Tag-out; Leak testing; Specific Use of Gauges and maintenance; Solvay specific Radiation Protection Program, Operating and Emergency Procedures; Berthold Density Gauge maintenance and operation (including non routine maintenance – only installation, relocation and movement to storage)

RadCon LLC

Nuclear Gauge Consultation



Robin J. Tregle, President



ENGELHARDT & ASSOCIATES, INC.

Susan J. Engelhardt, MS
President, CEO

RADIATION SAFETY TEST

NAME

Robert John

DATE:

5-4-11

True or False

- | | | | |
|----|------------------------------------|------------------------------------|--|
| a. | <input checked="" type="radio"/> T | <input type="radio"/> F | Radiation is energy |
| b. | <input type="radio"/> T | <input checked="" type="radio"/> F | Radiation cannot hurt you |
| c. | <input checked="" type="radio"/> T | <input type="radio"/> F | $^{137}\text{Cs}/^{60}\text{Co}$ the sources in our Berthold gauges |
| d. | <input checked="" type="radio"/> T | <input type="radio"/> F | $^{137}\text{Cs}/^{60}\text{Co}$ are gamma emitters |
| e. | <input checked="" type="radio"/> T | <input type="radio"/> F | ALARA stands for keeping exposures As Low As Reasonably Achievable |
| f. | <input checked="" type="radio"/> T | <input type="radio"/> F | Dosimetry is the measure of dose |
| g. | <input checked="" type="radio"/> T | <input type="radio"/> F | Radiation safety is a part of plant safety and must be treated as such |

Multiple Choice

1. Which of the following is true about ionizing radiation
 - a. Radiation is energy
 - b. Gamma rays are easily detected
 - c. Radioactive materials are unstable
 - ☒ d. All of the above
2. Which of the following are routine maintenance on gauges
 - a. Leak tests
 - b. Shutter checks
 - c. Inventory
 - d. Sign verification
 - e. Detector repairs
 - ☒ f. All of the above
3. What is considered authorized activities with the Berthold gauges (non-routine)
 - a. Removal of the source from its shield,
 - b. Installation
 - c. Relocation
 - d. Removal to storage
 - ☒ e. 3 of the above

Short Answer

1. What action should you take if you see an unknown individual trying to access your gauge storage area where the sources are kept: Stop them, ask why, Report to management.
2. Who is our RSO? Curtis Nelson
3. If you suspect that you have been exposed to radiation, what steps should you take with respect to your dosimeter: Get it to Curtis quickly, further exposure do not wait until you get home.

4. What steps would you follow if the meter went off while performing a leak test?

exit the area and turn it off so
MOP's may not enter report in court's
when it is

5. Describe the procedure (four steps) for using a survey meter:

1. calibrate
2. check battery
3. check for contamination
4. check for leaks

6. What does ALARA stand for?

7. What does Inverse Square mean:

True and False

- | | | | |
|----|------------------------------------|---|--|
| a. | <input checked="" type="radio"/> T | F | Time, distance and shielding are primary methods of radiation protection |
| b. | <input checked="" type="radio"/> T | F | A dose of 400 rem is required to deliver a mean lethal dose to an individual |
| c. | <input type="radio"/> T | F | Survey meters have to be calibrated every time you change the batteries. |
| d. | <input checked="" type="radio"/> T | F | Leak tests have to be done on your gauges every 3 years or 6 months depending on the device registry requirements |
| e. | <input checked="" type="radio"/> T | F | Surveys have to be done at initial installation of the sources and after a repair to gauges |
| f. | <input checked="" type="radio"/> T | E | Each person is responsible for his radiation safety |
| g. | <input checked="" type="radio"/> T | F | If a shutter doesn't close easily, just slam it closed with a hammer |
| h. | <input checked="" type="radio"/> T | F | To properly survey an area with a survey meter, you begin with the meter on the lowest scale and scale upward as the readings increase |

Matching

- | | | |
|----|---|---------------------------------------|
| a. | Radiation dose delivered over a short period of time | <u>1</u> Leak Test |
| b. | Check of source integrity | <u>2</u> Acute dose |
| c. | Radiation dose delivered over a long period of time | <u>3</u> Contamination |
| d. | Methods of radiation protection | <u>4</u> Time, distance and shielding |
| e. | Exposure to energy of the source | <u>5</u> Irradiation |
| f. | Presence of radioactive material where it is not supposed to be | <u>6</u> Chronic dose |

Multiple Choice

1. What are sources of natural radiation?

- a. Air
 b. building materials
 c. rocks and soil
☒ d. all the above

2. What kind of atoms are known as radioactive?
 - a. stable atoms
 - ☒ b. unstable atoms
 - c. all atoms
3. What is the minimum safe distance in a radiation emergency?
 - a. 6mRem/hr.
 - b. 5mRem/hr
 - ☒ c. 2mRem/hr
 - d. 3mRem/hr
4. Besides time and distance, what is the third principle for minimizing your exposure to radiation?
 - a. Escaping
 - b. Draping
 - c. Adjusting
 - ☒ d. Shielding
5. When you move twice as far away from a source of radiation you reduce you exposure to?
 - a. one half
 - ☒ b. one quarter
 - c. one third
6. A yellow sign with a tri-foil warns you of?
 - a. nuclear gauge in use
 - b. an area you should not enter unless necessary
 - ☒ c. the presence of radiation
 - d. all the above
7. When a red light is on , on a nuclear gauge, what does this tell you?
 - ☒ a. stay away, shutter open
 - b. a part is broken
 - c. call a supervisor
8. When you receive a chest X-ray how many millirem are you exposed to?
 - a. 2
 - b. 100
 - ☒ c. 20
 - d. 500

Matching

- | | |
|------------------------------------|--|
| A. Rad Worker with badge | <input checked="" type="radio"/> 500 mrem/Yr |
| B. Rad Worker without badge | <input checked="" type="radio"/> 100 mrem/Yr |
| C. Member of public | <input checked="" type="radio"/> 5000 mrem/Yr |
| D. "Caution: Radioactive Material" | <input checked="" type="radio"/> >100mR/Hr |
| E. "Caution: Radiation Area" | <input checked="" type="radio"/> 5 - 100 mR/Hr |
| F. "Caution: High Radiation Area" | <input checked="" type="radio"/> Wherever Rad. Used/Stored |

9. Describe the procedure to lock out a gauge:

ensure that the gauge is locked out and to the
proper position

10. Describe the procedure for removing a gauge from its mounting/ describe the procedure to mount a gauge in a new location,:

See Attached & Defa

11. Using the equation $D = 6CE/d^2$ where
- D = Exposure rate in R/Hr
 - C = Activity in Curies
 - E = Energy in MeV
 - D = Distance in feet

What is the exposure rate from a 25mCi ^{60}Co source at 1 foot from the source and at 2 feet (remember the energy of ^{60}Co is a total of 2.50MeV)

25 mCi = 0.025 Ci
0.25 R/hr

Using the same equation as above, calculate the exposure rate from a 25mCi ^{137}Cs source at 1 foot from the source and at 2 feet from the source (remember the energy of the ^{137}Cs source is .66MeV)

25 mCi = 0.025 Ci
0.25 R/hr


CHECK LIST FOR GAUGE USERS TRAINING
RELOCATION/INSTALLATION/MOVE TO STORAGE

Before attempting to install, relocate or move a gauge to storage be sure that the RSO has given approval for the task. NO ACTION can be taken with respect to these activities without RSO approval in writing. *A*

PRE-SAFETY ACTIVITIES

- ____ Wear your radiation dosimetry
- ____ Do survey meter checks and document them
 - ____ Calibration date ____
 - ____ Battery
 - ____ Background
 - ____ Dedicated check source
 - ____ Turn off when through
- ____ *Always start with the meter on the lowest scale
- ____ Make sure that the RSO has approved the task being performed

STEPS TO MOVING A GAUGE/INSTALLING A GAUGE

- 
- ____ Close the shutter and lock it out
 - ____ Survey the gauge to assure that the shutter is closed
 - ____ Check the general condition of the gauge (don't want to move a damaged gauge)
 - ____ Verify that the leak test is current on the gauge
 - ____ Verify that the new location for the gauge is appropriate for that source and source size (source strength must be appropriate for the new location; could lead to exposures if not for the source strength)
 - ____ Place the gauge on a hand truck or cart with the face of the gauge aimed at the ground
 - ____ Move the gauge to the new location
 - ____ Storage:
 - ____ Add the gauge to the storage inventory and remove it from the active inventory
 - ____ Survey the storage shed outside and forward copy of survey to the RSO
 - ____ New location of use
 - ____ Change inventory to note the new location
 - ____ Mount the gauge on the vessel or pipe; mount the detector
 - ____ Remove the shutter lock and do a shutter check
 - ____ Standardize the system (allows you to take measurements of density or flow)
 - ____ Mount new Caution Radioactive Material sign or mount the sign that was with the gauge at the original location
 - ____ Perform a leak test on the gauge

Survey

____ Notifications: Notify the RSO of the task status as being done and update inventory in the computer.

____ Sign off on all paperwork associated with the gauge move and return it to the RSO

SIGNATURE

Robert John

DATE

5-4-11

RSO REVIEW AND COMMENTS:

RSO SIGNATURE

Chris Neel

DATE

5-4-11

Certificate of Completion

Advanced Gauge User Training

Solvay Chemicals, Inc. – Green River, WY

May 3-4, 2011

This is to certify that

Kyle Koritnik

has been successfully trained and tested on the following topics:

Regulatory Aspects and Regulations; Radiation Physics and Terminology; Gauging Principles/SSDR; Radiation Protection; Dosimetry, Doses and Dose Limits; Biology; Radiation Measurements; Radiation Safety Programs-Operating and Emergency Procedures; Lock-out/Tag-out; Leak testing; Specific Use of Gauges and maintenance; Solvay specific Radiation Protection Program, Operating and Emergency Procedures; Berthold Density Gauge maintenance and operation (including non routine maintenance – only installation, relocation and movement to storage)

RadCon LLC

Nuclear Gauge Consultation



Robin J. Tregle, President



ENGELHARDT & ASSOCIATES, INC.

Susan J. Engelhardt, MS
President, CEO

*Responsible
Area Engineer*

[Signature]

RADIATION SAFETY TEST

NAME Kyle Korntner DATE: 5/4/11

True or False

- | | | | |
|----|------------------------------------|------------------------------------|--|
| a. | <input checked="" type="radio"/> T | F | Radiation is energy |
| b. | T | <input checked="" type="radio"/> F | Radiation cannot hurt you |
| c. | <input checked="" type="radio"/> T | F | $^{137}\text{Cs}/^{60}\text{Co}$ the sources in our Berthold gauges |
| d. | <input checked="" type="radio"/> T | F | $^{137}\text{Cs}/^{60}\text{Co}$ are gamma emitters |
| e. | <input checked="" type="radio"/> T | F | ALARA stands for keeping exposures As Low As Reasonably Achievable |
| f. | <input checked="" type="radio"/> T | F | Dosimetry is the measure of dose |
| g. | <input checked="" type="radio"/> T | F | Radiation safety is a part of plant safety and must be treated as such |

Multiple Choice

- Which of the following is true about ionizing radiation
 - Radiation is energy
 - Gamma rays are easily detected
 - Radioactive materials are unstable
 - ☒ All of the above
- Which of the following are routine maintenance on gauges
 - Leak tests
 - Shutter checks
 - Inventory
 - Sign verification
 - Detector repairs
 - ☒ All of the above
- What is considered authorized activities with the Berthold gauges (non-routine)
 - Removal of the source from its shield,
 - Installation
 - Relocation
 - Removal to storage
 - ☒ 3 of the above

Short Answer

- What action should you take if you see an unknown individual trying to access your gauge storage area where the sources are kept: Contact the RSO, and approach the person to find out who they are, and why they are there
- Who is our RSO? Curtis Nelson
- If you suspect that you have been exposed to radiation, what steps should you take with respect to your dosimeter: Turn it into the RSO so it can be analyzed

4. What steps would you follow if the meter went off while performing a leak test?

Write down the readings and verify the shutter is closed, verify calibration meter. BACK AWAY!
Wipe test!

5. Describe the procedure (four steps) for using a survey meter:

Check cal. date, Check battery, Start on lowest setting, and shut it off when complete
Check Background, check in the check source

6. What does ALARA stand for? As low as Reasonably achievable

7. What does Inverse Square mean: As you increase distance exposure goes down

True and False

- a. ☒ T F Time, distance and shielding are primary methods of radiation protection
- b. ☒ T ☒ F A dose of 400 rem is required to deliver a mean lethal dose to an individual
- c. T ☒ F Survey meters have to be calibrated every time you change the batteries.
- d. ☒ T F Leak tests have to be done on your gauges every 3 years or 6 months depending on the device registry requirements
- e. ☒ T F Surveys have to be done at initial installation of the sources and after a repair to gauges
- f. ☒ T F Each person is responsible for his radiation safety
- g. T ☒ F If a shutter doesn't close easily, just slam it closed with a hammer
- h. ☒ T F To properly survey an area with a survey meter, you begin with the meter on the lowest scale and scale upward as the readings increase

Matching

- | | |
|--|---------------------------------------|
| a. Radiation dose delivered over a short period of time | <u>b</u> Leak Test |
| b. Check of source integrity | <u>a</u> Acute dose |
| c. Radiation dose delivered over a long period of time | <u>f</u> Contamination |
| d. Methods of radiation protection | <u>d</u> Time, distance and shielding |
| e. Exposure to energy of the source | <u>e</u> Irradiation |
| f. Presence of radioactive material where it is not supposed to be | <u>c</u> Chronic dose |

Multiple Choice

1. What are sources of natural radiation?

- a. Air
- b. building materials
- c. rocks and soil
- ☒ d. all the above

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 - a. stable atoms
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 - c. one third
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 - b. 100
 - ☒ c. 20
 - d. 500

Matching

<input checked="" type="checkbox"/> A. Rad Worker with badge	<u> 3 </u> 500 mrem/Yr
<input checked="" type="checkbox"/> B. Rad Worker without badge	<u> C </u> 100 mrem/Yr
<input checked="" type="checkbox"/> C. Member of public	<u> A </u> 5000 mrem/Yr
D. "Caution: Radioactive Material"	<u> F </u> >100mR/Hr
<input checked="" type="checkbox"/> E. "Caution: Radiation Area"	<u> E </u> 5 - 100 mR/Hr
<input checked="" type="checkbox"/> F. "Caution: High Radiation Area"	<u> D </u> Wherever Rad. Used/Stored

9. Describe the procedure to lock out a gauge:

Wear dosimeter, Close shutter, Do not check,
Close shutter, Survey gauge, Install lock if OK.

10. Describe the procedure for removing a gauge from its mounting/ describe the procedure to mount a gauge in a new location,:

See Attached ~ [Signature]

11. Using the equation $D = 6CE/d^2$ where
- D = Exposure rate in R/Hr
 - C = Activity in Curies
 - E = Energy in MeV
 - D = Distance in feet

What is the exposure rate from a 25mCi ^{60}Co source at 1 foot from the source and at 2 feet (remember the energy of ^{60}Co is a total of 2.50MeV)

$$D = \frac{6(0.025)(2.5)}{1^2}$$
$$= 375 \text{ mR/H}$$

$$D = \frac{6(0.025)(2.5)}{2^2}$$
$$= 93 \text{ mR/H}$$

Using the same equation as above, calculate the exposure rate from a 25mCi ^{137}Cs source at 1 foot from the source and at 2 feet from the source (remember the energy of the ^{137}Cs source is .66MeV)

$$D = \frac{6(0.025)(.66)}{1^2}$$
$$= 99 \text{ mR/H}$$

$$D = \frac{6(0.025)(.66)}{2^2}$$
$$= 24 \text{ mR/H}$$

CHECK LIST FOR GAUGE USERS TRAINING

RELOCATION/INSTALLATION/MOVE TO STORAGE

Before attempting to install, relocate or move a gauge to storage be sure that the RSO has given approval for the task. NO ACTION can be taken with respect to these activities without RSO approval in writing. ~~2~~

PRE-SAFETY ACTIVITIES

- ___ Wear your radiation dosimetry
- ___ Do survey meter checks and document them
 - ___ Calibration date ___
 - ___ Battery
 - ___ Background
 - ___ Dedicated check source
 - ___ Turn off when through
- * Always start with the meter on the lowest scale
- ___ Make sure that the RSO has approved the task being performed

STEPS TO MOVING A GAUGE/INSTALLING A GAUGE

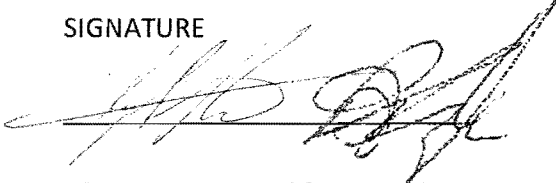
- ___ Close the shutter and lock it out
- ___ Survey the gauge to assure that the shutter is closed
- ___ Check the general condition of the gauge (don't want to move a damaged gauge)
- ___ Verify that the leak test is current on the gauge
- ___ Verify that the new location for the gauge is appropriate for that source and source size (source strength must be appropriate for the new location; could lead to exposures if not for the source strength)
- ___ Place the gauge on a hand truck or cart with the face of the gauge aimed at the ground
- ___ Move the gauge to the new location
- ___ Storage:
 - ___ Add the gauge to the storage inventory and remove it from the active inventory
 - ___ Survey the storage shed outside and forward copy of survey to the RSO
- ___ New location of use
 - ___ Change inventory to note the new location
 - ___ Mount the gauge on the vessel or pipe; mount the detector
 - ___ Remove the shutter lock and do a shutter check
 - ~~___ Standardize the system (allows you to take measurements of density or flow) ~~2~~~~
 - ___ Mount new Caution Radioactive Material sign or mount the sign that was with the gauge at the original location
 - ___ Perform a leak test on the gauge

Survey

____ Notifications: Notify the RSO of the task status as being done and update inventory in the computer.

____ Sign off on all paperwork associated with the gauge move and return it to the RSO

SIGNATURE

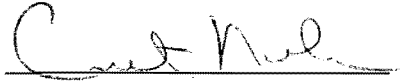
A handwritten signature in black ink, appearing to be "J. B. [unclear]", written over a horizontal line.

DATE

5/4/11

RSO REVIEW AND COMMENTS:

RSO SIGNATURE

A handwritten signature in black ink, appearing to be "Crest Nelson", written over a horizontal line.

DATE

5-4 11

SEP - 6 2011

DATE

This is to acknowledge the receipt of your letter/application dated 9/1/11, and to inform you that the initial processing, which includes an administrative review, has been performed.

☒ There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card:

The action you requested is normally processed within 90 days.

☐ A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 575911.
When calling to inquire about this action, please refer to this mail control number.
You may call me at 817-860-8103.

Sincerely,



Licensing Assistant

BETWEEN:

Accounts Receivable/Payable
and
Regional Licensing Branches

[FOR ARPB USE]
INFORMATION FROM LTS

Program Code: 03120
Status Code: Pending Amendment
Fee Category: 3P
Exp. Date:
Fee Comments:
Decom Fin Assur Req: N

License Fee Worksheet - License Fee Transmittal

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: SOLVAY CHEMICALS INC
Received Date: 08/31/2011
Docket Number: 3029284
Mail Control Number: 575911
License Number: 49-19597-02
Action Type: Amendment

2. FEE ATTACHED

Amount: _____

Check No.: _____

3. COMMENTS

Signed: _____

Date: _____

Coleen Murnahan

9-1-2011

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / /)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:

Amendment: _____

Renewal: _____

License: _____

3. OTHER _____

Signed: _____

Date: _____

From: (307) 875-6500
NANCY MILLER
SOLVAY CHEMICALS
400 COUNTY ROAD 85
PO BOX 1167
GREEN RIVER, WY 82935

Origin ID: RKSA

FedEx
Express



J11201104290225

SHIP TO: (307) 875-6500 X 616 BILL SENDER
Licensing, Texas Health Res. Tower
US Nuclear Reg Comm Region IV
612 E LAMAR BLVD STE 400

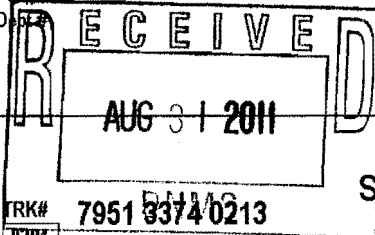
ARLINGTON, TX 76011

Ship Date: 30AUG11
ActWgt: 1.0 LB
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Delivery Address Bar Code

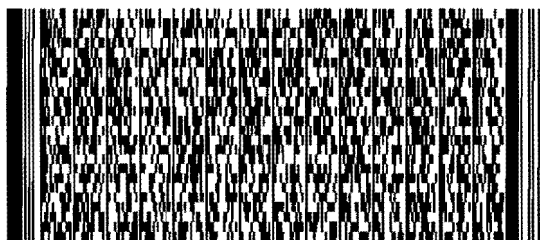


Ref # Curtis Nelson - SAFETY
Invoice #
PO #
Date



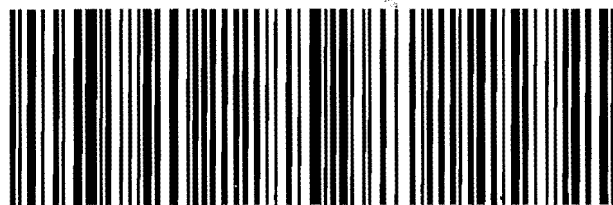
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STANDARD OVERNIGHT

TRK# 7951 3374 0213
UZ01



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