
Commercial Services Field Project Training Requirements

Revision 2

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Proprietary
 Non-Proprietary
 Restricted Information

New
 Title Change
 Revision
 Rewrite
 Cancellation

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1.0 SCOPE

1.1 Purpose

The purpose of this procedure is to specify the general training requirements for field project personnel and subcontractors operating under the Commercial Services (CS) Radiation Protection Program (RPP). Any site specific training requirements should be specified in the site specific Work Plans or other project specific documentation.

1.2 Applicability

This procedure applies to all project personnel and any personnel entering a restricted or controlled area at temporary job sites where EnergySolutions has implemented the RPP. Any person entering an area under EnergySolutions control or may have incidental contact with licensed materials shall have the appropriate training as specified. This includes but is not limited to the training as follows and as applicable:

- General Employee Radiation Training (GERT)
- Radiation Worker (RW-I)
- Respiratory Protection (RW-II)
- Authorized User of the license (AU)
- Radiation Protection Supervisor (RPS)
- DOT Hazmat Subpart H
- Pre-Natal Radiation Exposure Instruction, and
- Site Specific Training

A Training Matrix is provided as Attachment 5.1 summarizing the training requirements as specified in this procedure. Training may be waived provided the individual has had a general radiological safety briefing by the RPS and is assigned a full time escort; however, access to a contaminated area or high radiation area will not be permitted without the necessary training.

2.0 REFERENCES

- 2.1 10CFR19.12, *Instruction to Workers*
- 2.2 10CFR20, *Standards for Protection against Radiation*
- 2.3 USNRC NUREG-1558, Volume 18, *Consolidated Guidance about Materials Licenses, Program Specific Guidance about Service Provider Licenses*

- 2.4 USNRC Reg Guide 8.13, *Instruction Concerning Prenatal Radiation Exposure*
- 2.5 USNRC Reg Guide 8.15, *Acceptable Programs for Respiratory Protection*
- 2.6 USNRC Reg Guide 8.29, *Instruction Concerning Risks from Occupational Radiation Exposure*
- 2.7 CS-AD-PR-002, *Commercial Services Project Records*
- 2.8 CS-RS-PG-001, *Commercial Services Radiation Protection Program*
- 2.9 CS-RS-PG-002, *Respiratory Protection Program for Radionuclides – Commercial Services Projects*

3.0 GENERAL

3.1 Definitions

- 3.1.1 *Authorized User* – A designated EnergySolutions employee who has adequate training and experience to use, possess, or provide services involving radioactive materials controlled under an EnergySolutions radioactive materials license.
- 3.1.2 *Practical Factors* – An adequate physical demonstration on the use of required personnel protective equipment (PPE) including donning and doffing protocols, as well as an oral demonstration/understanding of radiation protection principals and procedures as it pertains to situational conditions.
- 3.1.3 *Radiation Worker I (RW-I)* – A person who has adequate radiation safety training and experience to be assigned duties involving exposure to radiation and/or radioactive material where, in the course of their employment, they are likely to receive in a year an occupational dose of radiation greater than 100 millirem (mrem) [1 millisevert (mSv)].
- 3.1.4 *Radiation Worker II (RW-II)* – A radiation worker (RW-I) who has adequate respiratory protection training to be allowed to wear respiratory protection.
- 3.1.5 *Radiation Protection Supervisor (RPS)* – A designated EnergySolutions employee who has the adequate applied health physics experience and familiarity with the EnergySolutions RPP and procedures.
- 3.1.6 *Restricted Area* – An area to which access is limited and controlled by the licensee for the purpose of protecting individuals against an undue risk from exposure to radiation and radioactive materials or other hazards.

- 3.1.7 *Training* – Instructions provided to personnel that are required to safely perform their duties in a regulatory and procedurally compliant manner. Training may be self-study, on-line study, classroom instruction, and/or demonstration or a combination thereof.

3.2 Responsibilities

Note: Depending upon personnel qualifications and the size of the project, project personnel may be assigned multiple roles and/or responsibilities.

3.2.1 Project Manager (PM)

The Project Manager is responsible for ensuring that the proper procedures and programs are implemented on the project site as required by customer agreements and contracts. The PM is responsible for ensuring that these programs and procedures are properly incorporated into project-specific plans and procedures. The PM is responsible for ensuring that Commercial Services and/or client programs and procedures are available for use by field personnel.

3.2.2 CS Radiation Safety Officer (RSO)

The CS RSO maintains and oversees the implementation of the CS RPP. The CS RSO shall ensure that radiation safety, radioactive materials management, and radiological operations procedures and programs are kept up to date such that they comply with current regulations and incorporate current and relevant industry practices and regulatory guidance.

3.2.3 Authorized User (AU)

The AU is responsible for implementing the *EnergySolutions* Radioactive Materials License (RML) at the temporary project site and for ensuring that all site activities are performed in accordance with the RML.

3.2.4 Radiation Protection Supervisor (RPS)

The RPS is responsible for implementing the CS RPP and the project specific radiological requirements at the field project location. The RPS manages and oversees the technicians performing radiation protection surveys and site monitoring and reports directly to both the PM and the CS RSO.

3.2.5 Project Health Physicist (PHP)

The PHP is responsible for assisting the CS RSO in providing health physics support to the PM and RPS. This includes technical support to

ensure procedural and regulatory compliance and to ensure that the project specific Data Quality Objectives are met.

3.2.6 Radiation Worker (RW-I and RW-II)

The RW is responsible for safely performing project work as assigned while following the EnergySolutions RPP procedures and Work Plans.

3.3 Precautions and Limitations

3.3.1 Training shall be commensurate for the work activities that the individual may perform and the hazards to which they may be exposed.

3.3.2 Training shall be administered to personnel prior to performing project activities which directly handle radioactive materials and prior to entering any restricted area as applicable.

3.3.3 Re-training may be necessary whenever there is a significant change in assigned work duties, operating conditions, change in regulations, or following any radiological incident or event.

3.3.4 Refresher training shall be required annually unless otherwise specified.

3.3.5 Re-training shall be required for the correction of deficiencies in an employee's job performance.

3.3.6 Radiation Worker training is required for non-escort access.

3.3.7 Site-specific or task-specific training cannot be challenged or be subjected to grant of equivalency of other training.

3.4 Records

3.4.1 Lesson plans and training objectives

3.4.2 Graded exams

3.4.3 Graded practical factor records

3.4.4 Required reading/briefing sheets

3.4.5 Training certificates or completed attachments to this procedure

4.0 REQUIREMENTS AND GUIDANCE

4.1 Challenge Testing and Exemptions

4.1.1 Project personnel may opt to challenge specific training based on a worker's prior education, certification and/or experience to forgo the

classroom or self-study portion of Radiation Worker training (RW-I). A challenge test shall be administered and evaluated by the EnergySolutions CS RSO. The test shall be made up of multiple choice or discussion-type questions that are chosen to test the employee's knowledge of the topics covered by general Radiation Worker training.

- 4.1.2 Personnel who show documented proof of extensive experience in working within radiologically controlled areas may be exempted from the Practical Factors portion of training and evaluation. The CS RSO shall evaluate and approve all Practical Factors training exemptions.
- 4.1.3 Personnel who show documented proof of current Radiation Worker training equivalent to the training in this procedure may be exempted from Radiation Worker training. The project RPS or the CS RSO shall evaluate and approve all training exemptions.
- 4.1.4 The CS RSO may evaluate documented training given by parties external to the license program for equivalency. CS RSO shall document the evaluation of equivalent training for personnel for which credit is granted on Attachment 5.11 of this procedure
 - Training for Authorized User or Radiation Protection Supervisor is not subject to equivalency due to the project-specific nature of this training content.
 - Date on which the equivalent training was completed shall be captured as the initial start date for consideration of retraining frequency.

4.2 General Employee Radiological Training

- 4.2.1 General Employee Radiological Training (GERT) shall be performed for all non-radiation worker personnel who may have incidental contact or work in the general vicinity with radioactive materials.
- 4.2.2 GERT training shall consist of general awareness training and basic radiation protection fundamentals as follows:
 - RAM Controls
 - Time/distance/shielding
 - Dose/Exposure
 - Area postings
 - General risk(s)
- 4.2.3 Document GERT training using Attachment 5.2, *GERT Briefing Sheet*.

4.3 Radiation Worker (RW-I)

- 4.3.1 Initial Radiation Worker (RW-I) training shall consist of both classroom lecture or self-study and a Practical Factors demonstration.
- 4.3.2 RW-I training may be tailored, as necessary, by the RPS and as approved by the CS RSO for the particular project or work tasks to be performed and the radiological hazards present.
- 4.3.3 RW-I training shall cover the topics as provided in Attachment 5.3, Radiation Worker Training Outline.
- 4.3.4 RW-I training shall be evaluated through a written test made up of multiple choice or discussion-type questions that are chosen to test the employee's general knowledge of the topics covered by the training.
- 4.3.5 Each individual who requires radiological training shall receive Practical Factors training from the RPS or designee. Training shall be commensurate with expected duties and hazards.
- 4.3.6 Practical Factor training shall be evaluated through the proficient demonstration of the following as applicable.
- Properly review the RWP and understand the PPE and monitoring requirements.
 - Proper selection and inspection of PPE,
 - Properly don and doff PPE,
 - Properly wear dosimetry (SRD and/or TLD).
 - Demonstrate the proper frisking techniques.
 - Demonstrate the proper response to alarms and other emergency and situational conditions such as a radiological spill, medical emergency, security breach or observed/unplanned release.
- 4.3.7 Refresher training shall be performed annually with a 30 day grace period. Refresher training may be challenged as specified in Section 4.1 above.
- 4.3.8 Radiation Worker training as provided by EnergySolutions CS organization shall be documented using the form provided in Attachment 5.4, *Radiation Worker Training Record*, or equivalent.

4.4 Respiratory Protection (RW-II)

Note: All individuals should be medically qualified prior to training as donning a respirator is part of the training; otherwise, do not allow the individual to don a respirator if they have not been medically cleared.

4.4.1 All individuals must be qualified Radiation Workers in order to receive respiratory protection training.

4.4.2 Personnel shall be medically clear prior to fit-testing.

4.4.3 Respiratory Protection training shall be provided to individuals who voluntarily wear respiratory protection.

4.4.4 All personnel who are required to use respiratory protection while conducting radiological work shall be trained according to the requirements found in Reference 2.9, CS-RS-PG-002, *Respiratory Protection Program for Radionuclides - Commercial Services Projects*. Respiratory Training shall consist of the following:

- Types of respiratory protection equipment and protection factors (APR, PAPR, Supplied Air, SCBA)
- Proper selection of respiratory protection equipment and usage
- Fit testing requirements
- Properly inspecting equipment including filters, gaskets, inhalation and exhalation valves, straps, face to facepiece seal, etc.
- Personnel grooming
- Donning the respirator
- Positive and negative pressure leak tests
- Doffing the respirator
- Cleaning, maintenance and storage, and
- Emergency relief from respiratory protection

4.4.5 Practical Factor training shall be evaluated through the proficient demonstration of the use of respiratory protection as outlined in Section 4.4.4 above.

4.4.6 Refresher training shall be performed annually with a 30 day grace period.

- 4.4.7 There shall be no grace period for the medical exam required for wearing respiratory protection equipment.
- 4.4.8 Respiratory Protection training as provided by EnergySolutions CS organization shall be documented using the form provided in Attachment 5.5, *Respiratory Protection Training Record*, or equivalent.

4.5 Authorized User (Radioactive Materials License)

- 4.5.1 The individuals experience and qualifications, (i.e. resume), shall be reviewed by the CS RSO prior to AU training to ensure the individual has the proper experience and tools to be an AU.
- 4.5.2 Authorized Users shall receive specific training on the EnergySolutions' radioactive materials license(s) used at the field project site and the conditions of the Radioactive Materials License (RML) as applicable.
- 4.5.3 Authorized User training shall be performed by the CS RSO.
- 4.5.4 AU training shall include the following:
- RML reciprocal recognition and advance notifications
 - RML possession limits and inventories
 - Authorized work tasks and uses under the RML
 - Records maintenance
 - Radioactive materials storage and security
 - Regulatory notifications and postings
 - General knowledge of the EnergySolutions CS RPP
- 4.5.5 All AUs shall receive approval by the Commercial Services Radiation Safety Committee.
- 4.5.6 Refresher training shall be performed annually with a 30 day grace period and upon the receipt of any license amendments.
- 4.5.7 AU training shall be documented on Attachment 5.6, *Authorized User Training Record*, or equivalent.

4.6 Radiation Protection Supervisor

- 4.6.1 The RPS shall be qualified Radiation Worker (RW-I or RW-II) as applicable.
- 4.6.2 The individuals experience and qualifications, (i.e. resume), shall be reviewed by the CS RSO prior to RPS training to ensure the individual has the proper applied Health Physics experience and tools to be an RPS.
- 4.6.3 RPS training shall be performed by the CS RSO.
- 4.6.4 RPS training shall include the following as it pertains to the EnergySolutions RPP and procedures:
- Authorized work tasks and uses under the RML
 - Familiarity with EnergySolutions RPP procedures and procedural requirements
 - ALARA program and principles
 - Personnel monitoring and air sampling
 - Instrumentation
 - Area postings and radioactive materials control
 - Radiation Work Permits
 - Contamination controls
 - Radioactive materials storage and security
 - Radiological surveys and materials release
 - Respiratory Protection
 - Records maintenance
- 4.6.5 All RPSs shall receive approval by the Commercial Services Radiation Safety Committee.
- 4.6.6 Refresher training shall be performed annually with a 30 day grace period.
- 4.6.7 RPS training shall be documented on Attachment 5.7, *Radiation Protection Supervisor Training Record*, or equivalent.

4.7 DOT Hazmat Subpart H

- 4.7.1 All project personnel involved with any aspect of waste handling at the project site shall receive DOT Subpart H training. This may include but is not limited to the following:
- Waste container receipt and inspection
 - Waste loading and handling
 - Securing waste packaging
 - Marking and labeling
 - Waste shoring
 - Waste shipping
- 4.7.2 DOT Subpart H training shall be commensurate with the specific work tasks that each individual is responsible to perform.
- 4.7.3 Training shall be designed to ensure the project waste will meet the disposal site WAC, ensure package integrity and conformance and that all DOT shipping requirements are met.
- 4.7.4 DOT Subpart H training shall be evaluated through a written test made up of multiple choice or discussion-type questions that are chosen to test the employee's general knowledge of the topics covered by the training.
- 4.7.5 DOT Subpart H training as provided by *EnergySolutions* CS organization shall be documented using the form provided in Attachment 5.8, *DOT Subpart H Training Record*, or equivalent.

4.8 Pre-Natal Radiation Exposure Instruction

- 4.8.1 All Radiation Workers shall receive instruction in the possible health risks to an unborn child if exposed to radiation during pregnancy. The CS RSO or designee shall give this instruction, normally at the time of Radiation Worker training or prior to the issuance of dosimetry.
- 4.8.2 All other personnel who may come into incidental contact with radioactive materials while at the project site shall also have the instruction.
- 4.8.3 Pre-natal instruction shall be performed in accordance with Reference 2.4, USNRC Reg Guide 8.13, *Instruction Concerning Prenatal Radiation Exposure*. Workers shall have an opportunity to review the documents and ask questions about the contents of each Guide.

- 4.8.4 After receiving the instruction, all personnel are required to acknowledge their understanding by completing Attachment 5.9, *Pre-Natal Radiation Exposure Policy Acknowledgement Statement*.

4.9 Site Specific Training

- 4.9.1 In addition to the above training, site specific training shall be performed to the following, depending upon the Project requirements and documentation:
- Project Work Plans
 - Health and Safety Plan
 - Project Procedures
 - RWPs
 - Job Hazard Analyses
- 4.9.2 Site specific training may be performed either by Project Management instruction or self study.
- 4.9.3 Site specific training shall be documented either by signing a document review or briefing form attached to the specific document or by completing Attachment 5.10, *Required Reading Log / Record* or equivalent.

4.10 Visitors

- 4.10.1 All site visitors shall be trained in accordance with Section 4.2.
- 4.10.2 Visitors may be exempt from training provided they are assigned a full time escort; however, access to a contaminated area or high radiation area will not be permitted without the necessary training.

4.11 Training Records and Documentation

- 4.11.1 All training records shall be maintained at the project site.
- 4.11.2 All records shall be maintained in accordance with Reference 2.7, CS-AD-PR-002, *Commercial Services Project Records*.

5.0 ATTACHMENTS AND FORMS

- 5.1 Training Matrix**
- 5.2 GERT Briefing Sheet**
- 5.3 Radiation Worker Training Outline**
- 5.4 Radiation Worker Training Record**
- 5.5 Respiratory Protection Training Record**
- 5.6 Authorized User Training Record**
- 5.7 Radiation Protection Supervisor Training Record**
- 5.8 DOT Subpart H Training Record**
- 5.9 Pre-Natal Radiation Exposure Policy Acknowledgement Statement**
- 5.10 Required Reading Log / Record**
- 5.11 Training Equivalency Review**

(Attachment 5.1)

Training Records Matrix

Training	GERT / Visitor ^b	RW-I Radiation Worker	RW-II Respirator Qualification	AU	RPS
General Awareness Briefing and Rad Fundamentals	✓	N/A	N/A	N/A	N/A
Radiation Worker Classroom Instruction and/or self study ^a	N/A	✓	✓	✓	✓
Radiation Worker Graded Exam ^a	N/A	✓	✓	✓	✓
Practical Factors Exam ^a	N/A	✓	✓	✓	✓
Medical Clearance	N/A	N/A	✓	N/A	N/A
Respiratory Protection Training	N/A	N/A	✓	N/A	N/A
Fit Test	N/A	N/A	✓	N/A	N/A
Prenatal Radiation Exposure Policy Acknowledgement Statement	✓	✓	✓	✓	✓
DOT Subpart H ^c	N/A	✓	✓	✓	✓
RML Instruction	N/A	N/A	N/A	✓	N/A
EnergySolutions RPP Instruction	N/A	✓ ^d	✓ ^d	✓ ^d	✓
Radiation Safety Committee (RSC) Approval Required	N/A	N/A	N/A	✓	✓

^a Challenge testing or exemptions authorized based upon CS RSO approval.

^b Prenatal Instruction only required if entering a restricted area (Escort required).

^c DOT Subpart H training commensurate with the work tasks to be performed.

^d RPP instruction commensurate with the work tasks to be performed and documented via required reading log.

(Attachment 5.2)

GERT Brief Sheet

I acknowledge that I have received general employee radiation training and understand the hazards as present on-site. I have been instructed to the following:

- Health hazards from radiation exposure
- Relative risks of radiation exposure
- Exposure limits, federal and administrative (Visitors, minors, non-occupational worker, occupational RW)
- Identification of restricted areas
- Area postings and access requirements
- Personnel monitoring
- ALARA principle
- Time/distance/shielding
- Radioactive Materials controls

Name (Print)	Signature	SSN (xxx-xx-####)	Date

**(Attachment 5.3) Radiation Worker Training Outline
(Example)**

1. Radiation Fundamentals
 - a. Ionizing and non-ionizing radiation
 - b. Radiation / Radioactive Materials / Contamination
 - c. Atomic Make-up
 - d. Radiation emissions (alpha, beta, positron, gamma, neutron)
 - e. Characteristics of emissions
 - f. Radioactive decay and half-life
2. Units
 - a. Dose
 - b. Exposure Rate
 - c. Contamination
 - d. Activity
3. Background
 - a. Terrestrial
 - b. Cosmic
 - c. Man-made (Fall-out)
 - d. Medical Exposure
 - e. Manufactured items and consumables
 - f. Quantify background
4. Contamination (Loose vs. Fixed)
 - a. Definitions
 - b. Contamination limits
 - c. Contamination Controls
 - d. PPE
5. Airborne Contamination
 - a. Definition
 - b. DAC
 - c. Respiratory Protection
 - d. Respiratory Protection requirements
6. Radiation Exposure
 - a. Exposure Limits (Federal and Administrative)
 - b. Biological affects (Somatic / Genetic / Teratogenic; Stochastic vs. non-stochastic)
 - c. Threshold and non-threshold models - Hormesis affect
 - d. Radiosensitivity
 - e. Pre-natal exposure
 - f. Relative risks of occupational exposure
 - g. Acute Exposure
 - h. Chronic Exposure
 - i. Shallow Dose – Skin Dose
 - j. Lens of the Eye
 - k. Deep Dose Equivalent (DDE) – Whole Body
 - l. Committed Effective Dose Equivalent (CEDE) – Organ Dose
 - m. Weighting Factors

- n. Total Effective Dose Equivalent (TEDE) – Total Dose
- 7. ALARA Principle
 - a. Time, distance, shielding
 - b. Minimizing exposure
- 8. Personnel Monitoring
 - a. TLDs, SRDs, EDs
 - b. How they work
 - c. How to wear dosimetry
 - d. How to read SRDs and EDs
 - e. ED alarm setpoints
 - f. Air Sampling (General Area, breathing zone, perimeter)
 - g. CAMs
 - h. DAC-hr tracking (ALI, DAC, DAC-hr)
 - i. Bioassay
 - j. Public and non-occupational worker monitoring
- 9. Instrumentation and Detection
 - a. Types of instruments and uses.
 - b. Dose rate
 - c. Contamination
 - d. Personnel frisking
 - e. Gamma Spectroscopy
 - f. Liquid Scintillation
 - g. MDA and MDC
- 10. Personnel Protective Equipment
 - a. Modesty clothing
 - b. Protective clothing
 - c. Face shields
 - d. Respiratory protection equipment
 - e. Level C, B, A
- 11. Radioactive Materials Control
 - a. Radiologically Controlled Areas (RCAs) and definitions (CA, AA, RMA, RA, HRA, VHRA)
 - b. Area Boundaries
 - c. Area Postings
 - d. Administrative controls
 - e. Engineering controls
 - f. Equipment and materials release
- 12. Emergency Procedures
- 13. Energy *Solutions* RPP
 - a. Policy Statement
 - b. Programs
 - c. Procedures

(Attachment 5.4) Radiation Worker Training Record

RW-I: Classroom Instruction / Self Study:

- Radiological fundamentals
- Types of ionizing radiation and characteristics
- Background radiation
- Radiation Exposure and associated risks
- ALARA principle
- Time / distance / shielding
- Personnel Monitoring
- Personnel Protective Equipment
- Work permits and procedures
- Instrumentation and detection
- Personnel frisking
- Radioactive Materials Control
- Emergency procedures and response
- Energy *Solutions* RP program and procedures
- Equipment and materials release

I have reviewed and/or been instructed in the above subjects and topics:

Name (PRINTED)

Signature

SSN (xxx-xx-####)

Exam Results: Passing Grade (80%)

Examination Grade: _____ Pass / Fail

RW-I: Practical Factor:

- | | | | |
|--|------------------------------|--------------------------------|------------------------------|
| 1. Demonstrated ability to understand the RWP and entry requirements | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 2. Properly selected PPE per the RWP | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 3. Properly inspected PPE | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 4. Properly donned PPE | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 5. Properly wears dosimetry | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 6. Properly responds to situational condition as presented below:

_____ | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 7. Demonstrated good Rad Work practices | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 8. Properly doffs PPE | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 9. Properly performs whole body frisk | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |

Comments / Notes: _____

I have reviewed the graded radiation worker exam and all comments to the practical factors and resolved any lack of understanding and/or any questions that I may have had.

Name (PRINTED)

Signature

Date

_____ has successfully demonstrated the knowledge and practical abilities as described above and is qualified as a radiation worker.

Instructor (PRINTED)

Signature

Date

(Attachment 5.5) Respiratory Protection Training Record

RW-II: Classroom Instruction:

- Airborne Radioactivity Areas
- DAC and DAC-hrs
- Medical clearance
- Types of respiratory protection (APR / PAPR / Air Line / SCBA)
- Protection Factors
- Respiratory relief requirements
- Personal grooming requirements
- Contact Lenses vs Spectacle Kits
- Equipment issue / sign-out
- Filter selection
- Equipment Inspection (Gaskets, filters, valves, straps, dry-rot and deformation)
- Face to Facepiece Seal
- Negative and Positive pressure test
- Escape respirator use
- Doffing respiratory protection
- Equipment decon and disinfecting
- Equipment maintenance and storage

I have been instructed in the above subjects and topics regarding respiratory protection:

Name (PRINTED)

Signature

SSN (xxx-xx-####)

RW-II: Practical Factor:

- | | | | |
|---|------------------------------|--------------------------------|------------------------------|
| 1. Demonstrated proper respirator selection and understood PFs | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 2. Properly inspected respirator | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 3. Properly donned respirator | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 4. Performed negative and positive pressure seal test as applicable | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 5. Understood the importance of the fit test | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 6. Understood the importance of proper grooming | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 7. Properly doffed respirator | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 8. Properly disinfected the respirator | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |
| 9. Properly repackaged and stored the respirator | <input type="checkbox"/> SAT | <input type="checkbox"/> UNSAT | <input type="checkbox"/> N/A |

Comments / Notes: _____

I have reviewed the graded radiation worker exam and all comments to the practical factors and resolved any lack of understanding and/or any questions that I may have had.

Name (PRINTED)

Signature

Date

_____ has successfully demonstrated the knowledge and practical abilities as described above and is qualified to wear respiratory protection.

Instructor (PRINTED)

Signature

Date

(Attachment 5.6) Authorized User Training Record

Radioactive Materials License No.: _____

Amendment Number: _____

Licensing Agency: _____

Type of Training: Initial Refresher

- Authorized User responsibilities
- Personnel training requirements
- License reciprocity and use at temporary job sites
- Advance notification requirements
- Multiple license conditions (division of responsibilities)
- EnergySolutions RP Program overview
- Origination of radioactive materials at the work site
- Radioactive Materials possession limits and inventories
- Authorized uses under the license (Mobile Decommissioning and Decontamination)
- Gauging devices and source handling
- Source control requirements
- Records maintenance
- Radioactive Materials storage and security requirements
- Regulatory notifications and workplace postings
- Emergency notification requirements and phone numbers.
- Increased security controls (as applicable and need to know basis)
- Job completion requirements (records submittal and regulatory notifications)
- First notifications and condition reports

Name (PRINTED)

Signature

SSN (xxx-xx-####)

The individual above has been instructed to the radioactive materials license and license conditions and has been approved by the Radiation Safety Committee as an Authorized User of the RML.

Radiation Safety Officer (PRINTED)

Signature

Date

(Attachment 5.7) Radiation Protection Supervisor Training Record

Type of Training: Initial Refresher

- Radiation Protection Supervisor responsibilities
- Authorized uses under the license (Mobile Decommissioning and Decontamination)
- EnergySolutions Radiation Protection Program review
- Personnel monitoring requirements
- EnergySolutions instrument procedural review
- EnergySolutions survey procedural review
- EnergySolutions ALRA program
- Air sampling and analysis
- Personnel training requirements
- Area postings
- EnergySolutions radiation work permits
- Radioactive material storage and control
- Area access controls
- Personnel contamination reporting
- First notifications and Condition reports
- Increased security controls (as applicable and need to know basis)
- Emergency response protocols
- Waste management
- Establishment of dose goals

Name (PRINTED)

Signature

SSN (xxx-xx-####)

The individual above has been instructed to the EnergySolutions Radiation Protection Program and procedures and has been approved by the Radiation Safety Committee a Radiation Protection Supervisor based upon their training and applied health physics experience.

Radiation Safety Officer (PRINTED)

Signature

Date

(Attachment 5.8) DOT Subpart H Training Record

Description of responsibilities: _____

- | | |
|---|---|
| <input type="checkbox"/> Container receipt and inspection | <input type="checkbox"/> Container closure and inspection |
| <input type="checkbox"/> Disposal site WAC | <input type="checkbox"/> Marking and labeling |
| <input type="checkbox"/> Container loading requirements | <input type="checkbox"/> |
| <input type="checkbox"/> Container handling requirements | <input type="checkbox"/> |

Exam Results: Passing Grade (80%)

Examination Grade: _____ Pass / Fail

I have reviewed the DOT Subpart H training exam and resolved any lack of understanding and/or any questions that I may have had.

Name (PRINTED) *Signature* *Date*

_____ has successfully completed the DOT subpart H training for the
_____ project work site as it pertains to their role and responsibilities
as specified above.

Instructor (PRINTED) *Signature* *Date*

(Attachment 5.9) Prenatal Radiation Exposure Policy
Acknowledgement Statement

All EnergySolutions field project personnel including Radiation Workers, project management and supervisors, and any staff members who may receive radiation exposure or be affected by a declaration of pregnancy are required to acknowledge their understanding of the Declared Pregnant Worker Policy by signing the following statement:

By signing this statement, I affirm that I have received instruction in the possible health risks to an unborn child if exposed to radiation during pregnancy. At a minimum, the following topics were discussed in my training:

- *Sensitivity of the embryo/fetus to radiation exposure during the pregnancy.*
- *The gestational administrative dose restriction that is applied to the embryo/fetus of a declared pregnant woman (150 mrem per ES-RS-PG-001, Section 4.4.1).*
- *Importance to avoid non-uniform exposure (50 mrem/mos)*
- *The definition of a declared pregnant worker.*
- *How to officially declare a pregnancy.*
- *Dose assessment from estimated date of conception to date of declaration.*
- *Restriction of activities as necessary.*
- *The voluntary nature of a pregnancy declaration.*
- *How to formally withdraw a pregnancy declaration.*
- *The expected action to be taken in response to a pregnancy declaration.*

I have been provided with paper or electronic copy of USNRC Reg Guide 8.13, Instruction Concerning Prenatal Radiation Exposure and USNRC Reg Guide 8.29, Instruction Concerning Risks from Occupational Radiation Exposure. I have reviewed the two Regulatory Guides and have been given an opportunity to ask questions about the contents of each document. I understand that I may contact the EnergySolutions Commercial Services Radiation Safety Officer or my Site Radiation Protection Supervisor at any time with additional questions.

Name of Worker (PRINTED)

Name of Trainer (PRINTED)

Signature of Worker

Signature of Trainer

Date

Date

(Attachment 5.10)

Required Reading Log / Record

I have read and understand the requirements as stipulated in the following project documents and procedures:

Name (PRINTED)

Signature

SSN (xxx-xx-####)

Document Number	Document Title	Date Reviewed

(Attachment 5.11) Training Equivalency Review

This form may be used to evaluate and document training given outside of the ES RM License program that meets applicable objectives described in this procedure. The license RSO may grant credit for externally-delivered training to meet requirements of this procedure.

- Check all that apply:
- Radiation Worker (RW-1)
 - RW-1 Practical Factor
 - Respiratory Protection (RW-II) Qualification
 - RW-II Practical Factor
 - DOT Subpart H

		Yes	No
Evaluation:	Objectives consistent with applicable attachment?	<input type="checkbox"/>	<input type="checkbox"/>
	Training knowledge assessed via written test?	<input type="checkbox"/>	<input type="checkbox"/>
	Competent organization delivery training?	<input type="checkbox"/>	<input type="checkbox"/>
	Training completion date documented?	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

<u>Dates</u>	Qual	Delivery	Expiration
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Comments

Attach all supporting information and documentation

Review Performed by: _____ RSO _____ Date