1. PREREQUISITE

Subcontractor/supplier personnel responsible for radiological control of field radiography operations shall be trained to the requirements of this RD in accordance with RD-5000, Subcontractor Quality Assurance Program Requirements and RD-1008, Training and Indoctrination.

2. SCOPE

This document provides radiological control for subcontracted industrial radiography activities performed at the Idaho National Laboratory (INL).

This procedure includes controls for:

- Verification of qualification or certification of radiography personnel
- Establishing INL specific operating and emergency actions
- Verification of subcontractor radiography license.

This procedure applies to all industrial radiographic operations performed by subcontractor personnel at INL facilities utilizing sealed sources or X-ray machines up to an including 400 keV primary beam output. Radiography is performed outside established radiographic vaults/caves (open or other than permanent radiographic installation).

This procedure <u>does not</u> apply to:

- X-ray machines above 400 keV primary beam output
- Neutoron generators and accelerators, or
- Radiographic activities conducted in radiography vaults/caves in accordance with approved safety analysis reports.

3. REQUIREMENTS

Performer	Responsibilities
INL Technical Point of Contact or Project Manager	Notify the RSO prior to radiographic operations. Ensure documentation of subcontract radiographer qualifications are submitted via the vendor data system. Ensure documentation of subcontract radiography license is submitted via the vendor data system.

	Ensure subcontractors identify radiation generating devices (RGDs) to Radiological Control Department prior to transport of devices onto INL facilities.
INL Radiological Control Department	Provide registration of RGDs and/or radiography sealed sources as requested. Monitor emergency or off-normal incidents, for instituting corrective actions safely.
INL Radiograhy Safety Officer	Verify subcontractor radiographers and radiographer assistants have necessary qualifications or certifications. Submit status of subcontractor radiography personnel qualifications to the INL TRAIN system Review subcontractor radiography safety program documents. In conjunction with Radiological Control Department, monitor emergency or off-normal incidents, for instituting corrective actions safely.
Subcontractor Radiographer (RT)	Perform radiography in accordance with subcontractor license, training, and INL specific instructions. Supervise radiographer's assistant performance of radiography.
Subcontractor Radiographer's Assistant (RTA)	Perform radiographic operations under supervision of the radiographer.

3.1 INL Project Manager or Technical Point of Contact: Ensure the following actions are completed:

3.1.1 Subcontractor Radiography license documentation is submitted via vendor data system for approval.

3.1.2 Subcontractor Radiographer certification and Radiographer's Assistant qualification documentation are submitted via vendor data for approval.

3.1.3 Ensure subcontractor Radiation Generating Device (RGD) are registered with INL RGD coordinator prior to use at INL.

3.1.4 Ensure subcontractor Radiography sealed sources are registered with INL seal source accountability and control coordinator prior to movement onto INL facilities.

3.1.5 Ensure subcontract radiography personnel are construction radiation worker qualified.

3.2 Subcontractor:

3.2.1 Identify Radiography sealed sources or x-ray machines intended for use prior to moving equipment on site.

3.2.2 Submit Radiographer certifications and Radiographer's Assistant qualifications.

3.2.3 Radiography personnel: Attend a documented review, conducted by INL RSO of operation requirements for radiography as described in this procedure.

3.3 INL RSO perform following:

3.3.1 Ensure subcontract personnel approved for radiography are listed in INL TRAIN system for appropriate qualification code and expiration date of approval status (12-months).

3.4 Radiographic Operations

3.4.1 Initiate form 441.58, Field Radiography Checklist, Section I, at least 24-hours in advance of scheduled RT operations.

3.4.2 Ensure completion of form 441.58, Section II, items 1 through 4, on the shift radiography is to be commenced.

3.4.3 Ensure form 441.58, section IV, comments are added as necessary based on Section II evaluations.

3.5 Radiographer: In addition to performing radiography in accordance with license requirements, ensure the following actions are completed:

3.5.1 Sign form 441.58, section II, item 5 in accordance with form instructions prior to commencing radiography.

3.5.2 Complete form 441.58, Section III, data entries as indicated on form and form instructions.

3.5.3 Ensure posting of the area in which radiography will be performed, including any adjacent areas, in accordance with the Radiation Work Permit (RWP).

3.5.3.1 Set the radiation area boundary and posting at a point where survey instrument readings would result in a total external dose no greater than 2 mR in any one hour, taking into consideration shielding, distance from the source and the

time in which the source is unshielded or not secured in any one hour.

3.5.3.2 Set the high radiation area posting at a point where estimated total external dose no greater than 100 mR in any one hour would occur, taking into consideration shielding, distance from the source and the time in which the source is unshielded or not secured in any one hour.

3.5.4 Search and clear the area in which field radiography will be performed and adjacent areas, as applicable. Clear the area of unauthorized personnel. Give special attention to possible personnel occupancy or the other side of walls, ceilings, floors or barriers.

3.5.5 Announce a verbal warning prior to commencement of radiography operations in those areas affected. Make use of voice paging systems when appropriate.

3.5.5.1 If unusual or abnormal conditions occur, STOP WORK and maintain radiographic area control and immediately notify Line Management responsible for the work being performed. Subcontract Management.

3.5.5.2 Radiation area boundary readings will be verified during first exposures in a series of exposures under similar conditions and boundaries adjusted as necessary by the radiographer.

3.5.6 Return the exposure device to an approved source storage area at the completion of the radiographic operation in accordance license requirements.

3.5.7 Line Management and Subcontractor Management are to make notification for any unusual or abnormal RT events, as applicable:

3.5.7.1 Immediately notify Facility Management for event classification.

3.5.7.2 Verify that RSO for Radiography and Radcon Director have been notified of the unusual or abnormal conditions.

3.5.7.3 Notify the Subcontract Administrator and the Subcontract Technical Representative or Construction Field Representative.

3.5.8 Subcontractor Maintenance Activities

3.5.8.1 Subcontractor: Maintain equipment as identified in licensing documents.

3.5.8.2 If equipment is in use at INL facilities, report defect or impaired function to: RadCon Director, RSO, or designated alternates.

4. DEFINITIONS

Terms utilized in this RD are defined in LST-359.

5. REFERENCES

RD-1008, Training and Indoctrination

RD-5000, Subcontractor Quality Assurance Program Requirements

Form 441.58, Field Radiography Checklist

6. APPENDIXES

None.