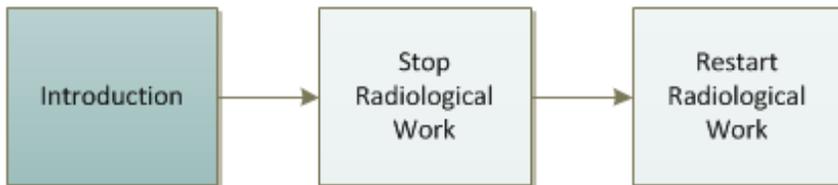

SUBJECT AREA CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

Periodic Review Due: **Apr 28, 2018**



Introduction

This subject area describes the procedure for stopping radiological work that does not meet Laboratory requirements or creates a threat of unplanned radiological exposures or releases.

Only individuals trained in Radiological Worker 1 and General Employee Radiological Training (GERT) courses can issue a stop-work order. GERT and Radiological Workers do not have to be an expert in the area of concern and do not have to be involved in the work in question. It is the responsibility of GERT and Radiological Workers to issue a stop-work order whenever radiological work does not meet Laboratory requirements or creates a threat of unplanned radiological exposures or releases.

Continual improvement of radiological performance is a high priority at BNL, and each worker trained in the radiological stop-work procedure is expected to:

1. Point out and ensure correction of poor radiological work practices whenever they occur. In most cases, all that should be necessary is calling attention to the problem.
2. Respond positively to radiological cautions provided by a co-worker.
3. Immediately abide by a radiological stop-work instruction.

Supervisors do not need to invoke a formal stop-work order in exercising their normal responsibilities to monitor work in progress and to ensure proper adherence to BNL practices.

This subject area also describes the procedure for restarting work after a stop-work order is resolved.

This subject area contains the following sections:

1. [Stop Radiological Work](#)
2. [Restart Radiological Work](#)

Standards of Performance

All staff and users shall identify, evaluate, and control hazards in order to ensure that work is conducted safely and in a manner that protects the environment and the public.

All staff and users shall ensure that they are trained and qualified to carry out their assigned responsibilities, and shall inform their supervisor if they are assigned to perform work for which they are not properly trained or qualified.

All staff and users shall conduct work within the facility-specific operational boundaries specified in Facility Use Agreements.

All staff and guests shall ensure that personnel radiation exposure is maintained As Low As Reasonably Achievable (ALARA).

All staff and guests shall promptly report accidents, incidents, injuries, Environmental, Safety, Security & Health (ESS&H) deficiencies, emergencies, and off-normal events in accordance with procedures.

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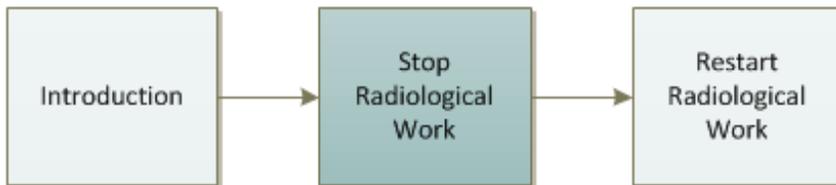
Questions/Comments

SUBJECT AREA PROCEDURE CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

Periodic Review Due: **Apr 28, 2018**



This information applies to BNL staff and non-BNL staff trained in General Employee Radiation Training (TQ-GERT) or Radiological Worker (RWT-001), who observe a significant deviation from Laboratory radiological work requirements.

Stop Radiological Work

1. Issue a stop-work order when there is a significant deviation from Laboratory radiological requirements. The following are some examples of significant deviations:
 - Discovery of work that is being conducted without adequate work planning, such as work in a "High Radiation Area" or a "Contamination Area" without a Radiological Work Permit (RWP);
 - Intentional disregard of established radiological requirements or direction from a Radiological Control Technician;
 - Operation of radiation-producing equipment with interlocks bypassed without prior review and approval;
 - Potential for unplanned exposures greater than 50 mrem to a visitor or minor, or greater than 100 mrem to a worker;
 - Any single skin contamination > 5,000 counts per minute (cpm) beta/gamma on a frisker.
2. State the following when issuing a stop-work order: **"Stop work. You are in violation of radiological requirements because..."** If an individual refuses to stop work, immediately bring this to the attention of your supervisor or "Facility Support Representative." Once a stop-work order is given:
 - The workplace is to be placed in a safe condition.
 - All work in the affected activity is to stop.
 - All workers are to report to their supervisor.

Work is not to resume until safety reviews are performed and the Department Chair/Division Manager or equivalent line manager has authorized restart. See the section on Restarting Radiological Work.

3. Inform the BNL Event Categorizer of issue(s) in accordance with guidance in the Event/Issues Management Subject Area, and coordinate with the Facility Support Representative to submit a Radiological Awareness Report (RAR) (Refer to the Radiological Issues--Communication and

Resolution Subject Area).

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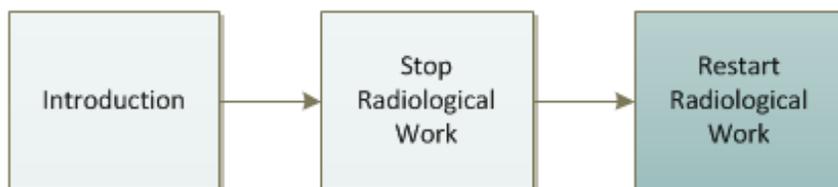
Questions/Comments

SUBJECT AREA PROCEDURE CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

Periodic Review Due: **Apr 28, 2018**



This information applies to Department Chairs/Division Managers (or Delegate) who is responsible for reviewing the conditions for stopping work and authorizing the restart of work.

Restart Radiological Work

1. The Department Chair/Division Manager (or Delegate) for the work activity(s) that was stopped, with support from Radiological Control Division staff, after consulting with the individual who initiated the "Stop Work Order," reviews the workplace activities and conditions, and determines the action(s) that must be completed before work may resume.
2. The Department Chair/Division Manager (or Delegate) authorizes restart after corrective actions and safety reviews are completed.

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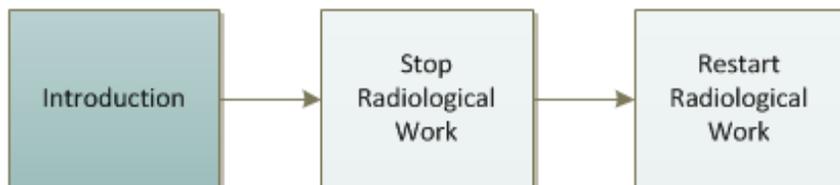
Questions/Comments

REQUIREMENTS CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

Periodic Review Due: **Apr 28, 2018**



Reporting Obligations

None

External/Internal Requirements

BNL has to abide by all applicable Prime Contract clauses, DOE directives, industry standards, as well as Federal, state, and local laws. BNL develops its policies and procedures based on an evaluation of these external requirements. This Subject Area implements the following requirements:

Requirement Number	Requirement Title
10 CFR 830. Subpart A	Energy, Nuclear Safety Management, Quality Assurance Requirements
10 CFR 830.200 - Subpart B	Safety Basis Requirements
10 CFR 835	Energy/Occupational Radiation Protection
42 USC - Chapter 84 - Subchapter XVI (EEOICPA)	TITLE 42—THE PUBLIC HEALTH AND WELFARE, CHAPTER 84—DEPARTMENT OF ENERGY, SUBCHAPTER XVI—ENERGY EMPLOYEES OCCUPATIONAL ILLNESS COMPENSATION PROGRAM; Energy Employees Occupational Illness Compensation Program Act of 2000, as amended.(EEOICPA)
BSA Contract No. DE-SC0012704 - Clause C.4	Statement Of Work
BSA Contract No. DE-SC0012704 - Clause H.13	Source And Special Nuclear Material

BSA Contract No. DE-SC0012704 - Clause I.131 (DEAR 970.5223-1)	INTEGRATION OF ENVIRONMENT, SAFETY, AND HEALTH INTO WORK PLANNING AND EXECUTION (DEC 2000)
O 231.1B Admin Change 1 (Nov 28 2012)	Environment, Safety and Health Reporting
O 410.2	Management of Nuclear Materials
O 414.1D Admin Chg 1 (May 8, 2013)	Quality Assurance
O 420.1C (Dec 12, 2012)	Facility Safety
O 420.2C(Jul 21, 2011)	Safety of Accelerator Facilities
O 433.1B (Apr 21, 2010)	Maintenance Management for DOE Nuclear Facilities
O 435.1 Change 1	CRD - Radioactive Waste Management
O 458.1 Change 2(Jun 6, 2011)	Radiation Protection of the Public and Environment
O 460.1C (May 14, 2010)	Packaging and Transportation Safety
P 420.1 (February 8, 2011)	Department of Energy Nuclear Safety Policy
P 450.4A (Apr 25, 2011)	Integrated Safety Management Policy

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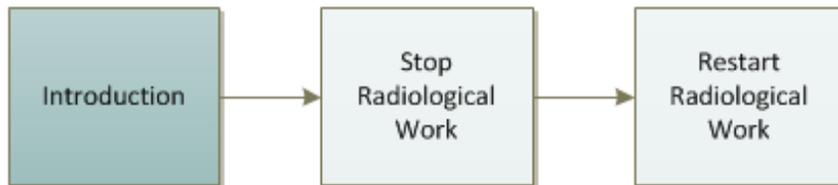
Questions/Comments

TRAINING CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

Periodic Review Due: **Apr 28, 2018**



Training

This subject area contains the following training requirements (see the [BNL Training and Qualifications](#) website):

- General Employee Radiation Training (TQ-GERT)
or
Radiological Worker (RWT-001)

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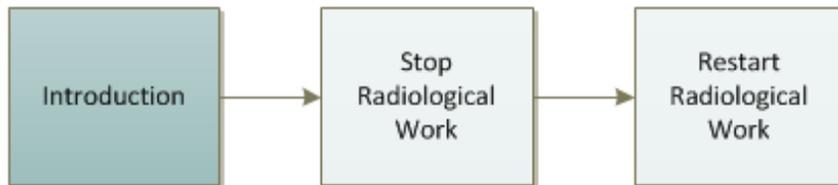
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CHANGES CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

Periodic Review Due: **Apr 28, 2018**



Revision History

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Revision Number	Revision Type	Revision Date	Revision Description
1.5	Minor	04/28/2015	The subject area was completely reviewed and published in the new SBMS layout with minor editorial changes.
1.4	Minor	03/27/2014	The subject area was completely reviewed and a link was added to the new Radiological Issues—Communication and Resolution Subject Area to clarify the process for Radiological Awareness reporting and completion of documentation in step 5 of the section Stopping Radiological Work.
1.3	Minor	02/18/2011	The subject area was completely reviewed and no changes were needed.
1.2	Minor	03/03/2008	The subject area was completely reviewed. The Introduction and the section Stopping Radiological Work were revised and include the following changes: • Radiological Stop Work Training is incorporated in Radiological Worker 1 and GERT; • A significant deviation for any single skin contamination was modified to > 5,000 counts per minute (cpm) beta/gamma on a frisker; • Whole body frisking with a hand-held Frisker > 2 inches per second was added as an example of a hasty survey for radioactivity.
1.1	Minor	03/16/2005	A link to Radiological Awareness Reports in the Stopping Radiological Work . Radiological Control Procedures was added to step 5 in the section on Stopping Radiological Work.

1.0	Major	03/11/2005	This subject area describes the procedure for stopping radiological work that does not meet Laboratory requirements or creates a threat of unplanned radiological exposures or releases. It also contains the procedure for restarting the work after the stop-work order has been resolved. This subject area replaces the legacy document Radiological Stop Work Procedure.
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NOTE: The dates for "Major Revisions" match the Subject Area Effective Date. Major and/or Minor revisions may not always match with the "Last Modified Date", since this date could reflect changes to links or spelling. Records of changes are maintained in the SBMS documentation for each subject area.

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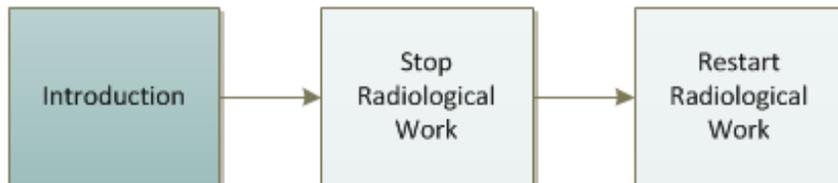
Questions/Comments

DEFINITION CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

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Definitions

Term	Definition
As Low As Reasonably Achievable (ALARA)	The approach to radiation protection to manage and control exposures (both individual and collective) to the work force and to the general public to as low as is reasonable, taking into account social, technical, economic, practical and public policy considerations. As used in 10 CFR 835, ALARA is not a dose limit, but a process that has the objective of attaining doses as far below the applicable limits of 10 CFR 835 as is reasonably achievable.
Radiological Awareness Report (RAR)	The Radiological Awareness Report (RAR) is a mechanism to communicate Radiological Control Management System issues for continuous improvement purposes.
radiological facility	Any facility using radioactive materials having the potential to cause radiological harm. There is no possession minimum for such a hazard.
Radiological Work Permit (RWP)	The work document that identifies radiological conditions, establishes worker protection and monitoring requirements, and contains specific approvals for radiological work activities. The RWP serves as an administrative process for planning and controlling radiological work and informing the worker of the radiological conditions.

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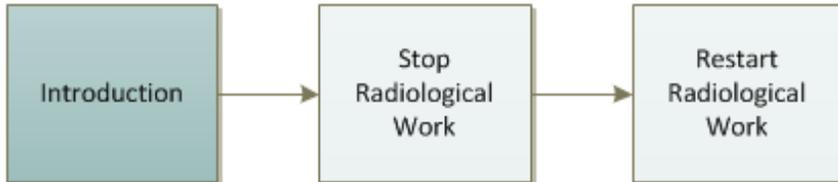
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LESSONS LEARNED CONTENT

Radiological Stop Work Subject Area

Effective Date: **Apr 28, 2015** ([Rev 1.5](#))

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Lessons Learned

BNL's Lessons Learned Program supports ongoing learning by collecting and sharing work experiences and good practices. This allows us to better understand risks and hazards and develop strategies to control them. Many managers share selected Lessons Learned with their staff at daily briefings and morning meetings to update everyone's knowledge and skills. The Program draws information from BNL, the DOE complex, and private industry. For more, [see the BNL Lessons Learned Program website](#).

Here is a selection of recent Lessons Learned related to this particular Subject Area:

Title	Date
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