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| BROOKHAVEN NATIONAL LABORATORY Safety & Health Services Division INDUSTRIAL HYGIENE GROUP | NUMBER IH50700 |
| | REVISION Final Rev6 |
| SUBJECT: Industrial Hygiene Requirements Management | DATE 10/14/09 |
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1.0 Purpose & Scope

This document describes the program the Safety and Health Services Division (SHSD) Industrial Hygiene Group (IHG) uses to track changes in legal requirements to ensure that BNL and SHSD Industrial Hygiene Group policies and documents remain in compliance with applicable requirements. The program is also intended to identify new requirements or changes at the proposal level before they are implemented, so that the Laboratory can plan for potential impacts. This procedure supplements the Laboratory's *Requirements Management System* described in SBMS.

The scope of this procedure applies to requirements (drivers) and best management proactive documents found in:

- DOE regulations, Orders, Notices, and Guides
- OSHA worker health and safety regulations,
- DOE mandated ANSI standards,
- ANSI standards incorporated by reference in OSHA regulations,
- ANSI standards used by BNL as best management practices,
- DOE mandated ACGIH *Threshold Limit Values*®,
- DOE mandated NFPA Standards,
- DHHS Etiological Agent requirements, and
- Other applicable drivers as appropriate.

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2.0 Responsibilities

This procedure is administered through the SHSD Industrial Hygiene Group.

2.1 The IH Group Leader is responsible to assign IH staff to conduct operations covered by this program.

2.2 The IH Group Subject Matter Experts (SMEs) are responsible to:

- Maintain up to date information regarding changes to regulations.
- Review proposed changes to regulations for potential impact to Laboratory operations.
- Apprise the Laboratory management and Departments/Divisions of the impact of requirement changes.
- Complete the notifications and documentation as required by the Requirements Management Subject Area.
- Initiate changes in Subject Areas and SHSD IHG level procedures, as necessary.
- Coordinate incorporation of requirements covering multiple hazards types, such as NFPA Standards for Chemicals.

3.0 Definitions

External Requirements Document: Any federal, state, or local law or regulation; DOE Directive; or other document that imposes requirements upon the Laboratory. Example include: OSHA regulations, DOE Executive Orders and the BSA Prime Contract.

Record of Decision (ROD): The SBMS documentation that illustrates how an external requirement document is being implemented at the Laboratory.

Subject Matter Expert (SME): For this SOP, the title SME refers to the roles of Standards Based Management System (SBMS) Subject Area Subject Matter Expert and/or IH Group Program Administrator.

4.0 Prerequisites none

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5.0 Precautions none

6.0 Procedure

- 6.1 The SME periodically (at least annually, ideally quarterly) reviews governmental agency websites and other resources for proposed or enacted changes to applicable drivers. The IH group accesses the appropriate sources for the drivers listed in Attachment 9.1.
- 6.2 The SME notifies the SBMS Office of any pending requirement changes that could potentially affect Laboratory operations if SBMS documentation needs updating. When a regulatory driver changes, the SME reviews the requirement for impact on BNL operations. The SME documents this review using the *External Requirements Document Record of Decision Form* found on the SBMS site at <https://sbms.bnl.gov/standard/02/0201e011.doc>. The SME maintain copies of appropriate documents in the Industrial Hygiene program files.

NOTE: The SBMS Office may notify the appropriate Management System Steward of the pending or proposed regulatory changes or new requirements that may impact Laboratory operations. The Management System Steward forwards the requirement to the SME for review.

- 6.3 The SME initiates changes in Subject Areas, training material, or SHSD procedures, if needed, so that the Laboratory achieves compliance with the new or changed requirements.
- 6.4 The SME contacts and coordinates with other SMEs to ensure the incorporation of drivers that cover multiple hazards into the appropriate SBMS Subject Areas and site level training material, so that the Laboratory achieves compliance with the new or changed requirements.
- 6.5 The SME distributes guidance information to the affected Department or Division if requirement changes impact Laboratory operations. The SME provides technical assistance to the line organization in the implementation of any new regulatory requirements and/or interpretation of the requirements as they pertain to the line.

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- 6.6 If BNL needs to implement corrective action(s), the SME identifies the responsibility to the line organization(s) and enters Corrective/Preventative Actions into the appropriate of the BNL Assessment Tracking System (ATS).
- 6.7 The person completing the periodic review stores the completed review survey form as per the SHSD IH Group Records Management procedure. The appropriate file code is IH50.

7.0 Implementation and Training

- 7.1 **Qualification Criteria:** The IH Group Leader will instruct all appropriate IH Group staff in their role relative to this procedure and will assign person(s) with technical knowledge and computer experience to conduct the periodic requirement reviews. Qualification is documented using Attachment 9.2. Re-qualification is required on a three year basis.

8.0 References

- 8.1 BNL SBMS Requirements Management Subject Area

9.0 Attachments

- 9.1 SHSD Industrial Hygiene Group- Regulatory Driver List
- 9.2 SHSD Industrial Hygiene Group- Qualification form.
- 9.3 Sample of the *Periodic Regulatory Driver Survey*

10.0 Documentation

| Document Development | | |
|---|---|---|
| PREPARED BY: <i>(signature and date on file)</i> R. Selvey Date 07/16/04 | REVIEWED BY: <i>(signature and date on file)</i> J. Peters Date 07/19/04 | APPROVED BY: <i>(signature and date on file)</i> R. Selvey IH Manager Date 07/20/04 |
| ESH Coordinator/ Date: <i>none</i> | Work Coordinator/ Date: <i>none</i> | SHSD Manager / Date <i>none</i> |

The only official copy is on-line at the SHSD IH Group website.
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|--|--|--|
| QA Representative / Date: <i>M. Snyder 11/15/06</i> | Training Coordinator / Date: <i>none</i> | Filing Code: IH52 |
| Facility Support Rep. / Date: <i>none</i> | Environ. Compliance Rep. / Date: <i>none</i> | Effective Date: 07/20/04 |
| ISM Review - Hazard Categorization <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low/Skill of the craft | Validation: <input type="checkbox"/> Formal Walkthrough <input checked="" type="checkbox"/> Desk Top Review <input type="checkbox"/> SME Review Name / Date: | Implementation: Training Completed: Tracked in BTMS Procedure posted on Web: 10/14/09 Hard Copy files updated: 10/14/09 Document Control: 08/01/08 |

| Revision Log |
|---|
| Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input checked="" type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input type="checkbox"/> Corrective/preventive actions to non-conformances <input checked="" type="checkbox"/> none of the above Section/page and Description of change: Changes to Section 6 to streamline the wording and improve clarity of actions. Updated Modified Attachment 9.1 to remove non essential entries and clarify BMP and Regulatory entries. Modified Section 10 to new format. Added Attachment 9.3 Periodic Review form. SME Reviewer/Date: (signature/date on file) R. Selvey 11/01/05 |
| Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input checked="" type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input checked="" type="checkbox"/> Corrective/preventive actions to non-conformances <input type="checkbox"/> none of the above Section/page and Description of change: Changes to Attachment 9.1 in the form of added or modified requirement/drivers. Changes resulted as corrective/preventative action form OHSAS 18001 NSF Registration Audit for Phase 3. Added Step 6.7 for records management. SME Reviewer/Date: (signature/date on file) R. Selvey 12/08/06 |
| Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input checked="" type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input checked="" type="checkbox"/> Corrective/preventive actions to non-conformances <input type="checkbox"/> none of the above Section/page and Description of change: Minor text changes marked in document resulting from QA Coordinator Review and comments from Training/Qualification Class. SME Reviewer/Date: (signature/date on file) R. Selvey 01/02/07 |
| Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input checked="" type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input type="checkbox"/> Corrective/preventive actions to non-conformances <input checked="" type="checkbox"/> none of the above Section/page and Description of change: Added P456.1 to Attachment 9.1. SME Reviewer/Date: (signature/date on file) R. Selvey 01/12/07 |
| Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input checked="" type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input checked="" type="checkbox"/> Corrective/preventive actions to non-conformances (DOE BHSO HazMat Surveillance 2008) <input type="checkbox"/> none of the above Section/page and Description of change: Added NFPA drivers and coordination with other SME to SOP: added third from last bullet in Section 1; added last bullet in Section 2.2; added Step 6.5; added NFPA to Attachment 9.1. Remove N450.7 from Attachment 9.1. SME Reviewer/Date: (signature/date on file) R. Selvey 08/01/08 |
| Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input checked="" type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input checked="" type="checkbox"/> Corrective/preventive actions to non-conformances (DOE BHSO HazMat Surveillance 2008) <input type="checkbox"/> none of the above Section/page and Description of change: Rev6: Updated the document control section in Section 6. SME Reviewer/Date: (signature/date on file) R. Selvey 10/14/09 |

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Attachment 9.1

Industrial Hygiene Regulatory Drivers

| Document | Title |
|---|---|
| 29 CFR 1910 | Labor/Occupational Safety and Health Standards |
| 1910.94 Ventilation 1910.95 Noise and Hearing Conservation 1910.120 Hazardous waste operations and emergency response 1910.133 Eye and face protection. 1910.134 Respiratory protection. 1910.135 Head protection. 1910.136 Foot protection. 1910.138 Hand protection. 1910.141 Sanitation. 1910.146 Permit-required confined spaces. 1910.151 Medical services and first aid. 1910.1000 Air contaminants. 1910.1001 Asbestos. 1910.1002 Coal tar pitch volatiles; interpretation of term. 1910.1003 13 Carcinogens (4-Nitrophenyl, etc.). 1910.1004 alpha-Naphthylamine. 1910.1017 Vinyl chloride. 1910.1018 Inorganic arsenic. | 1910.1020 Access to employee exposure and medical records. 1910.1025 Lead. 1910.1027 Cadmium. 1910.1028 Benzene. 1910.1030 Bloodborne pathogens. 1910.1043 Cotton dust. 1910.1044 1,2-dibromo-3-chloropropane. 1910.1045 Acrylonitrile. 1910.1047 Ethylene oxide. 1910.1048 Formaldehyde. 1910.1050 Methylenedianiline. 1910.1051 1,3-Butadiene. 1910.1052 Methylene Chloride. 1910.1096 Ionizing radiation. 1910.1200 Hazard communication. 1910.1450 Occupational exposure to hazardous chemicals in laboratories. |
| 29 CFR 1926 | Labor/Safety and Health Regulations for Construction |
| 1926.52 Noise 1926.54 Non-Ionizing Radiation 1926.55 Gases, vapors, fumes, dusts, and mists 1926.56 Illumination 1926.57 Ventilation 1926.62 Lead | 1926.95 Foot Protection 1926.100 Head Protection 1926.101 Hearing Protection 1926.102 eye Protection 1926.103 Respiratory Protection 1926.1101 Asbestos |
| 42 CFR 73 | Select Agents and Toxins |
| 10 CFR 850 | Chronic Beryllium Disease Prevention Program |
| 10 CFR 851 | DOE Worker Safety and Health Program |
| 5480.4 Change 3 | Industrial Hygiene Protection, Safety and Health Protection Standards |
| O 440.1A | CRD - Worker Protection Management for DOE Contractor Employees |
| M 231.1-1 Change 2 | Environment, Safety and Health Reporting Manual |
| P 456.1 | DOE- Secretarial Policy Statement on Nanoscale Safety |
| ACGIH TLVs | Threshold Limit Values for Chemical Substances and Physical Agents |

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|--------------|--|
| ANSI Z 136.1 | Safe Use of Lasers |
| ANSI Z 88.2 | Respiratory Protection |
| NTP | Department of Health and Human Services, National Toxicology Program (NTP) Carcinogen- Annual Report |
| IARC | Intl. Agency on Research on Cancer (IARC) Monographs on Carcinogen |
| NFPA | National Fire Protection Association |

IH Requirements Management

Job Performance Measure (JPM) Completion Certificate

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| Candidate's Name | Life Number: |
|------------------|--------------|

Practical Skill Evaluation: Demonstration of Evaluation Methodology by Oral Exam

| Criteria | Qualifying Performance Standard | Unsat. | Recov. | Satisf. |
|---|---|--------|--------|---------|
| Finding Requirement Changes | Demonstrates knowledge in how to periodically review appropriate sources: internet, governmental agency websites, and other resources (including personal contacts), workgroups, listservs, federal and state register publications. | | | |
| BNL Change Management Process | Demonstrates knowledge of the SBMS Office process for conducting requirement changes. | | | |
| BNL Level Documentation | Demonstrates knowledge in initiating and leading change in Subject Areas if needed. | | | |
| Site-wide Action | Demonstrates knowledge in initiating and leading general laboratory distribution of notifications of changes. Understands the process of getting entries entered into the BNL ATS or SHSD FATS. | | | |
| IH Group level policy and procedures | Demonstrates knowledge in making any necessary changes to SHSD IHG level programs or activities. | | | |
| Record keeping | Demonstrates knowledge in documenting corrective actions submitted to the SBMS Office using the <i>External Requirements Document Record of Decision Form</i> . Understands the need to send a copy of all documents generated as a result of this procedure to SBMS. Understands need to and where to maintain copies in the Program Administrator section of the Industrial Hygiene Group Leader's files. | | | |

I accept the responsibility for performing this task as demonstrated within this JPM and the corresponding SOP.

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| Candidate Signature: | Date: |
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I certify the candidate has satisfactorily performed each of the above listed steps and is capable of performing the task unsupervised.

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| Evaluator Signature: | Date: |
|----------------------|-------|

Periodic Regulatory Driver Survey

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|-------|------------|
| Date: | Review By: |
|-------|------------|

| Document | Requirement Title | Source that was reviewed | Current Date that is in effect | Change Y/N |
|-----------------------|--|--|--------------------------------|------------|
| 10 CFR 850 | Chronic Beryllium Disease Prevention Program | <input checked="" type="checkbox"/> CFR Search | | |
| 29 CFR 1910 | Labor/Occupational Safety and Health Standards | <input checked="" type="checkbox"/> CFR Search | | |
| 29 CFR 1926 | Labor/Safety and Health Regulations for Construction | <input checked="" type="checkbox"/> CFR Search | | |
| 40 CFR 61 - Subpart A | National Emissions Hazardous Air Poll | | | |
| 40 CFR 763 | Protection of the E | | | |
| 42 CFR 72 | Interstate Shipment of Etiologic Agents | <input type="checkbox"/> CFR Search | | |
| 5480.4 Change 3 | Industrial Hygiene Protection, Safety and Health Protection Standards | <input type="checkbox"/> DOE Web site | | |
| M 231.1-1 Change 2 | Environment, Safety and Health Reporting Manual | <input type="checkbox"/> DOE Web site | | |
| O 440.1A | CRD - Worker Protection Management for DOE Contractor Employees | <input type="checkbox"/> DOE Web site | | |
| N 450.7 | CRD - The Safe Handling, Transfer, and Receipt of Biological Etiological Agents at Department of Energy Facilities | <input type="checkbox"/> DOE Web site | | |
| ACGIH TLVs | Threshold Limit Values for Chemical Substances and Physical Agents | <input type="checkbox"/> ACGIH Web site | | |
| ANSI/ASHRAE Std 62 | Ventilation for Acceptable Indoor Air Quality | <input type="checkbox"/> ANSI Web site | | |
| ANSI C95 | Safety Levels with Respect to Human Exposure to Radiofrequency Electromagnetic Fields RF (200kHz - 100Ghz) | <input type="checkbox"/> ANSI Web site | | |
| ANSI Z 136.1 | Safe Use of Lasers | <input type="checkbox"/> ANSI Web site | | |
| ANSI Z 88.2 | Respiratory Protection | <input type="checkbox"/> ANSI Web site | | |
| ANSI Z 4.1-68 | Requirements for Sanitation | <input type="checkbox"/> ANSI Web site | | |
| SCSC | Suffolk County Sanitation Code | <input type="checkbox"/> Suffolk County Web site | | |

Sample
Consult the IH50700 folder in SHSD Shared Drive for most recent version.

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| Record of actions needed: |
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