Industrial Hygiene Program

Advanced Mixed Waste Treatment Project

Approval:

(Signature on file. See DCR-13996.)  12/17/14

Date
**AMWTP MANAGEMENT PROCEDURE**

MP-ISIH-2.11, Rev. 9  
Issued: 12/18/14  
Effective: 12/19/14

**Industrial Hygiene Program**

**REVISION LOG**

<table>
<thead>
<tr>
<th>Revision Number</th>
<th>Date Approved</th>
<th>Pages Affected</th>
<th>Description of Revision</th>
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<tbody>
<tr>
<td>0</td>
<td>8/23/02</td>
<td>All</td>
<td>Initial issue. DCR-1407</td>
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<tr>
<td>1</td>
<td>1/10/03</td>
<td>All</td>
<td>DCR 1611. Incorporate minor editorial changes from line management self-assessment provided by BNFL Inc. corporate review.</td>
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<tr>
<td>2</td>
<td>3/4/03</td>
<td>All</td>
<td>DCR-2058. Effective date changed in order to implement ISIH procedure. Updated procedure to reference INST-ISIH-2.11.9</td>
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<tr>
<td>3</td>
<td>4/10/06</td>
<td>All</td>
<td>DCR-4299. Incorporated blue sheet changes: Applied minor changes to apply new AMWTP template.</td>
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<td>4</td>
<td>09/18/06</td>
<td>All</td>
<td>DCR-5314. Changes made to transition to ISMS.</td>
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<tr>
<td>5</td>
<td>03/29/07</td>
<td>All</td>
<td>DCR-5794. Applied minor changes throughout document to reflect INST-ISIH-2.11.1 being cancelled.</td>
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<tr>
<td>6</td>
<td>04/23/08</td>
<td>Various</td>
<td>DCR-6826. Replacing DOE O 440.1A and/or 440.1B with 10 CFR 851.</td>
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<td>8</td>
<td>06/25/13</td>
<td>Pg 1, 3, &amp; 4</td>
<td>DCR-12450. Added steps for assessing employees with actual or potential toxicant exposure.</td>
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<tr>
<td>9</td>
<td>12/17/14</td>
<td>Various</td>
<td>DCR-13996. Change made to incorporate AI 86587 resolution—adding an item under Step 3.2.1 to make IS/IH accountable for investigating unknown potential hazards. Made some editorial changes.</td>
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1.0 PURPOSE/SCOPE

The purpose of this procedure is to capture those functional elements of the industrial hygiene program for the Advanced Mixed Waste Treatment Project (AMWTP) that have not been addressed elsewhere in the Environment, Safety, and Health Program; to establish responsibilities for those program elements; and to present an overview of the AMWTP commitment to Industrial Hygiene (IH).

The elements of this procedure are applicable to all AMWTP operations.

The subjects and related materials described in this procedure are based on the requirements of federal law, generally recognized industrial practices, and/or functional requirements for Industrial Hygiene as defined in 10 CFR 851, Worker Safety and Health Program.

The AMWTP is involved in a number of activities whereby employees may be exposed to chemical and/or physical agents that may be hazardous to their health, if proper protective measures are not taken. The AMWTP team uses safety and health procedures and instructions, safe work controls and practices, and safety training to effectively eliminate or mitigate the safety and health hazards present during operations at the AMWTP. The AMWTP is committed to maintaining a professional safety and health staff who are responsible for establishing, monitoring and compliance with safety protocols.

2.0 ROLES AND RESPONSIBILITIES

<table>
<thead>
<tr>
<th>Performer</th>
<th>Responsibilities</th>
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| Environmental, Safety, and Health (ES&H) Director or Designee | • Ensures that a professionally and technically qualified industrial hygienist manages and implements the IH Program.  
• Ensures that adequate resources are allocated to implement an IH Program. |
| Industrial Safety/Industrial Hygiene (IS/IH) Manager | • Directs and manages the IS/IH Program.  
• Ensures that the IH Program is implemented at AMWTP and that the program is managed and maintained in accordance with the requirements of 10 CFR 851.  
• Responsible for the planning and coordinating of all day-to-day activities with AMWTP personnel to anticipate, identify, evaluate, control, or eliminate potential hazards. |
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<table>
<thead>
<tr>
<th>Performer</th>
<th>Responsibilities</th>
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<tbody>
<tr>
<td>Site Occupational Medical Director (SOMD)</td>
<td>• Assesses employees with actual or potential toxicant exposures, make recommendations, and provide follow up care as required.</td>
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<tr>
<td>AMWTP Medical Coordinator</td>
<td>• Schedules employee appointments with SOMD as needed.</td>
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</tbody>
</table>
| IS/IH Professional or Designee | • Provides technical assistance to Operations line management (as necessary).  
• Helps to anticipate, identify, evaluate, control, or eliminate potential hazards. |
| Operations Line Management | • Maintains safety at the AMWTP and implementation of the relevant IH procedures and instructions. |

### 3.0 PROCEDURE

#### 3.1 Implementation of the Industrial Hygiene Program

3.1.1 **ES&H Manager or Designee**: Ensure that a professionally and technically qualified industrial hygienist is available to manage the IH Program at AMWTP and that the program is managed and maintained in accordance with the requirements of 10 CFR 851.

3.1.2 **IS/IH Professional or Designees**: Ensure that the IH Program addresses, as a minimum, those functional elements required by statutory, List B (contractual) and 10 CFR 851 requirements.

3.1.2.1 Ensure infrastructure requirements are incorporated into work authorization documents.

3.1.2.2 Plan and coordinate all day-to-day activities with AMWTP personnel to anticipate and control potential hazards in accordance with the specific instructions referenced in Section 3.2.

3.1.3 **SOMD**: In all cases of chemical hazard exposures, utilize IH protocols to characterize the exact toxicant.

3.1.3.1 Convey the information to Medical as soon as known.
3.1.3.2 Assess the employee and make any recommendations for testing and follow up.

3.1.4 AMWTP Medical Coordinator: Schedule any employee with actual or potential exposures to toxicants with the SOMD.

3.1.5 IS/IH Professional or Designee: Provide technical assistance to Operations line management as necessary.

3.1.5.1 Provide feedback to the ES&H director or IS/IH manager about deficiencies in the IH Program.

3.1.5.2 Perform IH sampling and send for analysis.

3.1.5.3 Provide sampling results to management, employees, and Medical (if exposures above threshold limit values or permissible exposure limits are determined).

3.1.6 Operations Line Management: Maintain safety at the AMWTP and implement the relevant IH procedures and instructions.

3.2 Requirements

3.2.1 This comprehensive and objective IH Program will reduce the risk of work-related diseases and injuries at the AMWTP. The AMWTP IH Program includes the following:

1. Initial or baseline surveys of all work areas or operations to identify and evaluate potential worker health risks.
2. Coordination with planning and design personnel to anticipate and control health hazards that facilities and operations introduce.
3. Periodic surveys and/or exposure monitoring, as appropriate.
4. Characterization and investigation of unknown potential hazards (e.g., suspected hazardous substances, liquids, odors, etc.) in order to prescribe mitigations and to ensure work areas are safe for normal work activities.
5. Documented exposure assessment of chemical, physical, and biological agents and ergonomic stressors using recognized exposure assessment methodologies and use of IH laboratories accredited by the American Industrial Hygiene Association (AIHA).
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6. Specification of appropriate engineering, administrative, work practice, and/or personal protective control methods to limit hazardous exposures to acceptable levels.

7. Worker education, training, and involvement.

8. Coordination with cognizant occupational medical, environmental, health physics, and work planning personnel.

9. The required use of respiratory protection equipment approved by the National Institute for Occupational Safety and Health (NIOSH), per the AMWTP Respiratory Protection Program. If ever warranted, any respirator used without NIOSH must be tested and found acceptable under the DOE Respirator Acceptance Program.

10. Policy and procedures to mitigate the risk from identified and potential occupations carcinogens.

11. Use of appropriate industrial hygiene standards.

12. Professional and technically qualified industrial hygienists to manage and implement the IH Program.

3.2.2 In all cases of chemical hazard exposures, IH protocols will be utilized to characterize the exact toxicant. The information will be conveyed to Medical as soon as known.

3.2.2.1 In the event an employee believes that they have been exposed to a chemical hazard, the employee will be evaluated by Medical for adverse effects.

3.2.2.1.1 If symptoms are significant/incapacitating, the chemical exposure will be considered a medical emergency and the individual(s) will be transported per ambulance to the appropriate emergency department for stabilization and treatment.

3.2.2.2 An AMWTP medical evaluation will occur prior to returning to work. The SOMD will meet with the involved individual(s) to explain test results, subsequent monitoring if required, and answer concerns.
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3.2.2.3 If exposure to a chemical hazard occurs with symptoms that do not mandate immediate transfer to a higher level of care, the individual(s) will be evaluated by Medical to ensure that symptoms are self limiting and improvement is occurring.

3.2.2.3.1 Baseline measurements will be taken to include blood pressure, pulse, and respiratory rate.

3.2.2.3.2 Pulmonary function tests will be obtained if the route of exposure or the toxicant potentially affects the lungs.

3.2.2.3.3 If the toxicant is known and a blood test is available to determine physiologic levels, then serum and complete blood count (CBC) blood analysis shall be obtained.

3.2.2.3.4 Follow up evaluation and testing will occur depending on the toxicant involved and the status of the employee(s). The SOMD will meet with the involved individuals to explain test results, subsequent monitoring, if required, and answer concerns.

3.2.2.3.5 If an individual feels they have received an exposure to a known or unknown chemical hazard, whether symptoms are present or not, they have a right to request an evaluation by AMWTP Medical. All encounters will be documented in the medical record.

3.2.2.3.5.1 If all questions and concerns have not been answered to the satisfaction of the involved individual(s), further testing or outside consultation will be attained along with further laboratory analysis and biological sampling. This will be completed to the satisfaction of the individual(s) to put all questions about the exposures to rest.
4.0 DEFINITIONS

None

5.0 REFERENCES

(1) 10 CFR 851, Worker Safety and Health Program

(2) MP-DOCS-18.2, Records Management

6.0 RECORDS

Records generated by this procedure are classified in accordance with the table below and dispositioned in accordance with MP-DOCS-18.2, Records Management.

<table>
<thead>
<tr>
<th>Record Description</th>
<th>Classification</th>
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<tr>
<td>MP-ISIH-2.11, Case File</td>
<td>Misc. Other Records/A16-1.2/Destroy 5 years after submittal.</td>
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7.0 EXHIBITS

None

8.0 APPENDICES

None