Hazard Analysis at SRNS

Jennifer Hughes
Safety Engineer, SRNS

John Hill, CIH, CSP
Health & Safety Program Manager, SRNS

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Integrated Safety Management Functions

Postjob Reviews
Issue Reviews
Fact Finding Reviews

Provide Feedback & Continuous Improvement

Define the Work Scope

Analyze the Hazards

Develop & Implement Hazards Controls

Perform Work Within Controls

Work

Pre-Job Brief

Job-Site Reviews
Questioning Attitude
Time Outs
Other Error Reduction Tools

Walkdowns
Hazards analysis
Task Preview-SAFER Review
Terms

You will hear these terms when discussing Hazard Analysis:

- **IHA (Individual Hazard Analysis)**
- **AHA (Assisted Hazard Analysis)**
- **Hazard Tree**
- **Technical Work Document**
- **Basic Hazard Control Handbook**
• **Hazard Analysis** - The process of identifying and analyzing hazards for *activity level work*, so that controls can be applied to protect the worker. The hazard analysis includes the hazards associated with work activity, work location/environment and the methods or tools/equipment that are used to perform the activity.

• **Hazard Tree** – A series of hazard related questions within the AHA application that have pre-determined dispositions that assist the Planner/Initiator and SMEs with the identification of hazards.
Terms

• Assisted Hazard Analysis (AHA) - AHA is a tool used to assist with the performance of the hazard analysis process. The AHA output is a **support document to a technical work document (TWD), but is not a TWD.**

• Individual Hazard Analysis (IHA) - The process that each worker uses to continuously analyze all work (including location, tools, time and techniques) for hazards and/or changing conditions at all times (before, during and after each job) to ensure the hazards are properly controlled. In all activity level work, there is some level of IHA that each worker must use to protect themselves. The general employee Basic Hazard Controls Handbook (BHCH), safety postings, and formal training are key elements of the IHA process.
Technical Work Document (TWD) – Documents that provide instruction for the performance of ‘hands on’ activity level work that supports facility or site processes. The following must be recorded in the TWD at a minimum: scope of the activity level work, location and the hazards and controls associated with the activity level work. Examples of TWDs include, but are not limited to, technical procedures, work instructions, packaging & closure instructions, vendor manuals, startup test procedures, and R&D work instructions.
The AHA application is an interactive process that links key roles together to perform a hazard analysis for activity level work. The roles include:

- **Planner/Initiator**
- **SMEs**
- **Supervisor**
- **Workers**
Hazard Analysis Process - Identification
The Planner/Initiator inputs all information.

Subtasks help identify hazards and controls for each part of the main work scope and are applicable to identify hazards and controls for additional work groups needed to complete the main task.

Walkdown participants are key to helping the Planner/Initiator identify the hazards of the work scope and the subtasks and include the appropriate SMEs.
Hazard Analysis Process – Determination Guide

Determination cannot be set until all questions are answered.

All Questions are to the left and in the upper right is the complete question text.

Mini Help is available for all questions!
A Team Determination is set when any part of Question 3 is answered YES and will require input into the Hazard Tree.
A Formal Determination is set when any part of Question 4 is answered YES and will require input into the Hazard Tree.
The Hazard Tree mimics the Determination Guide with all questions on the left, the complete question on the upper right, and mini help on the bottom right.
If a Main Question is answered YES then the sub-tier must be answered. If a Main Question is answered NO then the sub-tier doesn’t have to be answered.

The Hazard Tree currently uses 3 tiers. There is the main question and then sub-tier questions and then one more level of sub-tier questions.
Certain questions in the Hazard Tree will require input into the Chemical Entry.
Hazard Analysis Process – Chemical Entry

Chemical Entry has 3 parts – Chemical List, MSDS/SDS, and Process Chemical.
Hazard Analysis Process – Chemical Entry

AHA is linked to the Site Chemical Database. SDSs can be added either by the known number or by description.

The Planner/Initiator then selects Add Selected MSDS/SDS to add the chemical to the Chemical List.
In the Chemical List the Planner/Initiator must put the amount to be used, application type, and ventilation type. Also, they must select which subtask the chemical will be used. Once the list is complete, Chemical List Complete must be checked or the AHA cannot be finalized.
We also have Process Chemicals for things like Asbestos, Lead, Fumes from Hot Work, etc. to ensure that the correct SMEs are involved in the Hazard Analysis. The process chemical is added to the chemical list and requires SME input into the hazard analysis.
IHA is the final Determination option that exists in the Hazard Tree. This analysis ends at the Determination Guide and doesn’t go through the Hazard Tree. There are controls that are built into Questions 5 and 7. Question 6 requires the use of the Basic Hazard Control Handbook.
Hazard Analysis Process

Simply stated: IHA is the foundation of the hazard analysis process, and when applied properly with the Team/Formal Assisted Hazard Analysis (AHA), this provides a complete set of controls to protect workers while performing work.

Individual Hazard Analysis

- The personal act of continuously analyzing the entire work environment for changing hazardous conditions.

IHA is for routine daily activities such as walkdowns, walking to your work location, getting a tool from the tool crib, driving on-site, establishing a lock out, etc. In addition, there are a few specific activities that we credit within activity level work that is captured and controlled through the Determination Guide in the AHA Application.
Basic Hazard Controls

Begins with the Basics:

- Outlines the basic safety requirements
  - Hard copies distributed to line management
  - Electronic copies available on InSite

- Individual Hazard Analysis (IHA)
  - Process of using the basic safety requirements with workplace postings and other formal safety training for hazards that are encountered routinely
  - IHA enables each worker to perform work safely without any additional Subject Matter Experts involvement (e.g. Safety, IH, Radcon, Fire Protection, Engineering, Environmental, etc.)

- When uncertain about hazard controls being adequate enough, *Timeouts* are encouraged and expected.
Continuous Learning Process

- Evaluate over **20,000** AHA’s annually

- Considerable involvement at all levels (worker to management) when making process changes because it impacts Operations, Maintenance, Construction, Subcontractor Technical Representatives (STR’s), and SMEs (Safety, IH, Radiological, Engineering, Fire Protection, etc.).
THE END

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