

**FACILITY:** Advanced Mixed Waste Treatment Project

**BEST PRACTICE TITLE:** Winter Enclosure Improves Safety and Schedule

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**BRIEF DESCRIPTION OF BEST PRACTICE:**

Fewer occupational injuries and illnesses occurred and the aggressive construction schedule was maintained by enclosing the BNFL Inc. AMWTP during the frigid winter weather in Idaho. In addition, by preventing work stoppage due to adverse weather, the time for the completion of the Advanced Mixed Waste Treatment Project (AMWTP) was shortened by more than 2 months.

**WHY THE BEST PRACTICE WAS USED:**

The AMWTP construction schedule required construction activities to continue through the winter. The outside average mean temperature during the winter at the AMWTP located within the Idaho National Engineering and Environmental Laboratory is approximately 18 degrees Fahrenheit with a cumulative snowfall of approximately 25 inches. It is not unusual to have -20°F days in Idaho. Given the safety and quality issues associated with winter construction, an enclosure was the best solution for maintaining a safe working environment and conditions and for enhancing the work schedule.

**WHAT ARE THE BENEFITS OF THE BEST PRACTICE:**

Using the single large enclosure for winter construction significantly reduced the workers exposure to cold, icy and muddy surfaces, and eliminated cold stress within the enclosure. It also improved the quality of construction by keeping concrete pours warm until they had cured. Delays associated with cold weather were eliminated. The AMWTP construction was completed on time and with an excellent safety record.

At the end of the winter, the enclosure was sold recovering a portion of the cost. The use of this enclosure protected employees, improved working conditions, ensured the quality of construction activities and reflected significant financial benefits to the project.

**WHAT PROBLEMS/ISSUES WERE ASSOCIATED WITH THE BEST PRACTICE:**

Small enclosures are often used for winter construction but must be moved as work progresses. By utilizing a single, large enclosure, these issues were eliminated.

**HOW THE SUCCESS OF THE BEST PRACTICE WAS MEASURED:**

The use of the enclosure was measured in excellent safety performance and ahead of schedule completion of the AMWTP. The workforce also appreciated a more hospitable and safer working environment.

**DESCRIPTION OF PROCESS EXPERIENCE USING THE BEST PRACTICE:**

Pre-planning for winter construction identified potential safety and schedule issues. Using a single large enclosure was selected over multiple, smaller enclosures as a safer and more cost effective method.

Tent over the construction site during the cold and snowy winter in Idaho



**ISM Core Functions and Principles**

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| CF1 - Define Scope of Work                        | P1 – Line Management Responsibility for Safety           |
|   | P4 - Balanced Priorities                                 |
| CF2 - Analysis of Hazards                         |  |
| CF3 - Develop and Implement Hazard Controls       | P5 - Identification of Safety Standards and Requirements |
|   | P6 - Hazard Controls Tailored to Work Being Performed    |
| CF4 - Perform Work Within Controls                | P7 - Operations Authorization                            |
| CF5 - Provide Feedback and Continuous Improvement |  |