

Best Practice # 36
8/13/05

FACILITY: BNFL Inc. - East Tennessee Technology Park 3-Building D&D Project

BEST PRACTICE TITLE: Worker Led Multi Faceted Approach Improves Safety

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BRIEF DESCRIPTION OF BEST PRACTICE:

The ETTP 3-Building D&D Project includes the removal and disposition of over 328 million pounds of hazardous and radioactively contaminated materials and equipment from three buildings comprising more than 4.8 million square feet. This large D&D project involves heavy construction dismantling, removal, and disposal of process equipment, support materials, and waste. Lifts included stacks of sharp, ragged edge, corrugated steel from dismantling.

During early 1999, the Project's safety record was in need of significant improvement. The following changes were implemented:

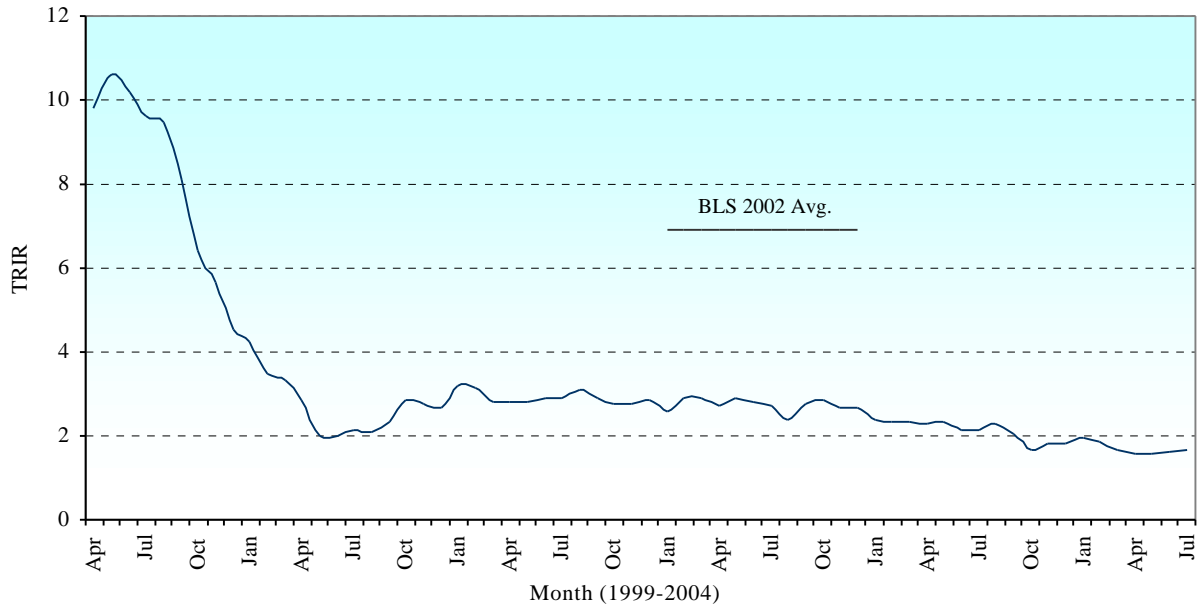
- Increased worker involvement in determining and implementing safety solutions.
- Re-evaluated and revised job hazard analyses and work procedures.
- Provided safety awareness training for employees.
- Assessments by top management of incidents with the injured employees and supervisor.
- Added initial incident reporting requirements to established procedures.
- Displayed current safety performance metrics as charts prominently in the work place.
- Obtained advice and assistance from outside, experienced, professionals and managers.
- Added safety professionals and managers with proven safety improvement experience.
- Issued safety performance reports monthly to management and ES&H staff.
- Discussed safety at start of all meetings.

WHY THE BEST PRACTICE WAS USED:

In April 1999, the project's safety record for Total Recordable Incident Rate (TRIR) was 10.62. The 2002 BLS average for the Miscellaneous Special Trade Contractors (SIC Code 179 - applicable to this project) was 6.9. Management recognized the need to improve communication between Management and Labor and seized the opportunity to empower the craft workers to become a more active participant in the safety program. It was recognized that significant changes had to be made in order to achieve significant safety performance improvement.

WHAT ARE THE BENEFITS OF THE BEST PRACTICE:

The changes caused dramatic safety improvements with minimal impact on productivity after the initial stand-down and restart. By the end of 1999, the TRIR improved 63% to 4.54, an important improvement (See chart below).



WHAT PROBLEMS/ISSUES WERE ASSOCIATED WITH THE BEST PRACTICE:

As safety performance improved, productivity also improved dramatically. After additional improvements, the Safety Program hit a plateau as evidenced by the TRIR ranging between 2.65-2.85. BNFL-ETTP, still striving to make project activities safer needed to further increase project-wide safety awareness.

HOW THE SUCCESS OF THE BEST PRACTICE WAS MEASURED:

Project Management proposed that the Building and Construction Trades partner in an improved manner with the Project’s Management to launch a Behavior Based Safety (BBS) process. After a series of meetings and visits to another BNFL Inc. project where behavior based safety had been successfully implemented, the stronger partnership was formed and the following changes were made in February 2002:

- Implemented the Behavior Based Safety process
- Provided awards and special recognition for improvements in safety.
- Implemented a Safety Incentive and Suggestion Program for improvements in safety.
- Implemented a joint Labor-Management Safety Committee
- Initiated Safety/Housekeeping Walk-down Inspection Committee.
- Established Incident Investigation Committee

The BBS Program increased employee morale and increased the overall sense that every employee had an impact on safety. The TRIR was reduced by an additional 25% and the Day Away Case Rate (DACR) was reduced by an additional 49%. For the third time in the past three years, the BNFL-ETTP Project celebrated One Million Safe Work-Hours. Also, the project has received a total of twelve (12) awards from the National Safety Council for safety improvement and for exemplary safety performance over the past seven years.

Additionally, the Project's BBS and Safety Committees instituted a community outreach program, safety performance and incentives related gifts and prizes, safety luncheons, improvements in personal protection equipment and process equipment, and started a safety partnership with a local vocational technical school. These activities further enhanced the Project's employees' morale. The benefits of these safety related activities can be seen not only in the improved safety of employees and associated safety performance metrics but also in the improved communication between Labor and Management.

DESCRIPTION OF PROCESS EXPERIENCE USING THE BEST PRACTICE:

Now, the hourly workforce has a much stronger ownership of their own safety. Additionally there is increased trust and partnership between the employees and management. As a result of the improved cooperation, the safety management systems, safety culture and behavioral attitudes have all seen significant improvement.

ISM Core Functions and Principles

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| CF1 - Define Scope of Work | 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 | P1 - Line Management Responsibility for Safety |
| | P2 - Clear Roles and Responsibilities |
| | P3 - Competence Commensurate with Responsibilities |

Behavior Based Safety Committee Members

