Best Practice # 37
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FACILITY: BNFL Inc. - East Tennessee Technology Park 3-Building D&D Project

BEST PRACTICE TITLE: Improved Electrical Controls

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BRIEF DESCRIPTION OF BEST PRACTICE:

To assist US DOE's reindustrialization efforts at its ETTP site in Oak Ridge, Tennessee, the DOE awarded a Decontamination and Decommissioning (D&D) contract to BNFL Inc. in 1997. The ETTP 3-Building D&D Project includes the removal and disposition of 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. This includes removing 44 miles of conduit and wiring per year on average.

A successful process was developed to minimize the occurrence of electrical incidents, which included the following:

- Isolating the energy source,
- Checking to ensure power has been removed from each electrical wire,
- Cutting a gap in each electrical wire,
- Removing the electrical wiring from the conduit, and finally
- Cutting and removing the electrical conduit.

WHY THE BEST PRACTICE WAS USED:

ETTP experienced several events involving cutting energized electrical cabling. Given the potential risk of serious injury or death from electricity, the project developed improvements to effectively eliminate this serious hazard.

WHAT ARE THE BENEFITS OF THE BEST PRACTICE:

The process provides assurance to the employees that the cables are de-energized before removal and that conduits are empty before they are removed.

WHAT PROBLEMS/ISSUES WERE ASSOCIATED WITH THE BEST PRACTICE:

This change in work practice required significant training to ensure that the entire workforce (more than 1000 people) fully understood this revised methodology.

HOW THE SUCCESS OF THE BEST PRACTICE WAS MEASURED:

No electrical incidents occurred from cutting conduit and wiring in 30 months after instituting the above process

DESCRIPTION OF PROCESS EXPERIENCE USING THE BEST PRACTICE:

This approach has been successfully adopted and implemented by other BNFL Inc. projects.

ISM Core Functions and Principles

CF1 - Define Scope of Work	P1 – Line Management Responsibility for Safety P4 - Balanced Priorities
CF2 - Analysis of Hazards	
CF3 - Develop and Implement Hazard Controls	P2 – Clear Roles and Responsibilities P3 – Competence Commensurate with Responsibilities P5 - Identification of Safety Standards and Requirements P6 - Hazard Controls Tailored to Work Being Performed
CF4 - Perform Work Within Controls	P7 - Operations Authorization