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NUCLEAR POWER PLANT APPLICATIONS OF BAR CODES AND OTHER AUTOMATIC IDENTIFICATION TECHNOLOGIES

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Principal Investigator:

ENCORE Technical Resources, INC.
INS, Inc.
Basic Technology Corporation

Project Manager:

L. F. Hanes
Electric Power Research Institute
P.O.Box 10412
Palo Alto, CA 94303
U.S.A.
Phone: (415) 855-2527

Objectives: The objective of the project is to:

- 1) Identify the plant functions and activities to which bar coding and related technologies are currently applied and quantify the benefits of these technologies.
- 2) Identify innovative applications with the potential for significant cost savings or other benefits, particularly in the area of plant operations and maintenance (O&M).
- 3) Develop bar code system recommendations and guidelines.

Comments: Analyses indicated that plant data collection and communication were important aspects of productivity-related problems. Bar coding represents a promising technology for reducing data-related personnel errors and inefficiency in nuclear power plant operations and maintenance.

Potential for dose limitation: The study revealed that while virtually every nuclear power plant applies bar coding in some way, about 80% use it only for conventional inventory control application. Few plants have applied the technology widely for plant O&M. Most nuclear industry bar code applications involve stand-alone systems operating on a dedicated PC with no exchange of data with other plant computers. While most plants spend \$100,000 to \$250,000 on bar code systems, few plants have conducted quantitative cost/benefit studies. Evidence indicated that existing bar coding applications have been quite cost effective, often with pay back periods of less than one year. Innovative applications of bar coding and other advanced automatic identification technologies may help nuclear power plants enhance productivity and achieve greater O&M cost savings.

References: EPRI TR-103955, Final Report, December 1994.

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