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American Nuclear Society

WITHDRAWN

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mobile radioactive waste processing systems

an American National Standard

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ERRATA

American National Standard Mobile Radioactive Waste Processing Systems, ANSI/ANS-40.37-1993

Table 2, Equipment Codes, on page 25, contains a typographical error. Footnote d of the table refers the user to Appendix A, item #10.

The correct item number is #8. The corrected table appears below.

Table 2

Equipment Codes

Equipment	Design and Fabrication	Materials[a]	Welder Qualification and Procedures	Inspection and Testing
Pressure Vessels	ASME B&PVC, Section VIII, Division 1	ASME B&PVC, Section II	ASME B&PVC, Section IX	ASME B&PVC, Section VIII, Division 1
Atmospheric Tanks	ASME B&PVC,[b] Section III, Class 3; or API 650; or AWWA D-100[c]	ASME B&PVC,[c] Section II	ASME B&PVC, Section IX	ASME B&PVC,[b] Section III, Class 3; or API 650; or AWWA D-100[c]
0-15 PSIG Tanks	ASME B&PVC,[b] Section III, Class 3; or API 620[c]	ASME B&PVC,[c] Section II	ASME B&PVC, Section IX	ASME B&PVC,[b] Section III, Class 3; or API 620[c]
Heat Exchangers	ASME B&PVC, Section VIII, Division 1; and TEMA[d]	ASME B&PVC, Section II	ASME B&PVC, Section IX	ASME B&PVC, Section VIII, Division 1
Piping and Valves	ANSI B31.1	ASTM; and ASME B&PVC, Section II	ASME B&PVC, Section IX	ANSI B31.1
Pumps	Manufacturers' Standards[e]	ASME B&PVC, Section II; or Manufacturers' Standards	ASME B&PVC, Section IX (as required)	ASME B&PVC,[b] Section III, Class 3; or Hydraulic Institute

[a] Manufactures' material certificate of compliance with material specifications may be provided in lieu of certified material test reports. Cast, wrought, or malleable iron shall not be used.
[b] ASME Code stamp, material traceability, and the quality assurance criteria of Appendix B to 10 CFR Part 50 are not required. Therefore, these components are not classified as ASME Code Class 3.
[c] Fiberglass-reinforced plastic tanks may be used in accordance with appropriate articles of Section X of the ASME Boiler and Pressure Vessel Code for applications at ambient temperature.
[d] See Appendix A, item # 8.
[e] Manufacturers' standard for the intended service. Hydrotesting should be 1.5 times the design pressure.

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American National Standard for Mobile Radioactive Waste Processing Systems

Secretariat
American Nuclear Society

Prepared by the
American Nuclear Society
Standards Committee
Working Group ANS-40.37

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American National Standard

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This standard was developed under the procedures of the Standards Committee of the American Nuclear Society; these procedures are accredited by the American National Standards Institute, Inc., as meeting the criteria for American National Standards. The consensus committee that approved the standard was balanced to ensure that competent, concerned, and varied interests have had an opportunity to participate.

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Comments on this standard are encouraged and should be sent to Society Headquarters.

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Foreword

(This foreword is not a part of American National Standard for Mobile Radioactive Waste Processing Systems, ANSI/ANS-40.37-1993, but is included for information purposes only.)

A key aspect for the further development of nuclear technology is the effective management of low-level wastes generated during the facility operation. Fundamental to the effective management of radioactive wastes is the design, construction, and operation of radioactive waste processing systems. Recently, there has been substantial interest in the use of mobile radioactive waste processing systems which can be transported from facility to facility. In the evaluation of these systems, there are several important factors which need to be considered. These include public health and safety, worker safety, economics, and the conservation of disposal site resources.

Radioactive waste processing systems must meet regulatory requirements for effluent releases and worker safety. Furthermore, waste forms produced by these systems need to meet the disposal site requirements to ensure that the burial facility performance objectives will be met. Economic considerations–involving equipment capital and operating costs, setup costs, transportation costs, and disposal charges–also play an important role in the choices of systems.

It is the purpose of this standard to establish those technical factors that affect the ultimate choice, design, and operation of the mobile radioactive waste processing system. It is the intent of this standard to identify a basis for establishing uniform practices and minimum requirements for the design, fabrication, and operation of mobile radioactive waste processing systems as applied to nuclear facility operations (power, institutions, laboratories, and disposal sites).

This standard addresses the technical practices and requirements necessary for radioactive waste processing operations while maintaining consideration for reducing radiation exposures to the environment and facility operating personnel.

The committee recommends that the use of additional mobile radioactive waste processing equipment, as described in this standard, be weighed against tight administrative controls to reduce waste volume generation and produce an acceptable product. Administrative procedures should be the first step in controlling the quantity of radioactive waste generated at a nuclear facility. The second step is the proper use of radioactive waste equipment to handle and process low-level radioactive wastes prior to disposal.

This standard was prepared by Working Group ANS-40.37 of the Standards Committee of the American Nuclear Society, whose membership at the time of the standard's approval was as follows:

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