

PREFACE

TMI-2: HEALTH PHYSICS AND ENVIRONMENTAL RELEASES

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Radiation protection requires the ability to alter responses to match needs. This expandability covers the range from natural environmental radiological measurements to operations that must be controlled with a stopwatch. The accident at Three Mile Island Unit 2 (TMI-2) required this expansiveness. Starting on the day of the accident, the work was divided between an off-site effort of environmental assessment and an on-site task of accident containment and recovery of facilities.

This issue serves to outline the work of several independent organizations. The groups worked separately to determine and assess releases to the environment, first manned entries into the reactor building, general practice of radiation protection for recovery workers, radiological characterization of the TMI-2 plant, and assay of nuclear fuel in primary and secondary systems. Significant technical development was required to enable or improve personnel dosimetry, protective clothing, respiratory protection, report and archive results, and assay contamination source terms including nuclear fuel.

During the early accident recovery period, "lessons learned" became an overused phrase. The expression served to preface the latest recommendation to improve equipment or training. Two important and clear lessons tend to be overlooked. First, exposure to the public was insignificant since the containment was adequate, and second, we were able to safely recover from a core melt accident.