

# ABSTRACT

## Generic Overview of the Status of Characterization Surveys & Guidance for Decommissioning

**Rateb (Boby) Abu Eid, Ph. D. ([boby.abu-eid@nrc.gov](mailto:boby.abu-eid@nrc.gov))**

*Division of Waste Management and Environmental Protection*

*U.S. Nuclear Regulatory Commission,*

*Washington D.C., 20555, USA*

This paper presents an overview of several topical areas pertaining to characterization and survey for decommissioning, including: U.S. NRC regulatory requirements for decommissioning & survey; a description of the decommissioning processes particularly role of characterization & survey; characterization survey types and NRC categorization of decommissioning groups; status of U.S. characterization survey guidance; and overview of key characterization & survey Issues. The specific topical areas are briefly discussed below:

- The paper addresses the U.S. NRC requirements under 10 CFR Part 20, Subpart E – “Radiological Criteria for License Termination, “and final status surveys requirements under 10 CFR 20.1501(a). Other requirements under 10CFR Parts 50.75, 50.82, 51.53, and 51.95) as well as, reporting and record keeping for decommissioning planning will be outlined. The paper also discusses NRC general decommissioning process for materials and fuel cycle facilities, as well as, for power reactor facilities.
- Strategy and planning for decommissioning using the data quality objectives (DQO) approach and its seven step process will be presented in some detail.
- The US NRC “Surveys & Site Investigation Process” as described in NUREG 1757 and categorization of “Decommissioning Groups” in the context of characterization and survey needs will be addressed.
- The paper briefly outlines methodologies, approaches, and status of U.S. multi-agency key guidance documents such as MARSSIM (NUREG-1575), MARSAME (NUREG-1575, Supp.1), and more recently, the NRC Subsurface Guidance NUREG/CR 7021.
- Dose modeling and software development/update in support of radiological survey and characterization for derivation of derived concentration guideline levels.
- Lessons Learned from Regulatory “Reviews of Survey Plans” particularly attributes of survey plans, common survey issues, and key aspects for decommissioning success are discussed in the paper.