

Abstract

Waste Characterization by the Department of Energy at the Energy Technology Engineering Center

The Energy Technology Engineering Center (ETEC) is a Department of Energy (DOE) facility undergoing D&D and soil and groundwater remediation and is located in Area IV of Boeing's Santa Susana Field Laboratory (SSFL). In 2020 the California Department of Toxic Substances Control (DTSC) and DOE signed an "Amendment to Order on Consent" (AOC) mandating classification and disposal of demolition debris from decommissioned facilities (decommissioned material) and facilities with no history of radiological use, as low-level radioactive waste (LLRW). This action was counter to established state and federal decommissioning guidance, counter to DOE's own waste minimization and sustainability policies and pandered to the dictates of the "cleanup-to-background" and "no safe level of radiation" activist agenda. Following shipment of decommissioned material and debris from non-radiological facilities to an *EnergySolutions* licensed LLRW disposal facility, a freedom of information act (FOIA) request was submitted by the author to DOE for shipping documents including NRC forms 540/541, "Uniform Low-level Radioactive Waste Manifests" and *EnergySolutions'* forms "Radioactive Waste Profile." The FOIA response revealed that a single instrument measurement of surface contamination and three wipe tests from a non-decommissioned, contaminated facility was used to characterize waste from not only the contaminated facility, but also three decommissioned facilities and four non-radiological facilities. Data on over 400 shipment manifests were systematically inconsistent and transparently illogical. Shipping manifests did not match waste stream profiles. Multiple different containers were assigned identical waste weights and identical total and individual activities. Container weighted average concentrations were derived from container total and individual radionuclide activities rather than vice versa. The apparent lack of any quality control of manifest data by all participants is troubling.

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Fifty years of experience in the nuclear industry, with leadership/management responsibility in nuclear plant reliability, safety analysis, probabilistic risk assessment, health physics, radiological risk assessment, nuclear decommissioning, and waste management & disposal.