LANL Nuclear Facility Categorization

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The U.S. Department of Energy (DOE) has defined four categories of nonreactor nuclear facility:

- Hazard Category 1 (HC-1),
- Hazard Category 2 (HC-2),
- Hazard Category 3 (HC-3), and
- Less-than-HC-3.

Although specific radionuclide threshold quantities have been established by DOE for the classification of HC-2 and HC-3 facilities, there are no quantitative thresholds to distinguish the less-than-HC-3 nuclear facilities from non-nuclear facilities. In fact, during the rulemaking process for 10 CFR 830, several comments requesting a threshold for nonreactor nuclear facilities were submitted. DOE disagreed with these requests, replying that the “nonreactor nuclear facility” definition, as written, is intended to cover all situations (other than nuclear reactors) with the potential to cause radiological harm.

Thus, it is the responsibility of the operators/managers of DOE facilities to identify which facilities are nuclear by the qualitative parameters provided. However, qualitative parameters require interpretation to be used. LANL has a proposal for defining the radiological limits below which “harm” to the worker cannot occur, thus establishing a quantitative method to calculate hazard threshold quantities and standardizing identification of nuclear facilities at the Los Alamos National Laboratory (LANL). This article will present the technical development and current status of the hazard threshold quantities.