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Comment

NRC staff correctly discourages development of an unrealistically-wide range of possible inadvertent intruder scenarios that conceivably represent any and all possible future human behaviors. The list of potential changes to intruder barriers in line 28 of page 4-3 should similarly be limited to those that are reasonably expected

Subsection 4.2.3 includes a statement that can be misleading to a licensee or reviewer (and not representative of a site's specific erosion processes). It is recommended that the sentence on line 25 of page 4-6 be revised to include context around site specific conditions.

Considering future distributive events by humans is an understandably challenging undertaking, but not impossible, as suggest by Staff. The statement made on line 8 of page 4-9 should be revised to reflect that the consideration of future disruptive human activities can be evaluated by limiting the scope of analyses to reasonably foreseeable near-term behaviors.

NRC's generic inadvertent intruder receptor scenarios were originally created to project inadvertent intruder doses at three generic sites (humid permeable, arid permeable, and humid impermeable). Because of the broad variety of site conditions, climates, meteorologies, geologies, hydrologies, and human behaviors, NRC staff's position that the generic scenarios are conservative and represent reasonably expected human activities in the near future is technically inaccurate and contrary to their own guidance supporting the importance of site-specific analysis (as is reflected in Section 4.3 of the draft Guidance). As such, line 7 of Page 4-11 should be revised to reflect site specific events in the reasonably foreseeable future.

NRC staff presupposes that it is reasonably expected that the site-specific soil and water conditions will support agricultural activities. Without considering what is reasonably expected or site-specific, guidance encouraging inclusion of these exposure pathways in this scenario is simply an arbitrary selection and cannot unequivocally be considered conservative. As such, the sentence beginning on line 40 of page 4-13 should be corrected to consider reasonably expected pathways.

Line 1 of page 4-16 should be corrected as, "*The intruder-agriculture scenario is assumed to be possible only if it is reasonably expected that a potable groundwater well can be successfully excavated and that the waste has been degraded to a form that is indistinguishable from soil.*"

Line 22 of page 4-16 should similarly be revised to read, "*Licensees may adopt the generic receptor scenarios described in Section 4.3.1.1 to demonstrate compliance by providing justification that if the facility's design, operation, and site are suitable for their use and are reasonably represented in the generic scenario characteristics.*"

Given the possible variability in reasonably expected site-specific activities, NRC staff's guidance in the sentence beginning on line 3 of page 4-19 should be revised reflect reasonably foreseeable site-specific behaviors.

It is recommended that NRC staff edit guidance for the review for model abstraction should include the importance of the abstract representation to what may be expected to occur at the site in the near term. Specifically, line 33 of page 4-26 should be amended to focus on the appropriateness of site-specific assumptions, data, and models.

Simple selection of generic codes, models, and parameters does not in and of itself create conservatism in the analysis. The caution on line 2 of page 4-27 regarding the use of site-specific models and codes should be mirrored to generic codes and models.

The importance of using realistic site-specific characterization should be better reflected in the stated objective in line 10 of page 4-30.

The example provided on line 35 of page 4-34 should be clarified to note that the example is only applicable to sites where housing construction is reasonably expected.

The behaviors listed on line 37 of page 4-35 should be related to expected activities at the site, not generically to ingestion of contaminated waste, soil, plants, and animal products.

The instructions to the assessment reviewer on line 43 of page 4-35 should clarify that the inadvertent intruder behaviors modeled should reflect those reasonably expected.