

Abstract: Proposed Environmental Site Closeout Concepts, Criteria, and Definitions Technical Background Document and Recommendations

This document describes a “contaminated site classification system” that is presented as an alternative to the existing ADEC system. The proposed classification system places all contaminated sites into the major categories of “open sites” and “closed sites.” The differentiation of open and closed site is based on the human health and environmental risk posed by the site. Closed sites must present a cumulative non-carcinogenic hazard index of less than 1 and a cumulative carcinogenic risk of less than 10^{-5} ; meet the GRO, DRO, and RRO criteria; and meet the environmental risk screening criteria. Open sites present existing or potential human health and/or environmental risks exceeding these criteria.

Closed sites may be differentiated into four categories based on an assessment of the risk associated with the migration-to-groundwater route if the soils are transported to another location. Open sites may be differentiated into three categories primarily based on: whether the site poses a human health or environmental risk under the existing land use; whether the site poses a potential risk assuming residential land use and that all exposure pathways are complete; and whether formal engineering and/or institutional controls are in place to manage the potential human health and environmental risks.

The assignment of a site into one of the open-site or closed-site categories may be described as determining the “site status.” Site status should be expected to change through time as sites are remediated and risks are managed by engineering and/or institutional controls.

The new proposed contaminated site classification system is recommended in place of the existing ADEC system because the existing system has several problems. The existing ADEC system places contaminated sites into three categories: (1) closed sites; (2) “no further remedial action planned” sites (NFRAP sites), also known as “conditionally closed” sites; and (3) open sites. Issues that raise concern about the existing ADEC system include the following:

1. Most Table B1, B2, and C criteria for petroleum hydrocarbon spills sites are overly conservative due to several types of assumptions (including those concerning phase partitioning, fuel compositions and the default site conditions).
2. The NFRAP/conditional closure status covers a wide range of human health risks—from sites with a high degree of risk (but stable concentrations or difficult to excavate) to sites with very low risk.
3. The division between open and NFRAP sites is not well defined, leading to inconsistent application and understanding.
4. The wide range of human health risks included in the NFRAP/conditionally closed status complicates risk communication, which complicates property transfers and property development.