

**Public Discussion Draft
RSR Wave 2 - Potential Changes to RSRs
Self-Implementing Engineered Controls
Class C Cleanup
August 5, 2013**

The Department of Energy and Environmental Protection is developing “public discussion drafts” of ideas for potential future amendment to DEEP regulations, or new provisions for regulations, to address remediation of releases and sites where hazardous substances have been released. Many of the subject matters for these drafts grew out of the Cleanup Transformation workgroup recommendations from November 2012. The purpose of the public discussion drafts is to provide more detail to the concepts set forth in the November 2012 Workgroup reports and the February 2013 Cleanup Transformation draft report. Also, this discussion draft is not a public hearing draft of a proposed regulation. DEEP will further shape and refine the discussion draft after considering public feedback, before proposing any formal proposed regulation for amendment/adoption and before initiating the formal regulation adoption process.

Purpose:

The Remediation Division is proposing amendments to the subsection of the Remediation Standard Regulations (RSRs), Section 22a-133k-2(f)(2) RCSA, governing the implementation of “Engineered Control of Polluted Soils” (“EC”). These changes are intended to allow engineered controls to be more flexible and more widely available to the regulated community, while retaining measures protective of human health and the environment. The proposed changes in the regulations include a provision for certain self-implementing ECs to address Direct Exposure concerns, will provide for changes in the requirements to include technical standards for self-implementing ECs, and will modify or clarify financial assurance and reporting requirements. The Remediation Division continues to evaluate a self-implementing engineered controls option for PMC in areas with a GB groundwater class, and/or any area served by public water and also to evaluate the applicability of a permeability of less than 10^{-6} cm/sec. DEEP requests feedback on what rules/standards should apply if an EC for Pollutant Mobility Criteria (PMC) is made self-implementing.

Note on editing: Starting with the RSRs Engineered Control provision as amended effective 6/27/13 as a baseline, the redline/strikeout below describes further proposed changes.

Engineered Control of Polluted Soils.

(A) Provided that an engineered control of polluted soils is implemented pursuant to subparagraphs (B) and (C) of this subsection, the requirements of subsections (a) through (e) of this section do not apply if:

(i) The Commissioner authorized the disposal of solid waste or polluted soil at the subject release area;

(ii) The soil at such release area is polluted with a substance for which remediation is not technically practicable;

(iii) The Commissioner, in consultation with the Commissioner of Public Health, has determined that the removal of such substance or substances from such release area would create an unacceptable risk to human health; or

(iv) The Commissioner has determined, after providing notice and an opportunity for a public hearing, that a proposal by the owner of the subject parcel to use an engineered control is acceptable because (aa) the cost of remediating the polluted soil at such release area is significantly greater than the cost of installing and maintaining an engineered control for such soil and conducting ground-water monitoring at such release area in accordance with subsection (g) of section 22a-133k-3, and (bb) that the significantly greater cost outweighs the risk to the environment and human health if the engineered control fails to prevent the mobilization of a substance in the soil or human exposure to such substance. The Commissioner may hold a public hearing pursuant to this section if in his discretion the public interest will be best served thereby, and he shall hold a hearing upon receipt of a petition signed by at least twenty-five persons. Notice of the subject proposal shall be provided by the owner of the subject parcel in two of the three following manners: (i) by publication in a newspaper of substantial circulation in the affected area; (ii) by placing and maintaining on the subject parcel, for at least thirty days, in a legible condition a sign which shall be not less than six feet by four feet which sign shall be clearly visible from the public highway; or (iii) by mailing notice to the owner of record of each property abutting the subject parcel at his address on the most recent grand tax list of the municipality or municipalities in which such properties are located. When notice is published or mailed, it shall include the name and address of owner of the subject parcel; the location address and/or a description of the location such parcel; a brief description of the nature of the pollution on the subject parcel; a brief description of the proposed engineered control; and a brief description of the procedures for requesting a hearing. When notice is provided by posting a sign, the sign shall include the words "Environmental remediation is proposed for this site. For further information contact..." and shall include the name and telephone number of an individual from whom any interested person may obtain information about the remediation. The owner of the subject parcel shall verify to the Commissioner in writing on a form furnished by him that notice has been given in accordance with this subsection.

(B) A request to use an engineered control ~~shall be~~ submitted to the Commissioner in writing, or a licensed environmental professional approval as provided for in subparagraph (C), ~~and~~ shall be accompanied by a detailed written report and plan stamped and signed by a licensed environmental professional which demonstrates that:

(i) (I) if the engineered control is to address exceedances of the direct exposure criteria, the proposed engineered control has been designed and will be constructed to physically isolate polluted soil; or (II) if the engineered control is to address exceedances of the pollutant mobility criteria, the proposed engineered control has been designed and will be constructed to minimize migration of liquids through soil and have a permeability of less than 10^{-6} cm/sec or, unless otherwise specified by the Commissioner in writing, to have the permeability specified in a closure plan implemented under sections 22a-209-1 et seq of the Regulations of Connecticut State Agencies for a release area which is a lawfully authorized solid waste disposal area; and

(ii) for all engineered controls, the proposed engineered control has been designed and will be constructed to function with minimum maintenance, to promote drainage and minimize erosion of or other damage to such control, and to accommodate settling and subsidence of the underlying soil so as to maintain the control's functional integrity;

(iii) plans for ground-water monitoring at the subject release area are adequate to ensure that any substance migrating therefrom will be detected;

(iv) plans for inspection and maintenance of the subject release area are adequate to ensure that the structural integrity, design permeability, and effectiveness of the engineered control will be maintained; such plans shall include without limitation measures to evaluate the continued effectiveness of the engineered control, prevent run-on and run-off of storm water from eroding or otherwise damaging the engineered control and measures to repair such control to correct the effects of any settling, subsidence, erosion or other damaging events or conditions;

(v) an environmental land use restriction, or notice of activity and use limitation, is or will be in effect with respect to the parcel at which the subject release area is located, which restriction ensures that such parcel will not be used in a manner that could disturb the engineered control or the polluted soil;

(vi) any other information that the Commissioner reasonably deems necessary; and

(vii) with respect to any release area subject to any of the requirements of section 22a-209-4(i) or section 22a-449(c)-100 through 110 of the Regulations of Connecticut State Agencies, all such requirements are or will be satisfied. With respect to a release area which is not subject to any such regulations, the owner of the subject parcel shall demonstrate that he or she has posted or will post a surety in a form and amount approved in writing by the Commissioner, which surety during the first year after installation of the engineered control shall be equal to the cost ~~of one year's maintenance and monitoring of the engineered control, and which in each subsequent year shall be increased in amount by adding an amount equal to the cost of one year's maintenance and monitoring, until the total amount of such surety is equal to the cost~~ of five years of maintenance and monitoring, which amount shall be maintained in

effect for the next twenty-five years or for such other period as may be required by the Commissioner.

(C) A licensed environmental professional may approve the use of certain types of engineered controls pursuant to subparagraph (B)(i)(I) of this subsection, assuming all other provisions of subparagraph (A), (B) and (D) are met. Such engineered controls shall meet the following minimum cover requirements: (i) for non-paved surfaces, a minimum of one foot of clean material underlain by a demarcation layer; (ii) for non-paved surface areas containing or proposed to contain shrubbery and/or trees, a minimum of four feet of clean material underlain by a demarcation layer; (iii) for non-paved, durable hardscaped surfaces, a minimum of one foot of clean material underlain by a demarcation layer; (iv) for existing paved surfaces, a minimum of three inches of bituminous concrete or concrete and eight inches of processed aggregate; and (v) for new paved surfaces, a minimum of three inches of bituminous concrete or concrete, and six inches of processed aggregate underlain by a demarcation barrier layer. Any engineered control not meeting the minimum cover requirements will require approval by the Commissioner.

(D) When the Commissioner approves a request pursuant to this subsection to use an engineered control he may require that such control incorporate any measures which he deems necessary to protect human health and the environment. Any person implementing an engineered control under this subsection shall perform all actions specified in the approved engineered control proposal including the recordation of the environmental land use restriction, or notice of activity and use limitation, and posting of the surety, and any additional measures specified by the Commissioner in his approval of such plan, and document the completion of such actions in a Final Completion Statement. The Final Completion Statement shall be submitted within sixty days following completion of the engineered control and be accompanied by a statement, stamped and signed by a licensed environmental professional or professional engineer, on a form prescribed by the Commissioner, verifying that the engineered control meets the performance objectives of this subsection. The property owner must submit an annual report describing the status of such engineered control to the Commissioner beginning no later than one year following submittal of the Final Completion Statement and continuing each year thereafter, on a form as may be prescribed by the Commissioner. Nothing in this subdivision shall preclude the Commissioner from taking any action he deems necessary to protect human health or the environment if an approved engineered control fails to prevent the migration of pollutants from the release area or human exposure to such pollutants.

(E) No person shall disturb or interfere with the engineered control without prior approval by the Commissioner. The property owner, shall inspect and maintain the engineered control as set forth in plans pursuant to (B)(iv) of this subsection.