

Recent Changes to DEQ/DWM Cleanup Guidance

5/15/2020

The Division of Waste Management made significant changes and additions to its hazardous substance cleanup guidance during the past year, summarized below. This document also offers, at one glance, a comprehensive list of our Division's cleanup guidance documents, to ease web page access to the information. The documents highlighted in yellow below have been recently revised.

Risk Evaluation Resources

The *DWM Risk Calculator* is a tool that can be used to (1) screen current risks posed by contaminated soils and vapors, (2) help plan the most cost-efficient remedial action and (3) evaluate whether a site may qualify for risk-based remediation under G.S 130A-310.65-310.77. The Calculator can provide risk levels posed by a site-specific set of contaminants (both for air and soil) and soil cleanup levels for restricted and unrestricted uses of the property. The Calculator also has other tools to aid in determining contaminant migration potential in evaluating qualification for risk-based remediation of groundwater.

The *DWM Preliminary Soil Remediation Goal (PSRG) tables* and *structural Vapor Intrusion (VI) screening tables* provide a first screen toward evaluating current risk and attainment of unrestricted use standards. If the "residential" use and "protection of groundwater" numbers on the PSRG tables are not exceeded, site soils can be considered to have met standards, requiring no further work. If "residential" or "nonresidential" (as appropriate) numbers on the VI screening tables are met, the vapor samples are considered to have met acceptable vapor concentrations. Additional sampling may still be required. If the PSRG or VI screening numbers are exceeded, the soils and air samples may still meet acceptable concentrations. The PSRG and VI tables provide a more conservative first screen, not taking into account the number of contaminants present and their particular toxic effects. If the numbers on the tables are exceeded, the Calculator can then be used to determine if risk targets and remediation standards are actually exceeded for the specific set of contaminants and their concentrations present at a site. The Calculator can also aid in reducing the cost of remedial action. For example, the site-specific risk results provided by the Calculator may show one contaminant, that is limited in extent, is contributing the most risk. Removal or treatment of this contaminant may bring the whole site to within remediation standards. Additionally, the Calculator can help determine if land use restrictions, instead of or in combination with, active remediation may result in a lower cost remedy.

The Calculator has been updated to include the most current US EPA toxicological values and has some improvements that make it easier to use. The *Risk Calculator User Guide* now includes more details and graphics to provide step-by-step instructions. The December 2019 revisions of both of the Calculator and User Guide replace any previous versions, so be sure to update bookmarks or favorites on your browser.

Risk Evaluation Resources, continued

DEQ Risk Calculator and User Guide (December 2019):

<https://deq.nc.gov/permits-rules/risk-based-remediation/risk-evaluation-resources>

Preliminary Soil Remediation Goals (PSRG) Table (December 2019):

On DEQ Risk Evaluation Resources Page Under Screening:

<https://deq.nc.gov/permits-rules/risk-based-remediation/risk-evaluation-resources>

On IHSB Guidance Page Under Remedial Goals:

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/inactive-hazardous-sites-guidance-documents>

Final Groundwater Standards and IMACs (15A NCAC 02L):

<https://deq.nc.gov/about/divisions/water-resources/planning/classification-standards/groundwater-standards>

Surface Water Standards (15A NCAC 02B):

<https://deq.nc.gov/about/divisions/water-resources/planning/classification-standards/rules>

Vapor Intrusion Guidance Document (March 2018) and Residential and Non-Residential Screening Levels (February 2018):

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/dwm-vapor-intrusion-guidance>

Remediation Guidance

Inactive Hazardous Sites Guidelines for Assessment and Cleanup of Contaminated Sites – *REC and standard guidance now combined* (January 2020):

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/inactive-hazardous-sites-guidance-documents>

Inactive Hazardous Sites Quick Clean Procedures (November 2015):

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/inactive-hazardous-sites-guidance-documents>

Risk-Based Remediation Under G.S.130A0310.65-310.77 – Guidance (January 2020):

<https://deq.nc.gov/permits-regulations/risk-based-remediation/technical-guidance>

Risk-Based Remediation Under G.S.130A0310.65-310.77 - Procedures and Forms (April 2020):

<https://deq.nc.gov/permits-regulations/risk-based-remediation/forms>

Guidelines for Addressing Pre-Regulatory Landfills and Dumps (May 2020):

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/inactive-hazardous-sites-guidance-documents>

TCE Indoor Air Inhalation Immediate Action Levels and Response

Following the Secretary's Science Advisory Board's (SAB) approval of Trichloroethylene (TCE) vapor intrusion action levels in February 2019, the Division has prepared the following guidance and factsheets regarding the implementation of these action levels. The weblink for all follows.

- DWM Supplemental Vapor Intrusion Guidance – Trichloroethylene (TCE) Indoor Air Inhalation Immediate Action Levels and Response (July 2019)
- Factsheet - TCE in Residential Indoor Air (July 2019)
- Factsheet - TCE in the Workplace Indoor Air (July 2019)
- Notification and Response Actions Associated with TCE in Indoor Air - *for use by consultants to communicate potential risks to their clients* (June 2019)

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/dwm-vapor-intrusion-guidance#tce-indoor-air-inhalation-immediate-action-levels-and-response>

The Supplemental Guidance and the Action Levels were developed through extensive coordination with the North Carolina Division of Public Health and with the US EPA Region 4. The SAB's review and endorsement process included the request for and consideration of public comment. Prior to the DEQ and the NC DPH submission of the *Guidance* and the *Action Levels* to the SAB in June, 2018, DEQ staff made presentations and requested stakeholder comment on draft *Guidance* and *Action Levels* at the following venues:

- North Carolina Manufacturer's Alliance – September 2016
- American Council of Engineering Companies & Professional Engineers of North Carolina – October 2016
- Environmental Health Subcommittee of the North Carolina Association of Local Health Directors – February 2017
- Registered Environmental Consultants update training by DEQ staff and REC Newsletter – March 2017
- North Carolina Bar Association – Environment and Natural Resources Subcommittee Annual Meeting – May 2017
- Dunklee & Dunham VI Symposium, August 2017
- Association of Engineering Geologists National Vapor Intrusion Symposium – October 2017
- North Carolina Department of Labor staff – December 2017

Vapor Intrusion Guidance

Main Page: <https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/dwm-vapor-intrusion-guidance>

DWM Vapor Intrusion Guidance Document (March 2018):

<https://files.nc.gov/ncdeq/Waste%20Management/DWM/NC%20VIG%20Final%2020180316%20v2.pdf>

DWM Residential Vapor Intrusion Screening Levels (February 2018):

https://files.nc.gov/ncdeq/Waste%20Management/DWM/SF/RiskBasedRemediation/Feb2018Res_VISLs.pdf

DWM Non-Residential Vapor Intrusion Screening Levels (February 2018):

https://files.nc.gov/ncdeq/Waste%20Management/DWM/SF/RiskBasedRemediation/Feb2018NonRes_VISLs.pdf

DWM Supplemental Vapor Intrusion Guidance – TCE Indoor Air Inhalation Immediate Action Levels and Response (July 2019):

<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/dwm-vapor-intrusion-guidance#tce-indoor-air-inhalation-immediate-action-levels-and-response>