

Site Specific Alternate Concentration Limits:

The site-specific ACL must meet the VDEQ [default ACL](#) criteria of individual risk at or below 1×10^{-6} and hazard quotient for child receptor at or below 1. In certain limited circumstances (as defined below), the facility may propose a site-specific ACL based on a risk of 1×10^{-5} as long as the criteria provided in 9VAC20-81-250.6.b.(4).b. (i), (ii), and (iii) are met. Further details on these criteria can be found in EPA's Alternate Concentration Limit Guidance, Interim Final, July 1987 (<http://www.epa.gov/osw/hazard/correctiveaction/resources/guidance/gw/acl.htm>). The facility should consult the appropriate DEQ regional office to determine whether site-specific ACLs are appropriate for a particular site.

When a change in toxicity value results in a lower [default ACL](#) for a chemical and this change results in corrective action for that chemical at a facility, DEQ will consider a site-specific ACL based on a 1×10^{-5} risk level. The DEQ regional office will also consider the criteria in 9VAC20-81-250.6.b.(4).b. (i), (ii), and (iii) (impact to groundwater quality, human exposure and surface water) to determine whether site-specific ACLs are appropriate for a particular site.

For the purpose of developing site-specific ACL, all aquifers shall be considered a potential drinking water source. Once the site-specific ACL has been calculated, the facility must demonstrate that the cumulative risk and hazard to residential receptors is within the current acceptable risk-based performance standard. The current risk-based performance standard is: For a receptor, a hazard index of 1.0 or lower for non-carcinogens and cumulative carcinogenic risk within the range of 1×10^{-4} to 1×10^{-6} from all pathways of exposure. The risk calculation must include exposure via ingestion, dermal, and inhalation (volatiles) under a residential drinking water scenario and include all detected constituents (detected above site-specific background concentration). Note that J-flagged values (estimated values between the detection limit and the quantitation limit) are considered detections and should be included in the cumulative risk and hazard calculations. Risk calculations should be performed as described in the steps of risk assessment (step [1](#), [2](#), [3](#), and [4](#)). The calculations must include proposed concentration for the chemical under consideration and maximum concentrations of all other detected chemicals (including J-flag data) in 8 most recent monitoring results. VDEQ recommends [REAMS](#) software to demonstrate that the proposed site-specific ACL value falls within the current risk based performance criteria. Technical information required to calculate health based alternate concentration limit using REAMS can be found [here](#).

Since all groundwater is considered a potential source of drinking water, the lack of current or projected residential use of groundwater is not considered in site-specific ACL calculations. However, the facility shall submit information on current and future uses of groundwater in the area. This information will be used by the DEQ regional office to determine whether a site-specific ACL will be considered. In cases where off-site landowners utilize groundwater wells, but these offsite wells have not been tested, the regional office may request an evaluation of the relative potential risk for exposure of offsite receptors. After review of the application, the Director will either grant or deny the site-specific ACL.

Site-specific ACLs need to be revised periodically based on changes in the number of constituents detected, concentrations of detected constituents, detection limit, toxicity values, and

exposure factors. The facility should submit a new proposal for site-specific ACL incorporating such changes. Please contact your Regional Office for further discussions.

Please note that the State Water Law (62.1 44.5) and Water Regulation (9 VAC 25-260-20.A; 9 VAC 25-31-50.A; 9 VAC 25-32-30.B.1.b) prohibit any constituent discharge to State Waters unless such discharge has been authorized by Permit. If such discharge is occurring, the facility may need to meet requirements of State Water Law and site-specific ACL may not be applicable. Please refer to guidance for 'Surface Water Impacts at Solid Waste Landfills' dated February 22, 2008 at <http://townhall.virginia.gov/L/ViewGDoc.cfm?gdid=3643>.

Special Note about use of [MCL](#) for Trihalomethanes (Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane):

The [MCL](#) for total THM is 0.080 mg/L and is not based on risk evaluation alone. The [MCL](#) is based on the ability of public water suppliers or treatment systems for maintaining certain chlorine level to control bacteria and other pathogens. As DEQ current policy allows using [MCL](#) as the final acceptable value for closure, the facilities may be allowed to use the [MCL](#) for Trihalomethanes provided the sum of detected concentrations and the detection limits (for non-detects) are below the [MCL](#) value.