

# SITE CHECK GUIDELINES FOR REGULATED UST SYSTEMS



N.C. Department of Environmental Quality  
Division of Waste Management  
Underground Storage Tank (UST) Section

This document summarizes the site check requirements. For detailed guidance about sampling locations, analyses, analytical methods, soil cleanup standards, report formats and other requirements, please refer to the UST Section’s most recent version of *Guidelines for Site Checks, Tank Closure and Initial Response and Abatement for UST Releases (STIRA)*.

## What is a site check?

**A site check is an environmental assessment that requires soil sampling where contamination from a release from a UST system is observed or most likely to be present at the site. In some cases, the UST Section may require groundwater samples to be collected.**

A site check is required when:	Examples of site check conditions:
<ul style="list-style-type: none"><li>• Environmental conditions indicate that a release from a UST system occurred.</li><li>• A UST system component fails a tightness test.</li><li>• A UST system component exhibits an unusual operating condition that could result in a release to the environment.</li></ul>	<ul style="list-style-type: none"><li>• Stained soil around dispensers, fill pipes, submersible pumps or other UST system components.</li><li>• Free product on surface water or ground water.</li><li>• Failing tank or line tightness tests.</li><li>• Failing tightness tests for spill buckets or containment sumps.</li></ul>

## Soil Sampling

General sampling procedures are described in this section. If the source and cause of a suspected release are known and the area of the suspected release is localized, then it may not be necessary to collect soil samples from around the entire UST system. Sampling would only be required around the component in the area of the suspected release. Prior UST Section approval is required to perform a localized site check.

If the UST system contains an **ethanol-gasoline blend**, the UST Section will determine if additional analytical methodologies are required.

### Around USTs

<p><b>Where samples must be collected:</b></p>	<ul style="list-style-type: none"> <li>• Around the perimeter of a single UST or around the perimeter of a set of USTs in a single pit.</li> <li>• One sample at the fill port or under any catchment basin at the fill port of each UST.</li> <li>• Underneath associated product lines, dispensers, containment sumps, turbine pumps or turbine containment sumps.</li> <li>• Any other area where contamination is suspected or observed.</li> </ul>													
<p><b>Minimum number of samples:</b></p>	<table border="0"> <tr> <td>Less than 6 feet -----</td> <td>1 sample</td> <td rowspan="6"> </td> </tr> <tr> <td>6 to 20 feet -----</td> <td>2 samples</td> </tr> <tr> <td>&gt;20 to 30 feet -----</td> <td>3 samples</td> </tr> <tr> <td>&gt;30 to 40 feet -----</td> <td>4 samples</td> </tr> <tr> <td>&gt;40 to 50 feet -----</td> <td>5 samples</td> </tr> <tr> <td>Greater than 50 feet -----</td> <td>1 sample per 10 ft. of pad length</td> </tr> </table>	Less than 6 feet -----	1 sample		6 to 20 feet -----	2 samples	>20 to 30 feet -----	3 samples	>30 to 40 feet -----	4 samples	>40 to 50 feet -----	5 samples	Greater than 50 feet -----	1 sample per 10 ft. of pad length
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<p><b>Sample depth:</b></p>	<p>Within 3 feet of the UST(s) at a depth equal to the depth of the tank bottom(s) or no deeper than 2 feet below the tank bottom into the native soil.</p>													

### Product Line Sampling

<p><b>Samples must be collected at the following areas:</b></p>	<ul style="list-style-type: none"> <li>• Beneath the product lines.*</li> <li>• At all fittings, joints, or wherever there is heightened potential for a release.</li> <li>• All locations where staining is present or contamination is suspected.</li> </ul>
<p><b>Number of samples to be collected:</b></p>	<p>A minimum of <b>one sample</b> must be collected for <b>each 10-linear foot interval</b> along a line. (If the line is less than 10 feet in length, one sample still is required.)</p>
<p><b>Sample depth:</b></p>	<p>No deeper than 2 feet into the native soil beneath the product lines.</p>

\*Samples are required under product lines even if it is planned that the lines remain for use with replacement UST(s).

### Under Dispenser Sampling

<b>Samples must be collected at the following areas:</b>	<ul style="list-style-type: none"> <li>• Directly below each individual dispenser.*</li> <li>• Below all couplings, pumps, and containment sumps, or wherever there is a heightened potential for release.</li> <li>• All locations where staining is present or contamination is suspected.</li> </ul>
<b>Number of samples to be collected:</b>	At least one per each individual dispenser.
<b>Sample depth:</b>	No deeper than 2 feet into the native soil beneath the dispenser.

\*Samples are required under dispensers even if it is planned that the dispensers remain for use with replacement UST(s)

### Under Containment Sumps, Spill Buckets or Other Areas

<b>Samples must be collected:</b>	<ul style="list-style-type: none"> <li>• Directly below containment structures.</li> <li>• Directly below the piping that enters the sump.</li> <li>• Beneath any defective area of the sump.</li> <li>• All locations where staining is present or contamination is suspected or observed.</li> <li>• If the containment sump is sitting directly on the tank, thereby preventing collection of samples under the sump, then samples must be collected along the perimeter of the sump within one foot of the sump.</li> <li>• If a sample cannot be taken below the spill bucket, then contact the corrective action branch for the appropriate sampling procedures.</li> </ul>
<b>Number of samples to be collected:</b>	At least one per each individual structure;
<b>Sample depth:</b>	No deeper than 2 feet into the native soil directly below the structure.

### Groundwater Sampling

If required by the UST Section, a permanent monitoring well, constructed according to Title 15A NCAC 2C, Well Construction Standards, must be installed as close as possible to and within 5 feet of the area of the UST system with the suspected release in a down gradient direction. A groundwater sample must be collected and analyzed using approved methods.

## Sample Analysis

### Soil Samples

<b>What to analyze for:</b>	Refer to the STIRA Guidelines for a complete listing of approved soil analytical methods.
<b>Action Levels:</b>	<ul style="list-style-type: none"><li>• GRO Total Petroleum Hydrocarbons: 50ppm.</li><li>• DRO Total Petroleum Hydrocarbons: 100ppm.</li><li>• Any exceedances in soil-to-groundwater maximum soil contaminant concentrations (MSCCs) or Method Detection Limit (MDL) if no MSCC is established for regulated hazardous substances.</li><li>• Any free product present.</li></ul>

### Groundwater Samples

<b>What to analyze for:</b>	Refer to the STIRA Guidelines for a complete listing of approved groundwater analytical methods.
<b>Action Levels:</b>	<ul style="list-style-type: none"><li>• Any groundwater contamination exceeding the groundwater quality standard established in 15A NCAC 2L .0202.</li><li>• Any free product present.</li></ul>

## Reporting Requirements

**If action levels have not been exceeded**, report results to the UST Section in a Site Check Report. Submit the Site Check Report to the branch of the UST Section that requested it (Permits and Inspections Branch, if required by a UST inspector; or the appropriate regional office of the Corrective Action Branch, if required by an incident manager). The UST Section must receive the Site Check Report within 30 days of the receipt of the Notice of Regulatory Requirements, Notice of Deficiency or Notice of Violation. If it was necessary to remove all or part of the UST system to allow access for site check sampling, then the required UST closure report elements should be submitted as part of the Site Check Report.

**If Action Levels Have Been Exceeded**

<p><b>UST-61</b></p>	<p>Initial response and abatement actions must be performed. Required initial response actions include:</p> <ul style="list-style-type: none"> <li>• Submittal of a UST-61, <i>24-Hour Release and UST Leak Reporting Form</i> to the UST Section within 24 hours following discovery of the release.</li> <li>• Taking immediate action to stop the release.</li> <li>• Identification and mitigation of hazards from exposure to pollutants.</li> </ul>
<p><b>20-Day Report</b></p>	<p>Submitted to the UST Section within 20 days following discovery of the release. May include:</p> <ul style="list-style-type: none"> <li>• Determination of the source of the release (if not previously identified).</li> <li>• Investigation and removal of free product.</li> <li>• Excavation of contaminated soil to the maximum extent possible</li> <li>• Confirmation sampling.</li> </ul>
<p><b>Initial Abatement Action Report</b></p>	<p>Submit the final results of the initial abatement actions for a petroleum release to the UST Section within 90 days following discovery of the release (or submit in 45 days in a 45-Day Report for a hazardous substance). If the post-excavation soil contaminant concentrations do not exceed the lower of the soil-to-groundwater or residential MSCCs and neither groundwater nor bedrock has been encountered in the excavation, then no further action will be required.</p> <p>If the Initial Abatement Action Report indicates that soil contaminant concentrations exceed the lower of the soil-to-groundwater or residential MSCCs or that groundwater or bedrock has been encountered in the excavation, then the responsible party must perform further assessment and submit a Limited Site Assessment Report within 120 days of the discovery of the release.</p>

Submit the above reports and forms to the appropriate regional office of the UST Section’s Corrective Action Branch.