

RECEPTOR FIELD SURVEY REPORT

Standard Operating Procedures

The Receptor Field Survey Report (RFSR) is included with an appropriate USTMP submittal (i.e. CAP-Part A, Monitoring report, etc.) as directed by the USTMP Project Officer. The RFSR properly identifies and evaluates groundwater usage and land usage receptors within five hundred (500) feet of petroleum release sites. The field survey process is documented through the Receptor Field Survey Sheets (RFSS) and is to be completed for each parcel included in the survey. There are two parts to this process: Administrative Procedures and Field Procedures. The template can be completed electronically or printed for manual field use.

A. ADMINISTRATIVE PROCEDURES:

MOST of the record searches can be performed PRIOR to the Field visit. Additional record search may be required to confirm field information.

1. Site Maps

a. Receptor Field Survey Map (Scaled Vicinity Map)

- i. Required- An electronically generated, scaled, color aerial/satellite GIS map with identifiable roads, existing structures and property boundaries within a five hundred (500) foot radius of the UST release point. Map must include North arrow and is recommended to be on 8.5 x 11 paper; however, 11x17 paper is acceptable. **An example vicinity map is provided.**
 1. Illustrate and label the five hundred (500) foot radius.
 2. Locate and label all public and non-public water withdrawal points, any sensitive receptors and any perennial water bodies located within this radius.
 3. Label the current property usage of all properties, current zoning of any vacant properties (no building present)
 4. Identify all active gas stations/fueling facilities or readily identifiable former fueling facilities within this same radius

b. Property Zoning Map (if applicable after field visit)

- i. **IF field visit indicates current or future zoning-** Municipalities may be able to provide electronic, color coded property zoning maps, for download and printing.
 1. If available, a property zoning map identifying the UST site, depicting the zoning key legend and depicting the five hundred (500) foot radius should be attached.

2. Records Search- Required to complete either prior to or after Field visit

a. Water Source Survey

- i. Wellhead Protection Area status: Contact the GA EPD Watershed Protection Branch, Drinking Water Program, (<https://epd.georgia.gov/watershed-protection-branch/drinking-water> or other authorized local government agency.
- ii. Wetland status -US Fish and Wildlife Service (USFWS) <http://www.fws.gov/wetlands/data/mapper.html>.

b. Ecological Research when a sensitive area has been identified within 500 ft radius of release site

- i. GA DNR Protected Species website - identify potential species and habitats occurring within a specific location.
<http://www.georgiawildlife.com/node/1366>.
<https://www.georgiabiodiversity.org>
- ii. USFWS Threatened and Endangered Species on National Wildlife Refuges Database: <http://www.fws.gov/angered/>
http://www.fws.gov/refuges/databases/ThreatenedEndangeredSpecies/ThreatenedEndangered_Search.cfm
- iii. Critical Habitat Data: <http://ecos.fws.gov/crithab/>
- iv. National Wetlands Inventory mapper:
<http://www.fws.gov/wetlands/data/mapper.HTML>
- v. Georgia 305(b)/303(d): <http://epd.georgia.gov/georgia-305b303d-list-documents>

c. Land Use

- i. If any of the indicators in Section B. Field Procedures 2c(iii)1 are present, contact local government to determine if there is a pending or recently completed zoning change for each affected parcel.

d. Vapor Intrusion-Preferential Pathway

- i. Potential preferential pathways include underground utilities - gas, water, sanitary sewer, storm sewer, electric, fiber optic cable, septic drain field, etc.) at the UST site and utility mains within one hundred (100) feet of the UST site property boundaries.
- ii. Identify underground utility mains and average depth for each underground utility main and utility vault(s) immediately adjacent to and/or crossing the UST site.
 - 1. Before starting any site fieldwork (excavation, tunneling, grading, boring, demolition, etc.) contact Georgia 811 at least 48 hours but no more than 10 working days in advance to have utility lines marked
 - a. Georgia 811 or 800-282-7411/ www.gaupc.com
 - b. Many municipalities provide GIS data on utility types and depths and can be contacted for relevant information.
- iii. If proper depth location cannot be determined, the following defaults can be used:

Underground Service Connection	Default Depth (feet)
Water	2
Gas	2
Power	2
Sanitary Sewer	3
Septic Drain Field	3
Telecommunications/Cable/ Fiber Optic	1

B. FIELD PROCEDURES:

To begin, evaluate the UST petroleum release site and continue to adjacent properties. The information will be used in the GRBCA Risk Model

1. UST Petroleum Release Site

a. Site Interview

- i.** Conduct interview with water users, building occupants, property owners or property managers of the petroleum release site.
 - 1.** Proper identification clearly and visibly displayed is expected when contacting individuals.
 - 2.** Effort to contact people at reasonable times is suggested.
 - 3.** Receptor Field Survey Sheet is to be completed for each user located on the petroleum release site
- ii.** If water users, building occupants, property owners or property managers of the petroleum release site **are not available** for interview
 - 1.** Consulting staff are to conduct the survey tasks through visual observation and complete a Receptor Field Survey Sheet.
 - 2.** If any of the following conditions are present, interviewers are to complete and leave a business card and a Property Site Visit Notification (Appendix B) in a visible location.
 - a.** The water supply is a non-public withdrawal point (well or spring) as visibly indicated by a well, well house or spring house and the absence of a water meter.
 - b.** The water supply may either be a municipal supply as indicated by a visible water meter.
 - i.** interviewers must verify with the local, public water authority at (<http://gadrikingwater.net/DWWPUB/>) to confirm if the identified water meters are active.
 - c.** Uncertainty about any observed survey element for a specific property exists.

b. Receptor Field Survey Sheet

- i. Locate the Water Source-** Private well/ public well/ Water Meter/ Spring/etc.
 - 1.** Drinking water- If the user reports a change in water quality or petroleum odors, it is to be immediately sampled for applicable chemicals of concern (COCs). Results are to be reported to the well user(s) and the USTMP Project Officer within twenty-four (24) hours of receipt of results.
- ii. Determine Water Usage-** Residential/ Nonresidential/ Agriculture (type)/ Industry (business)
 - 1.** Surface water or springs located onsite need to be evaluated for visual, olfactory and ecological impacts.
 - a.** Visual impact – examples include free product/sheen on water, free product/sheen on stream bank/sediment, and/or release of product droplets from sediment when disturbed.

be noted, only adjacent properties are to be interviewed. This is not under the 500ft guidance.

b. Applicable Survey Distance Guide

- i. Receptor Field Survey Qualifying Criteria. If any of the initial site-specific criteria are present, the 500ft survey distance will apply

Table F-1: Receptor Field Survey Qualifying Criteria	
Any Single Criteria	Occurrence/How identified
Free Product (release source area)	≥ 1.0 feet in a MW <i>(site data)</i>
Domestic Drinking Water Well	< 250 feet from release point <i>(visually observed)</i>
Public Water Supply (well and/or surface water intake)	< 500 feet from release point <i>(identified by records)</i>
Perennial Surface Water Body (well and/or surface water intake)	< 125 feet from release point <i>(visual or records identification)</i>

- ii. If any two (2) criteria listed in the table are identified, then the survey distance automatically results in a 500-foot Receptor Field Survey.

Table F-2: Five Hundred (500) Foot Field Survey Qualifying Criteria	
Any Two (2) Criteria	Occurrence/How identified
Free Product	≥ 0.125 feet in a MW or tank pit <i>(at closure)</i>
Free Product Condition	Benzene in groundwater ≥ 15,000 µg/L <i>(site data)</i>
Groundwater benzene concentration	Benzene in groundwater ≥ 10,000 µg/L <i>(site data)</i>
Depth to groundwater	< 25 feet BGS <i>(site data)</i>
Domestic Drinking Water Well	≥250 <500 feet from release point <i>(visually observed)</i>
Public Water Supply (well and/or surface water intake)	≥500 <750 feet from release point <i>(identified by records)</i>
Perennial Surface Water Body (well and/or surface water intake)	≥125 <500 feet from release point <i>(visual or records identification)</i>

c. Receptor Field Survey Sheet

- i. **Locate the Water Source-** Private well/ public well/ Water Meter/ Spring/etc.
 - 1. **Drinking water-** If the user reports a change in water quality or petroleum odors, it is to be immediately sampled for applicable chemicals of concern (COCs). Results are to be reported to the well user(s) and the USTMP Project Officer within twenty-four (24) hours of receipt of results.
- ii. **Determine Water Usage-** Residential/ Nonresidential/ Agriculture (type)/ Industry (business)

1. Surface water or springs located onsite need to be evaluated for visual, olfactory and ecological impacts.
 - a. Visual impact – examples include free product/sheen on water, free product/sheen on stream bank/sediment, and/or release of product droplets from sediment when disturbed.
 - b. Olfactory impact- smell of product which may or may not be evident. If there is no visible product observed but an olfactory impact is detected, the contaminant may be in a dissolve phase.
 - c. Ecological impacts may be visually observed in vegetation and/or the organisms present in the presence of a released petroleum product.
- iii. **Determine Land Use-** Residential/ Nonresidential/ Agriculture/ Park/ Wetland/ Business/ etc.
 1. Zoning/Future use indicators:
 - a. Posted, local government, use-on-review signage/notice
 - b. Property tag indications, such as colored tape marking boundary pins
 - c. Real estate for sale signs
 - d. Property erosion control measures (i.e. silt screen, hay-bails, etc.) and/or public access restriction fencing
 2. See Section A Administrative Procedures 2b Property Zoning for guidance on record search, if applicable
- iv. **Determine Foundation Type** of structure, if applicable
- v. **Vapor Intrusion- Preferential Pathways-** Vapor hazards are the presence of any olfactory detectable levels of petroleum vapors in a confined or enclosed space.
 1. Occupants, owners or property managers of properties that are adjacent to the UST site property boundaries or across a maximum two (2) lane street from the UST site that have a residence or commercial building with a crawl space or basement will be asked a petroleum vapor related question during field survey activities to identify any petroleum vapor intrusion concern.
 - a. Onsite Area of Contamination (AOC), usually the petroleum retail facility but can be residence. If the structure is a business but also provides housing, it is to be considered residential.
 - b. Nearest offsite Area of Potential Contamination (AOPC) residence located in the hydraulically down gradient or cross gradient direction from the petroleum release point; and/or
 - c. Nearest offsite (AOPC) nonresidence located in the hydraulically down gradient or cross gradient direction from the petroleum release point.
 2. This step often results in record search, Details in Section A. Administrative Procedures (1d).