Land Protection Branch Underground Storage Tank Management Program

USTMP Staff GRBCA Workbook Training Manual: Step 2

I. RBTL Report Worksheet Overview:

This worksheet evaluates the petroleum release site which is within the Area of Contamination (AOC) and typically called "onsite." The evaluation includes soil and groundwater (GW) analytical results for site specific chemicals of concern (COCs), which the workbook determines from data entered in Line Items 1 through 7. The table below provides the tasks completed by the user and worksheet:

RBTL Task	Task Description	What is Evaluated?	RBTL Line Item	User Action Green Button*	
1	Defines the site- specific risk scenario	AOC petroleum release site	1 through 7	1. Create COC & RBTL Tables	
2	Analytical results data entry tables import specific to the risk scenario entered	AOC release source soil and groundwater	8, 9 & 10	2. Compare COCs to RBTLs	
3	 A. Workbook determines what COCs apply. B. Selects the max COC value of each. C. Compares the max COC to established RBTLs 	Max soil and GW results selected by workbook and then compared to established RBTLs	11	N/A	

^{*}Green command buttons may require double clicking

II. Background Information for the Site used in the Training module:

For training purposes, a fictitious site is evaluated and each worksheet in the GRBCA Workbook is completed. The following background information includes key information about the release including results from the CAP-Part A, LWRS and Receptor Field Survey, SISR and CAP-Part B Reports.

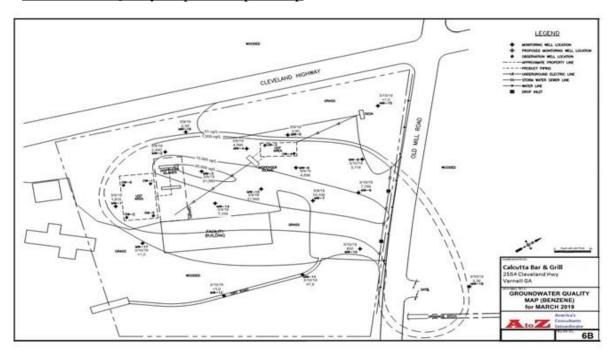
142536.1 Calcutta Bar & Grill, Whitfield County – release background information.

Release Notification on Friday, March 16, 2018 after a vehicle hit a dispenser late during the previous evening. Fire damaged canopy and dispenser. Gasoline surface staining observed on pavement, confirming gasoline had been released. Fiberglass fuel supply line in uncontained sump intact and shear valve damaged by fire. Distributor provides maintenance on UST system and maintenance replaced shear valve and dispenser and activated the pump. Owner notified distributor mid-morning that the pump was erratically cutting off. Maintenance returned and replaced electronic line leak detector (ELLD) and re-activated the pump. Owner again called to report the same problem with the pump. Maintenance returned and removed ELLD. Discovering no replacement on maintenance vehicle and earliest replacement ELLD from vendor available the following Tuesday. Maintenance temporarily replaced ELLD port with a bung so owner could sell fuel through weekend. The following day, distributor's weekend maintenance crew arrived to brand the replaced dispenser to match facility and repair canopy. While welding the canopy, falling sparks ignited the replaced dispenser sump. Fire consumed all 4 dispensers, entire canopy, maintenance vehicle, a customer's car and the facility sign. Lack of

fire abatement was later determined to be caused by no ELLD and store employee's inability to locate the indoor emergency shut off switch, later located behind the lottery ticket equipment.

The site map depicts the location of MW-3, which is the maximum GW benzene concentration MW at 21,300 ug/L. The Receptor Map identifies the receptors evaluated for this risk evaluation. GW occurs from 13 feet at the source area to 3 feet BGS near a creek, and flows Northeast. GW is progressively shallower closer to the creek. During storm events, runoff has impacted the creek through the intermittent surface water drainage system. This drainage has been sampled and determined to be contaminated.

Groundwater Quality Map & Receptor Map

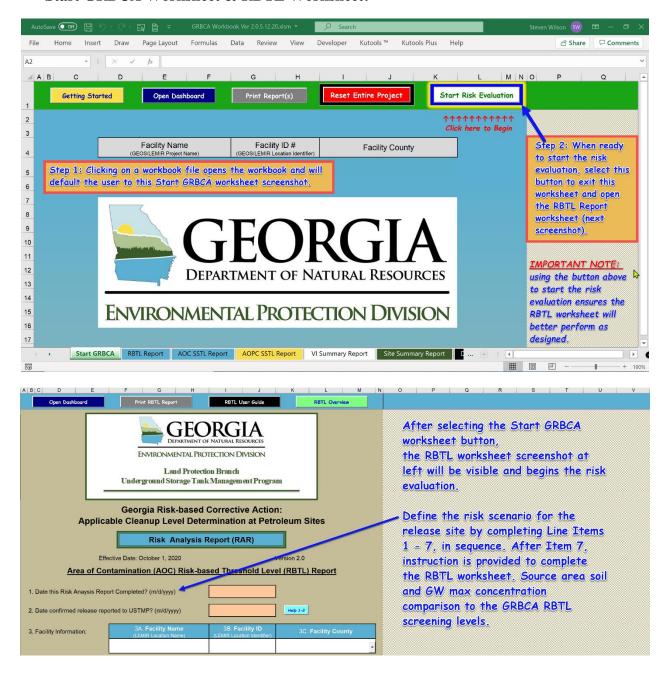




III. Complete Data Entry and Checkbox Selections:

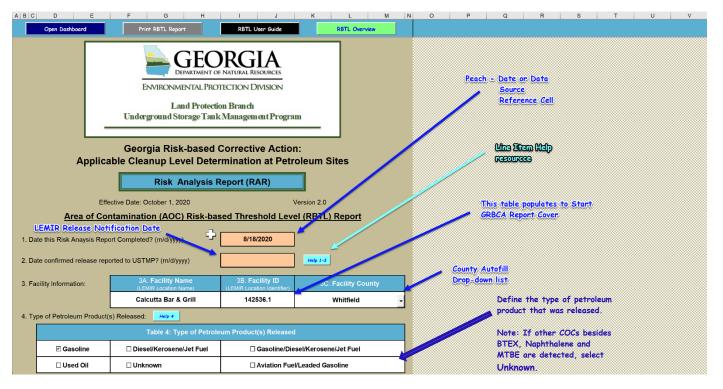
- 1. Enter the risk evaluation scenario for the evaluated site by completing RBTL worksheet Line Items 1 through 7:
 - A. Complete entries and checkbox selections in Line Items 1 through 7. Review the entries and selections for accuracy. Select 1. Create COC & RBTL Tables to import the site-specific, soil and GW analytical results data entry tables.

Start GRBCA Worksheet & RBTL Worksheet:

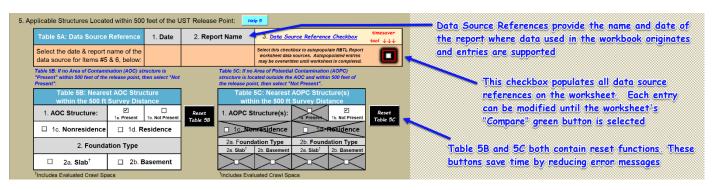


Line Items 1-7: Define the risk scenario

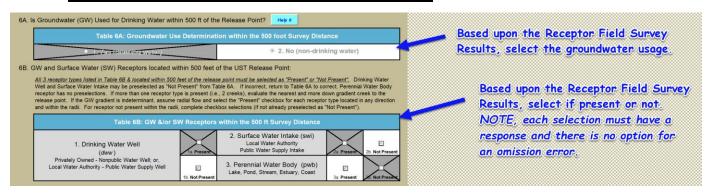
The risk evaluation scenario is defined by the user entries and selections made in this section.



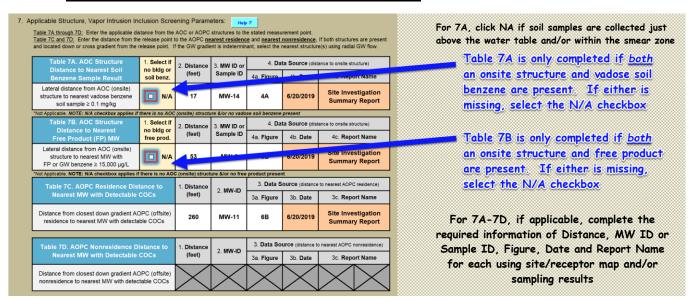
Data Source Reference- Line Item 5 (Table 5B/5C Reset Functions)



Groundwater & surface water selections- Line Item 6



Vapor Intrusion Screening Parameters- Line Item 7



2. RBTL Report Action Buttons: Import defined scenario Analytical Data Table Templates

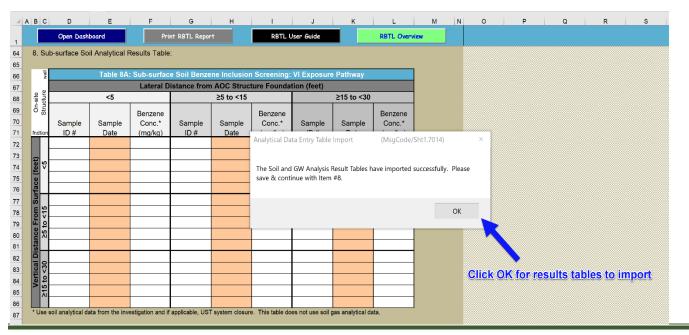
This screenshot depicts the initial state of the RBTL Action buttons. One activated button with white text and three deactivated buttons with gray text. Select the only activated button and analytical data tables specific to the release scenario will be imported



After selecting the **green** command button

1. Create COC & RBTL Table
the comparison is completed. Based on the information entered, Table 8A and 8B will import or Table 8 will import.

A message box will confirm that the import was successful. Click OK to continue with Table 8A/8B or Table 8. The next page contains data entry information for Line Item 8.



IV. Enter soil and GW analytical results in Line Item 8 (soil), Line Item 9 (GW), and data source reference in Line Item 10:

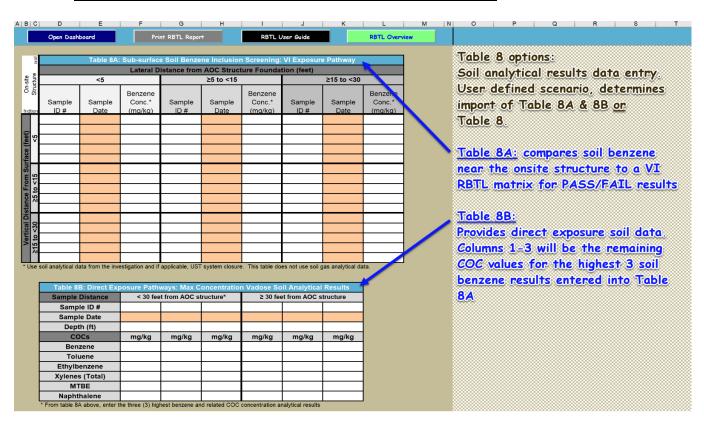
NOTE: In addition to the USTMP COCs required by Rule, a few additional COC analyses are needed, and most are Method 8260B analytes, usually completed by the laboratory at no additional cost.

1. Enter soil data manually or import data using various methods (<u>Line Item 8</u>).

Key notes for soil data entry in Table 8 or Table 8A & 8B (screenshots below):

- i. Target only vadose soil sample results near the release source area and eliminate deeper capillary fringe, "Smear Zone," analysis from consideration.
- ii. Soil data older than four (4) years is no longer representative of current site conditions and should not be entered. If the soil data is older than four (4) years old, it is acceptable to leave Table 8 empty.
- iii. Include the highest vadose benzene soil sample result closest to the AOC ("onsite") structure.
- iv. All analytical results entered are to be in mg/Kg units.
- v. The remaining vadose sample data entered will be the five (5) highest benzene analysis results. It is acceptable to have empty columns in some or all of Table 8 or Table 8B.
- vi. If pasting data from other data sources, ensure the results pasted into the destination table are for the COC listed and in the correct units.
- vii. Missing GRBCA COC data can be added later when assembled.

Soil Table 8A/8B Import Option - Soil VI Evaluation included



Soil Table 8 Import Option – No Soil VI Evaluation necessary

8. St	8. Sub-surface Soil Analytical Results Table:									
	Table 8: Direct Exposure Pathways: Max Concentration Vadose Soil Analytical Results									
	Sample ID #									
	Sample Date									
	Depth (ft)									
	COCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
	Benzene									
	Toluene									
	Ethylbenzene									
	Xylenes (Total)									
	MTBE									
	Naphthalene									

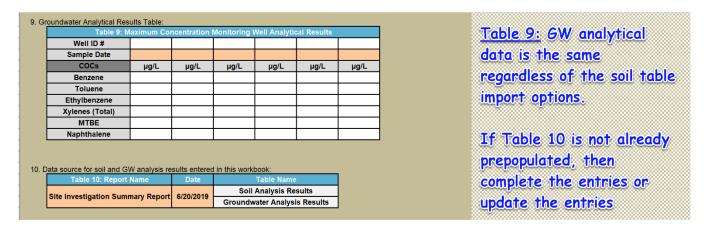
If no VI evaluation is necessary, the workbook selects Table 8, a direct exposure soil analyticial results table

2. Enter GW data manually or import data using various methods.

Key notes for GW data entry in Table 9 (Line Item 9).

- i. Use the most current GW data possible. For the last two (2) sample results from any MW located within the source area, it is acceptable to use the previous result if the data is less than one (1) year old and is significantly higher than the current result.
- ii. Include the highest GW benzene MW sample result in the table.
- iii. All analytical results entered are to be in ug/L units.
- iv. The remaining GW MW sample data entered will be the five (5) MW's with the highest benzene analysis results. Three (3) of the five (5) MWs should be near the release source area and the remaining two (2) MWs may be used for the near receptor MW selection. It is acceptable to have empty columns in some of Table 9. (Note: entering the near MW to receptor data in Table 9 will save an additional data entry step on the AOPC SSTL Report worksheet.)
- v. If pasting data from other data sources, ensure the results pasted into the destination table are for the COC listed and in the correct units.
- vi. Missing GRBCA COC data can be added later when assembled.
- 3. If not already prepopulated, enter the data source reference information in Table 10 (<u>Line Item</u> $\underline{10}$).

Screenshot for 2 and 3 above (Line Item 9 & 10)



After completing Item 10, the following sign is presented. Continue to the next page for instruction.

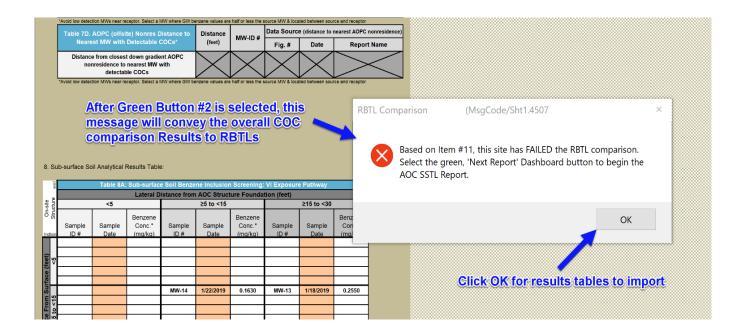
STOP: Review tables above for completeness. In Row 63, above, select green button #2 to finalize this worksheet.

V. Create Line Item 11 and Import Tables, Comparing the Max Soil and GW COC Values to RBTLs:

1. After Line Items 8, 9, and 10 have been populated, return to the RBTL action button located between Line Item 7 and Line Item 8. Select the activated **green** button to complete the RBTL Report worksheet. The workbook will select the max COC value for all table entries, compare the max COC results to RBTLs, and import results tables.

This screenshot depicts the intermediate state of the RBTL action buttons. Three new activated buttons with white text and one deactivated button with gray text. Select the only activated green button to have the workbook identify the max soil and GW EOC values and then compare those values to the GRBCA RBTLs.



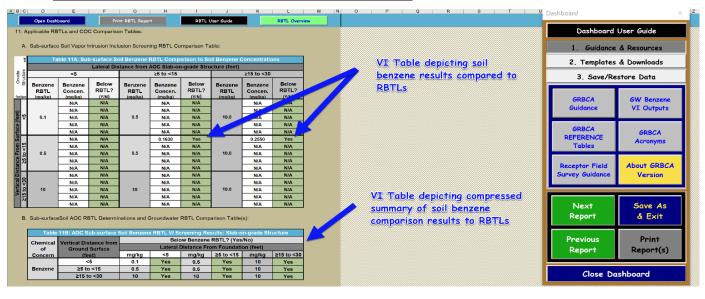


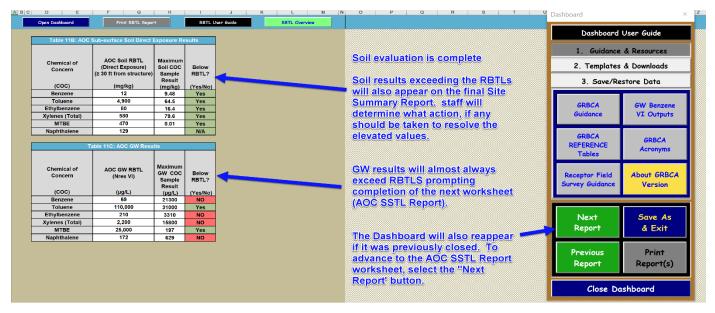
This screenshot depicts the completion state of the RBTL action buttons. Two blue activated buttons with white text and two green deactivated buttons with gray text. Inconsistent white or gray command button text from what is displayed here indicates a worksheet completion issue and should be elevated for further evaluation.



The next page displays the RBTL Comparison Results Tables

RBTL Output Tables for All Completed Evaluations





The RBTL Report Worksheet Training is now complete.