



**LEAKING UNDERGROUND STORAGE TANK  
 INITIAL ASSESSMENT REPORT**

**INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY.** Complete this form with all applicable information. The Certified Underground Storage Tank Professional (CP) and MUST sign below. Failure to submit a report within the stated time period may result in Administrative Penalties as provided for in Part 213, Section 21313a of 1994 PA 451, as amended. PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of RRD district offices.

FACILITY NAME:		FACILITY ID NUMBER:	
STREET ADDRESS:			
CITY:		ZIP:	COUNTY:
DATE(S) RELEASE(S) DISCOVERED:		CONFIRMED RELEASE NUMBER(S):	
O/O NAME:			
O/O STREET ADDRESS:		STATE:	ZIP:
CONTACT PERSON:		PHONE NUMBER:	

**ANSWER ALL QUESTIONS (DO NOT LEAVE BLANKS):**

1. a. Has the UST(s) been emptied?  YES  NO (If no, explain why):  
 b. Has the UST system(s) been properly closed?  YES  NO (If no, explain why):
2. Free product present: a. Currently?  YES  NO If YES, total gallons recovered since last report:  
 b. Previously?  YES  NO If YES, total gallons recovered to date:
3. Have vapors been identified in any confined spaces (basement, sewers, etc.)?  YES  NO
4. Is or was a drinking water supply affected as a result of a release from this facility?  YES  NO  
 If YES, indicate type and number:  Single family  Municipal (Type I)  Other (Type II or III)  Municipal (SW)
5. Estimated distance and direction from point of release to nearest:  
 a. Private well: \_\_\_\_\_ b. Municipal well: \_\_\_\_\_ c. Surface water/wetland: \_\_\_\_\_
6. Has groundwater been impacted at or above Target Method Detection Limits (for metals, impact above Tier 1 unrestricted residential drinking water RBSLs)?  YES  NO
7. Totals to date: a. cubic yards of soil remediated: \_\_\_\_\_ b. gallons of groundwater remediated: \_\_\_\_\_
8. Michigan RBCA Site Classification (1-4): \_\_\_\_\_
9. MTBE 

Has MTBE been detected in any groundwater sample? <input type="checkbox"/> YES <input type="checkbox"/> NO	Maximum concentration of MTBE found in groundwater. _____ ppb
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**CERTIFICATION OF REPORT COMPLETION**

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate, and complete. I certify that the report was submitted to the Remediation & Redevelopment Division (RRD)

on \_\_\_\_\_ (Date submitted **REQUIRED**)

\_\_\_\_\_  
 CP Original Signature - (**REQUIRED**)

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 PRINT QC PROJECT MANAGER'S NAME

\_\_\_\_\_  
 PRINT CP's Name

\_\_\_\_\_  
 NAME OF CONSULTING FIRM

CP ID \_\_\_\_\_

QC ID: **Z** \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

**Instructions** - Utilize the following checklist to ensure that all required information is provided in the Initial Assessment Report (IAR). Include this checklist as the table of contents. The order in which the information is provided is at your discretion. Each page of the report (including the cover sheet, table of contents, appendices, figures, etc.) should be consecutively numbered. The location column should be completed with the appropriate page number for each item. You may reference previously submitted materials by specifying the location within that document. Maps, tables, figures, etc. should be combined as appropriate.

All information required by Part 213 to be included in the IAR **must** be provided, and all sections of the report must be completed. If any items are not applicable to the site, provide a justification regarding the absence of this information in the appropriate section of the report.

Section	Table of Contents	Page
<b>1.0</b>	<b><u>INITIAL RESPONSE TO RELEASES</u></b>	
	A. Provide the date and time the release(s) was/were discovered and reported.	_____
	B. Indicate what portion of the underground storage tank (UST) system is, or is believed to be, the source of the release.	_____
	C. Describe how the release was discovered.	_____
	D. Describe any tank tightness testing performed in response to this release and provide the following:	_____
	1. Date of the testing	
	2. Method of testing	
	3. Results of the testing	
	E. List all former and existing USTs at this facility including the following information for each of these tanks:	_____
	1. Tank ID Number (as registered)	
	2. Contents (past/present, if gasoline specify grade and whether leaded or unleaded)	
	3. Size of the UST	
	4. Whether the tank was identified as a leaking underground storage tank (LUST)	
	5. Whether the tank has been emptied and/or removed. If a LUST, provide an explanation if not emptied or removed.	
	F. Describe the initial response actions which were performed at this site, as specified in Sections 21307(2)(a) through (c), and (3)(a) and (b).	_____
<b>2.0</b>	<b><u>REPORTING AND RESPONSE FOLLOWING THE DISCOVERY OF FREE PRODUCT</u></b>	
	<b>If free product has not been discovered, proceed to Section 3.0.</b>	
	A. Describe initial response actions performed at this site to address the presence of free product as specified in Sections 21307(2)(c) and (f), and (3)(b) and (c), 21308a(1)(b)(xviii). Refer to the Storage Tank Division Operational Memorandum No. 7, <i>Identification, Reporting, and Recovery of Free Product at LUST Sites</i> .	_____
	B. Attach the RRD Free Product Recovery Status Report (EQP 3850).	_____
	C. Include a schedule for subsequent Free Product Report submittals.	_____

**3.0 SITE CHARACTERIZATION INFORMATION**

**3.1 SCALED SITE MAPS**

- A. Provide a scaled area map (or maps) which includes the following:
  - 1. Site boundaries in relation to the surrounding area and the nearest major roads. \_\_\_\_\_
  - 2. Location and depth of nearby underground sewers and utility lines. \_\_\_\_\_
  - 3. Location of nearby surface waters or wetlands. \_\_\_\_\_
  - 4. Location and screened depth of all off-site wells (municipal, residential, production, irrigation, etc.) within two years groundwater travel time of the property line, which may be dependent on the pumping rates of the identified well(s). \_\_\_\_\_
  - 5. Location of all nearby delineated well-head protection areas. \_\_\_\_\_
  
- B. Provide a scaled site map (or maps) which includes the following:
  - 1. Location of fill ports, piping, dispensers, and other pertinent system components for all UST systems currently or formerly at the facility (*prior to excavation if tanks have been removed*). \_\_\_\_\_
  - 2. Location of the release and the component of the LUST system from which the release occurred. \_\_\_\_\_
  - 3. Location of adjacent buildings, roadways, paved areas, or other structures. \_\_\_\_\_
  - 4. Location of all on-site wells and screened intervals. \_\_\_\_\_
  - 5. Location of soil, groundwater, surface water, sediment or air samples, as applicable. \_\_\_\_\_
  - 6. Excavation dimensions and sample locations if applicable. \_\_\_\_\_

**3.2 SCALED CROSS-SECTIONAL DIAGRAMS**

- A. Provide scaled cross-sectional diagrams of buried utility corridors, including the pipe diameter, the type of backfill, and the trench depth. \_\_\_\_\_
  
- B. Provide scaled cross-sectional diagrams depicting the soil lithology and the contaminant distribution, including sampling intervals and boring depths. \_\_\_\_\_
  
- C. Provide scaled cross-sectional diagrams depicting the site hydrogeology, including the groundwater potentiometric surface, the monitoring well screened intervals, and sampling intervals. \_\_\_\_\_

**3.3 SOIL CONDITIONS AND CHARACTERISTICS**

- A. Describe the soils encountered in the vadose zone. \_\_\_\_\_
  
- B. Describe any soil contamination which has been detected. \_\_\_\_\_
  
- C. Describe any soil remediation or disposal activities performed to date, including the total volume of soil remediated or disposed. Indicate the disposal location, and provide proof of disposal (e.g., invoices, not load tickets). \_\_\_\_\_

- D. Provide a site diagram which identifies the estimated horizontal and vertical extent of on-site and off-site soil contamination. Include the maximum concentrations and sample depths. \_\_\_\_\_
- E. Provide an estimate of the volume of impacted soil remaining in the vadose zone. \_\_\_\_\_
- F. Describe steps that have been taken, or will be taken, to secure access to off-site properties, including easements and right-of-ways, to complete the delineation of the extent of the off-site impact of the release to soil. Include the names and addresses of potentially affected off-site property owners. \_\_\_\_\_
- G. Provide the schedule for completing the delineation of the extent of the off-site impact of the release to soil. \_\_\_\_\_
- H. Provide a table with field screening and laboratory data showing the results of all soil sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational Memorandum No. 14, *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*. \_\_\_\_\_
1. Sample ID
  2. Sample depth
  3. Date of collection
  4. Dates of extraction and analysis
  5. Method Detection Limits
  6. Analytical method or field screening instrument

*(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

- I. Provide a table which compares the maximum remaining soil contaminant concentrations for each required parameter to the appropriate RBSLs as provided in Storage Tank Division Operational Memorandum No. 4, *Tier I Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank Sites*. If residential leaching to groundwater RBSLs are not utilized for comparison, provide an explanation. \_\_\_\_\_
- J. Provide soil boring logs. \_\_\_\_\_
- K. Identify any known soil contamination not related to the release and the source, if known. \_\_\_\_\_

### 3.4 GROUNDWATER CONDITIONS AND CHARACTERISTICS

- A. Describe the site hydrogeology, and include the following: \_\_\_\_\_
1. Depth to groundwater and method of determination. \_\_\_\_\_
  2. Whether the groundwater is potable and/or not in an aquifer. Provide the basis for this determination. Refer to Storage Tank Division Operational Memorandum No.11, *Criteria to Eliminate the Potable Groundwater Pathway*. \_\_\_\_\_

3. Whether the groundwater is currently used as a source of drinking water, either residential or municipal.	_____
4. Whether groundwater is being used for a purpose other than drinking water.	_____
5. Whether more than one groundwater unit is present beneath the site.	_____
6. Depth to bottom of water-bearing layer.	_____
7. Predominant soil type in water-bearing stratum ( <i>e.g.</i> , <i>sand</i> , <i>silt</i> ).	_____
8. Effective porosity of water-bearing stratum (in $\text{cm}^3_{\text{void}}/\text{cm}^3_{\text{matrix}}$ ), and describe how it was determined.	_____
9. Hydraulic conductivity, and describe how it was determined.	_____
10. Groundwater flow rate and direction.	_____
11. Lateral component of the hydraulic gradient.	_____
12. Hydrogeologic conditions that could influence flow direction.	_____
13. Magnitude and direction of the vertical component of the hydraulic gradient.	_____
B. Attach copies of the following:	
1. Boring logs	_____
2. Well construction diagrams	_____
3. Potentiometric surface map	_____
4. Elevation data (USGS datum preferred), including top-of-casing, and grade elevations, and depth to groundwater	_____
C. Provide scaled maps and cross-sectional diagrams, showing the screened and/or sampling interval, which depict the extent of impact and the maximum concentrations.	_____
D. Indicate whether more than one groundwater unit has been impacted.	_____
E. Describe any groundwater remediation activities performed to date, including the total volume of groundwater remediated and the disposition of this groundwater.	_____
F. Provide an indication of whether the plume currently extends off-site.	_____
G. Describe steps that have been taken, or will be taken, to secure access to <u>off-site</u> properties, including easements and right-of-ways, for the purpose of completing the delineation of the extent of the release to groundwater, and provide the names and addresses of off-site property owners.	_____
H. Provide the schedule for completing the delineation of the extent of the off-site impact of the release to groundwater.	_____
I. Provide a table with field screening and laboratory data showing the results of all groundwater sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational Memorandum No. 14. The table should include the following:	_____
1. Sample ID	
2. Sample depth and/or screened interval	
3. Date of collection	
4. Dates of extraction and analysis	
5. Method Detection Limits	
6. Analytical method or field screening instrument	

(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)

Section	Table of Contents	Page
J.	Provide a table which compares the maximum remaining groundwater contaminant concentrations for each required parameter to the appropriate RBSLs as provided in Storage Tank Division Operational Memorandum No. 4. If residential health-based/aesthetic drinking water criteria are not utilized for comparison, provide an explanation.	_____
K.	Identify any known groundwater contamination not related to the release and the source, if known.	_____
<b>3.5</b>	<b>CONDITIONS AND CHARACTERISTICS IN OTHER ENVIRONMENTAL MEDIA</b>	
A.	Describe the evaluations conducted to determine if other environmental media have been impacted.	_____
B.	Describe the extent and distribution of any contamination present in any environmental media other than soil or groundwater.	_____
C.	Describe any actions taken or planned in response to contamination in other environmental media.	_____
D.	Describe steps that have been taken, or will be taken, to secure access to <u>off-site</u> properties, including easements and right-of-ways, to complete the delineation of the extent of the <u>off-site</u> impact of the release to the other specified environmental media. Provide names and addresses of potentially affected off-site property owners.	_____
E.	Provide a schedule for completing the delineation of the extent of the <u>off-site</u> impact of the release to the other specified environmental media.	_____
F.	Provide a table with the field screening and laboratory data showing the results of all sampling performed to date in the other specified environmental media.	_____
	<i>(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)</i>	
G.	Identify any known contamination in the other specified media not related to the release, and the source if known.	_____
<b>4.0</b>	<b><u>SITE CLASSIFICATION</u></b>	
A.	Indicate the current Site Classification Level, in accordance with Storage Tank Division Operational Memorandum No. 5, <i>Leaking Underground Storage Tank (LUST) Site Classification System</i> .	_____

- B. Provide a justification for this classification. Identify the current conditions that are the basis of the classification, and dates that the prescribed initial response actions were implemented. \_\_\_\_\_

**5.0 RESULTS OF THE RBCA EVALUATION**

**5.1 EXPOSURE PATHWAY CHARACTERIZATION**

- A. Identify and describe the following (Figure 2, Exposure Scenario Evaluation Flowchart, provided in the *ASTM RBCA E 1739-95*, may be utilized):
  - 1. Potential source(s) \_\_\_\_\_
  - 2. Potential transport mechanism(s) \_\_\_\_\_
  - 3. Potential exposure routes(s) \_\_\_\_\_
  - 4. Potential receptor(s) \_\_\_\_\_
  
- B. List each possible exposure pathway(s) for each land use, and sensitive habitat (if applicable) for the site. Provide an explanation for eliminating any pathways. \_\_\_\_\_

*NOTE: A complete pathway must include three necessary elements:*

- 1) *a source (e.g., contamination)*
- 2) *a mechanism by which the contamination can become available to result in exposures at the source or via migration to other locations (e.g., free product and contaminated groundwater movement along a buried utility corridor)*
- 3) *an individual who may come into contact, ingest, or inhale the contamination at the point of exposure (e.g., a utility maintenance worker digging to repair the line).*

*Examples of a complete pathway include:*

- 1) *inhalation of impacted soils by an on-site construction worker.*
- 2) *impacted soils leaching into potable ground water and being used by a nearby resident for drinking and bathing.*
- 3) *inhalation of vapors resulting from the migration of free product by a neighboring industrial worker.*
- 4) *impacted groundwater discharging to wetlands.*

**5.2 OPTIONAL TIER II EVALUATION**

- A. Indicate whether a site-specific Tier II or evaluation has been conducted for this site. \_\_\_\_\_
  
- B. If applicable, identify and justify where alternate assumptions or site-specific information were used in place of the default assumptions as defined in the Storage Tank Division Operational Memorandum No. 4. \_\_\_\_\_
  
- C. Provide the calculations and reference citations supporting the development of the relevant Tier II SSTLs. \_\_\_\_\_

- D. Provide a table which compares the maximum remaining contaminant concentrations for each required parameter for all media to the appropriate RBSLs (as provided in the Storage Tank Division Operational Memorandum No. 4), and the calculated SSTLs. Identify all applicable land use scenario(s), and indicate whether or not there is an exceedance of the RBSLs or the SSTLs.
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**5.3 PROPOSED FOLLOW-UP ACTIVITIES**

- A. Based on the results of the Tier I or optional Tier II evaluation, indicate the follow-up activities proposed for the site, (e.g., site closure; interim corrective action with subsequent reevaluation; final corrective action to achieve Tier I RBSLs or Tier II SSTLs; or perform further site-specific Tier II or Tier III evaluation to establish alternative SSTLs that meet the target risk goals).
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- B. Provide justification for the option chosen.
- 
- C. Provide a Work Plan and implementation schedule that describes the proposed site characterization activities to be performed to determine the horizontal and vertical extent of contamination. Include a scaled site map depicting proposed sampling locations.
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