TIER 1 INVESTIGATION REPORT FORM

Due within one year of the occurrence of any of the following:

- Receiving analytical results, which exceed action levels, while conducting investigations pursuant to paragraph (F)(3)(b) of OAC 1301:7-9-13;
- Electing to conduct corrective actions pursuant to paragraph (B)(2) of OAC 1301:7-9-13;
- Receiving analytical results, which exceed action levels, from a closure assessment conducted pursuant to paragraph (F) of OAC 1301:7-9-12; or
- Conducting corrective action activities pursuant to paragraph (B)(3) and (B)(4) of OAC 1301:7-9-13.

OWNER/OPERATOR AND FACILITY DATA

FACILITY INFORMATION:

COMPANY: _____
ADDRESS: _____
CITY: _____
COUNTY: _____
ZIP CODE: _____
LAT/LONG: _____
FACILITY ID #: _____

UST OWNER INFORMATION:

COMPANY: _____
ADDRESS: _____
CITY, STATE: _____
ZIP CODE: _____
CONTACT PERSON: _____
PHONE: _____

UST OPERATOR INFORMATION:

COMPANY: _____
ADDRESS: _____
CITY, STATE: _____
ZIP: _____
CONTACT PERSON: _____
PHONE: _____

PROPERTY OWNER INFORMATION:

COMPANY: _____
ADDRESS: _____
CITY, STATE: _____
ZIP: _____
CONTACT PERSON: _____
PHONE: _____

UNDERGROUND STORAGE TANK (UST) SYSTEM DATA

Tank #	Date Installed	Capacity	Const. Material	Tank Status	Date Removed

***STATUS= OOS<90** – Out of Service < 90 days **OOS>90** – Out of Service > 90 days **RE** - Replace **R** - Removed*
***CIU** - Currently In Use **NA** - Not Applicable **CIS** - Change in Service **CIP** - Closed in Place*

SITE HISTORY AND VISUAL SITE EVALUATION

(Include a description of the property, surrounding area, the date the release occurred, etc.)

TIER 1 SOURCE INVESTIGATION

POTENTIAL SOURCE(S):

POTENTIAL SOURCE AREA(S):

CHEMICALS OF CONCERN:

SUBSURFACE INVESTIGATION:

SOIL BORINGS INSTALLED DURING THIS INVESTIGATION / DATE:

PREVIOUSLY INSTALLED SOIL BORINGS / DATE:

MONITORING WELLS INSTALLED DURING THIS INVESTIGATION / DATE:

PREVIOUSLY INSTALLED MONITORING WELLS / DATE:

SB/MW	Install Date	Location	Installed With*	Total Depth	Depth to GW	Static GW	Depth to Bedrock	Screened Interval	MW Diameter

*HSA/SS – hollow stem auger/split spoon, DP – direct push, HA – hand auger

FIELD SCREENING

INSTRUMENT USED: _____

METHODOLOGY USED: _____

_____

_____

_____

CALIBRATION PROCEDURES: _____

_____

_____

_____

SB/MW#								
Depth	PID/FID Result	PID/FID Result	PID/FID Result	PID/FID Result	PID/FID Result	PID/FID Result	PID/FID Result	PID/FID Result
0-2’								
2-4’								
4-6’								
6-8’								
8-10’								
10-12’								
12-14’								
14-16’								
16-18’								
18-20’								
20-22’								
22-24’								
24-26’								
26-28’								
28-30’								
30-32’								
32-34’								

34-36’								
36-38’								
38-40’								
40-42’								
42-44’								
44-46’								
46-48’								
48-50’								
GW Depth								

The soil samples that were submitted for analysis should be in **BOLD** or marked with *

SOIL CLASSIFICATION

SOIL CLASSIFICATION:	SOIL CLASS 1	SOIL CLASS 2	SOIL CLASS 3
SOIL SYMBOL:	GW, GP, GM, GC, SW, SP, SM,	SC, ML, CL, OL, MH	CH, OH, PT

MARK THE CORRECT CHOICE: SOIL CLASS 1 ☐ SOIL CLASS 2 ☐ SOIL CLASS 3 ☐

LABORATORY DATA

LABORATORY NAME: _____

ADDRESS: _____

PHONE #: _____

CHEMICAL OF CONCERN / TEST METHOD: _____

DATE SAMPLES RECEIVED BY LAB: _____

DATE SAMPLES ANALYZED BY LAB: _____

TEMPERATURE OF COOLER/SAMPLES: _____

IMMEDIATE CORRECTIVE ACTIONS

FREE PRODUCT PRESENT: YES ☐ NO ☐

AMOUNT OF FREE PRODCT RECOVERED TO DATE: _____

LOCATION OF FREE PRODUCT: _____

OFF-SITE ACCESS

IS OFF-SITE ACCESS REQUIRED TO DELINEATE COCs: YES ☐ NO ☐

IF YES, DESCRIBE: _____

GROUNDWATER DETERMINATION

MARK THE CORRECT CHOICE

THE SATURATED ZONE IS ASSUMED TO BE GROUND WATER**:** YES ☐ NO ☐

THE SATURATED ZONE IS NOT CONSIDERED GROUND WATER: YES ☐ NO ☐ N/A ☐

DEPTH TO THE SATURATED ZONE: <15' ☐ 15'-30' ☐ 31-50' ☐ > 50' ☐

IF THE SATURATED ZONE IS NOT CONSIDERED GROUND WATER, DOCUMENTATION MUST BE PROVIDED:

GROUND WATER FLOW DIRECTION: _____

DRINKING WATER DETERMINATION

IF ANY OF THE FOLLOWING FOUR ITEMS APPLY, GROUND WATER IS CONSIDERED DRINKING WATER:

1.) The UST site or surrounding area is located in a Drinking Water Source Protection Area as defined by paragraph (C)(5) of OAC 1301:7-9-13**:** YES ☐ NO ☐

DESCRIBE: _____

2.) The UST site is in a Sensitive Area as defined by OAC 1301:7-9-09**:** YES ☐ NO ☐

DESCRIBE: _____

3.) A drinking water source in the ground water is identified within the surrounding area, even if the source is completed into a lower saturated zone than the saturated zone to be evaluated on an UST site. This identification shall include the information required in paragraph (I)(1)(b) of OAC 1301:7-9-13**:** YES ☐ NO ☐

DESCRIBE: _____

4.) A surface water body is located within three hundred feet of the UST site**:** YES ☐ NO ☐

DESCRIBE: _____

IF THE UST SITE DOES NOT MEET THE DRINKING WATER REQUIREMENTS OF THE FOUR ITEMS LISTED ABOVE, THEN GROUND WATER UNDERLYING THE UST SITE SHALL BE CONSIDERED NON-DRINKING WATER IF ANY ONE OF THE BELOW SIX ITEMS APPLY:

1.) Ground water in the upper saturated zone yields less than three gallons per minute;
YES ☐ NO ☐ Not Evaluated ☐

DESCRIBE: _____

2.) Ground water in the upper saturated zone has a background level of total dissolved solids of three thousand milligrams per liter or greater; YES ☐ NO ☐ Not Evaluated ☐

DESCRIBE: _____

3.) An UST site is located in an area where an urban setting designation pursuant to Chapter 3746 of the Revised Code and rules adopted there under has been approved by the director of Ohio Environmental Protection Agency and the owner and operator verifies that the urban setting designation remains protective of the potable use pathway in accordance with OAC 3745-300-10(D)(3)(b); YES ☐ NO ☐ Not Evaluated ☐

DESCRIBE: _____

4.) No potable wells are located within 300 feet of an UST site based on a physical survey and an ordinance requires a mandatory tie-in to a municipal water system for all properties in the surrounding area; YES ☐ NO ☐ Not Evaluated ☐

DESCRIBE: _____

5.) No potable wells are located within 300 feet of an UST site based on a physical survey and an ordinance prohibits the installation of potable water wells at all properties within the surrounding area; or YES ☐ NO ☐ Not Evaluated ☐

DESCRIBE: _____

No potable wells are located within 300 feet of an UST site based on a physical survey and 100 percent of the properties within 300 feet of an UST site area are connected to a municipal water source or a municipal source is readily available. YES ☐ NO ☐ Not Evaluated ☐

DESCRIBE: _____

NKING WATER DETERMINATION CONCLUSIONS

Groundwater is considered drinking water: ☐
Groundwater is not considered drinking water: ☐

SITE MAXIMUM CONCENTRATIONS

	SOIL				GROUND WATER		
	SB	Depth	Conc. mg/kg	Action Level	MW	Conc. mg/L	Action Level
BENZENE							
TOLUENE							
ETHYLBENZENE							
TOTAL XYLENES							
MTBE							
BENZO (a) ANTHRACENE							
BENZO (a) PYRENE							
BENZO (b) FLUORANTHENE							
BENZO (k) FLUORANTHENE							
CHRYSENE							
DIBENZ (a,h) ANTHRACENE							
INDENO (1,2,3-cd) PYRENE							
NAPHTHALENE							
TPH (C6-C12)					N/A	N/A	N/A
TPH (C10-C20)					N/A	N/A	N/A
TPH (C20-C34)					N/A	N/A	N/A
OTHER:							

TIER 1 DECISIONS

Select one of the following:

☐ The concentrations of all chemical(s) of concern are at or below action levels determined in accordance with paragraph (I)(2)(f) of OAC 1301:7-9-13 for all applicable pathways, and no further action is requested.

or

☐ The concentrations of chemical(s) of concern are above applicable action level(s) determined in accordance with paragraph (I)(2)(f) of OAC 1301:7-9-13, and the following chemicals of concern and pathways require further evaluation:

If applicable, please list the COCs and the pathways that failed:

Chemicals of Concern	Soil Pathways	Chemicals of Concern	GW Pathways

Upon approval of the completeness of the Tier 1 Investigation Report, the owners and operators are planning on conducting one or a combination of the following:

A.) An Interim Response Action: Yes ☐

B.) A Tier 2 Evaluation: Yes ☐

C.) A Remedial Action Plan: Yes ☐

MISCELLANEOUS DATA

THE FOLLOWING ITEMS MUST BE ATTACHED:

ADDITIONAL INFORMATION WHICH IS REQUIRED BY OAC 1301:7-9-13 OR ADDITIONAL INFORMATION WHICH CLARIFIES THE INVESTIGATION ACTIVITIES SHALL BE SUBMITTED AS APPENDICIES TO THIS REPORT.

TABLES:
TABLE 1 - SOIL CONCENTRATIONS COMPARED TO ACTION & DELINEATION LEVELS
TABLE 2 - GROUND WATER CONCENTRATIONS COMPARED TO ACTION & DELINEATION LEVELS
TABLE 3 - MONITORING WELL GAUGING DATA

FIGURES:
FIGURE 1 - TOPOGRAPHIC MAP
FIGURE 2 - SITE MAP
FIGURE 3 – SITE MAP WITH SOIL BORING LOCATIONS, SOIL CONCENTRATIONS AND SAMPLE DEPTH
FIGURE 4 - SITE MAP WITH MONITORING WELLS AND GROUND WATER CONCENTRATIONS
FIGURE 5 - GROUND WATER CONTOUR MAP

APPENDIX:
APPENDIX A – SOIL BORING LOGS
APPENDIX B – MONITORING WELL CONSTRUCTION DIAGRAMS
APPENDIX C – MONITORING WELL DEVELOPMENT & SAMPLING FORMS
APPENDIX D - SOIL CLASSIFICATION FORM
APPENDIX E – LABORATORY ANALYTICAL REPORT
APPENDIX F – CHAIN OF CUSTODY
APPENDIX G – DRINKING WATER EVALUATION SUPPORTING DOCUMENTATION

The Tier 1 Investigation Report Form **must** be signed by the UST owner/operator. The owner/operator is responsible for ensuring all data is accurate, and the form is legible and complete.

OWNER / OPERATOR SIGNATURE: _____

PRINT NAME: _____ **DATE:** _____

FORM PREPARED BY:
NAME: _____
COMPANY: _____
ADDRESS: _____
PHONE #: _____
EMAIL: _____

CHEMICALS OF CONCERN AND RECOMMENDED LABORATORY METHODS

Analytical Group 1 - light distillate products - including unleaded gasoline, leaded gasoline and aviation gasoline;

Analytical Group 2 - middle distillate products - including diesel, light fuel oils, stoddard solvents, mineral spirits, kerosene, and jet fuels;

Analytical Group 3 - heavy petroleum distillate products - including, but not limited to, lubricating and hydraulic oils;

Analytical Group 4 - used oil

Analytical Group 5 - unknown petroleum products or petroleum products other than those listed in analytical groups 1, 2, 3 and 4. Additional chemical(s) of concern and analytical methods must be selected, as appropriate, based on reasonably available information related to the product stored, including additives, impurities and degradation products. In addition, chemical(s) of concern should be selected based on their toxicity, mobility, and persistence in the environment. The owners and operators shall consult with the fire marshal for the appropriate chemical(s) of concern for products not in analytical group 1, 2, 3 and 4.

	Analytical Group Number	**1**	**2**	**3**	**4**	**5**	**Analytical Methods**
		Light Distillates	Middle Distillates	Heavy Distillates	Used Oil	Unknowns & Others	
	Chemical						
Aromatics	Benzene	x	x		x		8021/8260
	Toluene	x	x		x		
	Ethylbenzene	x	x		x		
	o, m and p-Xylenes	x	x		x		
Additives	Methyl tertiary-butyl ether (MTBE)	x			x		
Polynuclear Aromatics	Benzo(a)anthracene		x	x	x		8270/8310
	Benzo(a)pyrene		x	x	x		
	Benzo(b)fluoranthene		x	x	x		
	Benzo(k)fluoranthene		x	x	x		
	Chrysene		x	x	x		
	Dibenz(a,h)anthracene		x	x	x		
	Indeno(1,2,3-c,d)pyrene		x	x	x		
	Naphthalene		x	x	x		
Chlorinated Hydrocarbons	Volatile Organic Hydrocarbons				x		8260
Total Petroleum Hydrocarbons *1	TPH (C6 – C12)	x			x		8015
	TPH (C10 – C20)		x		x		
	TPH (C20 – C34)			x	x		
	Varies based on UST contents			x	x	*2	

*1 TPH analysis is not required for ground water samples.

*2 Additional chemical(s) of concern and analytical methods must be selected, as appropriate, based on reasonably available information related to the product stored, including additives, impurities and degradation products. In addition, chemical(s) of concern should be selected based on their toxicity, mobility, and persistence in the environment. The owners and operators shall consult with the fire marshal for the appropriate chemical(s) of concern for products not in analytical group 1, 2, 3 and 4.