INITIAL SITE CHARACTERIZATION (ISC) REPORT COVER SHEET & REPORT FORMAT

State Form 55439 (R / 7-26)
Indiana Department of Environmental Management
Petroleum Remediation Section

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Land Quality
Petroleum Remediation Section
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INSTRUCTIONS:

1. *This form is intended to assist with the organization of the Initial Site Characterization (ISC) Report. Additional information and guidance may be found in 40 Code of Federal Regulations (CFR) 280 Subpart F, Indiana Code 13-23-13, the Petroleum Remediation Program Guide (Waste-0082), and the Risk-based Closure Guide (R2, Waste-0046-R2).*
2. *The Cover Sheet should be attached as cover to your ISC Report submittal; format instructions should be followed but not included.*
3. *If a section or appendix does not apply, enter "Not Applicable" and explain why. Do not leave any section blank.*

A. FACILITY INFORMATION

Facility Name:	Facility ID Number:	
	Incident Number(s):	
Street Address:		
City:	County:	ZIP Code:

B. SITE PRIORITY INFORMATION

1. a) Is Free Product present?	☐ YES	☐ NO
b) If Free Product is present at the Site, has recovery information been submitted per 40 CFR 280 Subpart F and as described below in **Section 4**?	☐ YES	☐ NO
2. Have vapors been identified in any confined spaces (basements, sewers, etc.)?	☐ YES	☐ NO
3. Has this investigation identified that a drinking water well has been affected because of this release? ** For definitions of Public Water Systems see 327 IAC 8-2.7-1 and 40 CFR 141.2*	☐ YES ☐ Community ☐ Non-Transient non-community ☐ Transient non-community ☐ Private	☐ NO
4. Are utilities impacted or likely to be acting as conduits for contaminant migration?	☐ YES	☐ NO
5. Is the site located within a Well Head Protection Area (WHPA)?	☐ YES	☐ NO

6. Estimated distance in feet (ft) and direction from point of release to the nearest:

Private Well: ft.	Municipal Well: ft.	Surface Water: ft.
☐ North ☐ East	☐ North ☐ East	☐ North ☐ East
☐ South ☐ West	☐ South ☐ West	☐ South ☐ West

7. What is the depth to groundwater (below ground surface)?	ft.	
8. What is the predominant groundwater flow direction?	West	
9. Has the investigation defined the nature and extent of contamination in the soil: Vertically?	☐ YES	☐ NO
Horizontally?	☐ YES	☐ NO
10. Has the investigation defined the nature and extent of contamination in the groundwater: Vertically?	☐ YES	☐ NO
Horizontally?	☐ YES	☐ NO
11. Does contamination in the groundwater extend off-site?	☐ YES	☐ NO
12. If not defined, is contamination in the groundwater likely to extend off-site?	☐ YES	☐ NO
13. Is there an existing Environmental Restrictive Covenant (ERC) on the Site property deed or an off-site property(s)? If yes, list the parcel number(s) and associated restriction(s):	☐ YES	☐ NO
14. Is closure of the release(s) being requested at this time and if so, have the necessary evaluations required in **Section 9** of the format instructions been included in the ISC Report?	☐ YES	☐ NO

C. TANK(S) OWNER INFORMATION		
Tank Owner:		☐ Current ☐ Former (select one)
Street Address *(number and street)*:		
City:	State:	ZIP Code:
Contact Person:	Telephone Number:	
E-mail Address:		

D. TANK(S) OPERATOR INFORMATION		
Tank Operator:		
Street Address *(number and street)*:		
City:	State:	ZIP Code:
Contact Person:	Telephone Number:	
E-mail Address:		

E. CURRENT PROPERTY OWNER INFORMATION		
Property Owner:		
Street Address *(number and street)*:		
City:	State:	ZIP Code:
Contact Person:	Telephone Number:	
E-mail Address:		

F. REPORT PREPARER INFORMATION		
Preparer Name and Company:		
Street Address *(number and street)*:		
City:	State:	ZIP Code:
Contact Person:	Telephone Number:	
E-mail Address:		

G. CERTIFICATION OF REPORT COMPLETION			
I, the undersigned qualified environmental professional (QEP), hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate, and completed per IC 13-23-13-1. I certify that the attached report was submitted to the IDEM Petroleum Remediation Section on the date listed below.			
Name (print)	**Position**	**Company**	**Date**

QEP Credential:

_____ (signature)

Per IC 13-23-13-1, a QEP must be a Registered Professional Engineer, a Licensed Professional Geologist, a Certified Hazardous Materials Manager, or a Professional Soil Scientist. All must be specifically certified in the State of Indiana.

Additional Signature (as appropriate or desired)

_____ (signature and date)

_____ (printed name and date)

REQUIRED ISC REPORT FORMAT INSTRUCTIONS

Please attach the above Initial Site Characterization (ISC) cover sheet to your ISC Report submittal. The ISC Report should follow the general outline below.

EXECUTIVE SUMMARY

Provide a brief discussion and summary of the project.

1. BACKGROUND INFORMATION

Regional Location

Describe the regional location including but not necessarily limited to the following:

1. *Township, range, and section on a 7.5-minutes series United States Geological Survey (USGS) topographic map as **Figure 1**.*
2. *An appropriately scaled regional map of the site as **Figure 2.***
3. *A brief discussion regarding regional topography (elevation, slope, etc.), including references for all topographic maps used to make these interpretations.*

Site Location

Describe the site location. Include the following:

1. *A physical description of the site and a discussion of present and potential future land use of the subject property (i.e. industrial, commercial, or residential).*
2. *Identification of all adjacent properties in the four principal compass directions and include historical (if known) uses.*
3. *A scaled plan of the subject site and adjacent properties as **Figure 3**. The figure should also include site buildings or former buildings, locations of current and former underground storage tanks (USTs), aboveground storage tanks (ASTs), groundwater monitoring wells, utilities, storm drains, spill areas, etc.*

Land Use History

Describe the land use history and include the following:

1. *A description of the historical uses of the subject site, including chemicals used on the site, from past or present operations that may have contributed to the contamination.*
2. *A list of the current and previous property owners, for a minimum of the past 50 years, dates of ownership and the use of the property. If a land contract or lease currently exists, include contact information.*
3. *Any property descriptions, deed restrictions, land-use restrictions, chain-of-title documentation, or environmental notice limitations as **Appendix A.***

Site Tank History

*List all UST and AST information (past and present) in the format provided below as **Table 1**. If there are ownership or tank changes to regulated tanks, submit an updated Notification Form (State Form 45223; 57335) to USTRegistration@idem.IN.gov.*

Tank #	Installation Dates	Capacity (in gallons)	Product	Construction Material	Tank Status	Method of Leak Detection	Date Removed
1							
2							

Overview of Previous Site Environmental Investigations & Spill History

List in chronological order, all previous release and investigation efforts (i.e. UST Closure Reports, Phase II Investigations, abatement measures, site check results). The following details should be included:

1. *Report name, date, and IDEM Virtual Filing Cabinet document number.*
2. *Name of the party(s) that conducted the sampling and prepared the report.*
3. *Source and cause of any previous spill or release.*
4. *Rationale for the sampling.*
5. *The types of media sampled (i.e. soil, sediment, groundwater, vapor).*
6. *Laboratory methods that were used and a discussion of what is known about data quality and usability.*
7. *Summary tables and figures of results in **Appendix B**.*

2. RELEASE INCIDENT DESCRIPTION

Identify the source of the release and reason this investigation is being performed (i.e., failed tank tightness testing, loss of product through inventory control checks, erratic behavior of product dispensing equipment, water present in UST, Free Product, vapors present in basements and/or nearby utility corridors, etc.). The following details and supporting documentation should be included:

1. *Date reported to the department.*
2. *Release incident number assigned by IDEM.*
3. *List of material(s) released and volume of product lost (provide an estimate if the exact volume is not known).*
4. *Identify the source and cause of the release.*
5. *Areas affected (i.e. backfill soils, native soils, groundwater, surface water, subsurface conduits). Include depth intervals as appropriate.*
6. *Health and environmental risks associated with the release incident (i.e., sensitive area, drinking water well impacted, vapors in structures or utility conduits).*

3. INITIAL RESPONSE TO RELEASE

Provide a description of the initial response to the release. Additional detailed descriptions of the following actions and supporting documentation should include:

1. *Immediate actions taken to stop or prevent additional release of contamination.*
2. *Measures taken to prevent migration.*
3. *Measures taken to identify and mitigate hazards (fire, explosion and vapor) and investigate the potential of a Free Product release.*
4. *Abatement measures and site check results pursuant to 40 CFR 280.62.*

4. FREE PRODUCT RECOVERY INFORMATION

Free Product removal activities should follow 40 CFR 280.64. Additional detailed descriptions of the following actions and supporting documentation should include:

1. *Company/contractor responsible for Free Product recovery/removal.*
2. *Estimated quantity, type, and thickness of product observed or discovered.*
3. *Methods used to recover Free Product.*
4. *Decision rational as to where and whether discharge will occur.*
5. *Type of treatment applied to the discharge and the effluent quality.*
6. *Steps to obtain any necessary permits for discharge.*
7. *Final disposition of any Free Product recovered.*
8. *Amount of Free Product removed to date.*

5. REGIONAL INFORMATION

Regional Geologic & Hydrologic Information

Provide a description of the hydrogeology of the region including the following:

1. *Direction of groundwater flow.*
2. *Type of bedrock, depth to bedrock, and depth to groundwater within the region.*
3. *All high-capacity wells (greater than 70 gallons per minute) and municipal water supply wells within a 2-mile radius. Copies of the identified well logs are no longer required for report submittal.*
4. *All wells with a capacity of less than 70 gallons per minute within a 1-mile radius of the site (this information can be obtained from the Department of Natural Resources (DNR) – Division of Water: 317/232-4160 or toll free at 1-877/928-3755, or by accessing the website www.in.gov/dnr/water). Copies of the identified well logs are no longer required for report submittal.*
5. *A map with locations of all identified high and low capacity wells as **Figure 4**.*
6. *A list of references for all sources used to obtain this information in **Appendix C**.*

6. SITE SPECIFIC INVESTIGATION

Release Related Chemicals (RRCs)

List all RRCs for the subject release based on historical usage and storage of regulated substances in regulated USTs at the subject site. It may be necessary to reduce or expand the list of RRCs as additional site information is acquired.

Sampling & Rationale

Describe the sampling locations, the media sampled, and the RRCs evaluated at each location. A rationale should then be provided justifying these choices.

Soil Sampling

Provide a general overview of the soil sampling event including the following:

1. *Which samples were selected for laboratory analysis and why.*
2. *The method by which the borings were installed and samples were collected (i.e., hand auger, hollow-stem auger, direct-push, split-spoon, etc.), the depths at which the samples were collected, and what analysis was performed.*
3. *Observations and field screening readings collected during sampling activities regarding the subsurface soil should be included on a soil boring log. Include all soil boring logs in **Appendix D**.*
4. *Soil sample locations and estimated extent of contamination should be presented on **Figure 5**.*
5. *Identify cross sections on a site map as **Figure 6a.** Geologic cross sections (depicting the soil lithology, approximate location of the water table, screened intervals, utilities, and horizontal and vertical extent of contamination) should be included as **Figures 6b and 6c**.*

Groundwater Sampling

Provide a general overview of the groundwater sampling event including the following:

1. *Groundwater monitoring well construction diagrams in **Appendix D.***
2. *The method used to measure depth to water in each well (and depth to Free Product, if applicable). Describe the method used for well purging (i.e.:, well pump, bailer, pump) and the volume purged.*
3. *How the groundwater samples were collected from each well and describe the sample containers into which they were transferred.*
4. *Identify duplicate samples or any samples submitted for matrix spike/matrix spike duplicate (MS/MSD) analysis.*
5. *State whether samples for metals analysis were filtered or unfiltered. If filtered, state the reason why and the size (in microns) of the filter used. When lead sampling is required, PRS recommends collecting both filtered and unfiltered samples. The laboratory should be instructed by the person submitting the samples that if the unfiltered sample results exceed current Published Levels, the filtered sample should then be analyzed.*
6. *Describe all decontamination procedures if non-dedicated sampling equipment is used. Describe how decontamination and purge water is managed.*
7. *Depth to groundwater measurements in **Table 2**.*
8. *Groundwater sample locations and estimated extent of contamination on **Figure 7**.*

Vapor Sampling

Per current guidance, an evaluation of potential vapor intrusion based on specific criteria and scenarios should be included. If the evaluation determines that vapor (i.e., soil gas, conduit vapor, vapor intrusion) sampling is warranted, a general overview of the sampling event should include the following:

1. *Discuss the equipment utilized and how samples were collected. If applicable, include soil boring logs in **Appendix D**.*
2. *If applicable, discuss the necessity of a Background Indoor Air Assessment and provide a copy of any checklist or findings in **Appendix E**.*
3. *Observations and field screening readings collected during sampling activities regarding the subsurface soil should be included on a soil boring log. Include all soil boring logs in **Appendix D**.*
4. *Vapor sample locations on **Figure 8**.*

Groundwater Elevation Calculation

*Indicate the method used to determine the elevation of the groundwater monitoring wells and describe how groundwater elevations were calculated. All monitoring wells should be surveyed to a one-hundredth (0.01) foot accuracy to a common benchmark. Groundwater elevations and a depiction of groundwater flow should be presented in a groundwater contour map and included as **Figure 9**. Well screen depths and groundwater elevations should be included in **Table 2**. Indicate the survey benchmark in **Table 2**.*

Quality Assurance

*All lab analytical information, data sheets, chain-of-custody forms and documentation of minimum data documentation requirements (MDDRs) should be included in **Appendix F** and follow IDEM's "Investigation of Underground Storage Tank Releases" Quality Assurance Program Plan (QAPrP) (B-001-OLQ-PET-UST-24-Q-R5). Failure to submit this documentation may delay your ability to receive site characterization approval. A copy of the QAPrP can be found at https://www.in.gov/idem/tanks/files/tech_guidance_investigation_ust_releases_2024.pdf.*

7. RESULTS & CONCLUSIONS

Analytical Results

*Provide a brief narrative describing the analytical results for each media (soil, groundwater, vapor), including the results of the quality control samples (i.e., MS/MSD, duplicates, trip blanks, etc.). Analytical results for each media should be compared against current R2 Published Levels and presented on separate tables and figures. A copy of the laboratory certificates of analysis and chain of custody form(s) should be included as **Appendix F.***

Miscellaneous Sampling Data & Results

*Provide an overview of any additional sampling activities that occurred at the site and were not addressed in the previous sections. Discuss the method by which the samples were collected and all observations made during sampling activities. Analytical data and data summary tables should be included in **Appendix G**.*

Risk Evaluation

*Based on the information currently known about this release, a Conceptual Site Model (CSM) should be developed and provided in **Appendix H**. Identify and evaluate all potential exposure pathways associated with the subject release(s) and impacted media, including the following:*

1. *Dermal.*
2. *Ingestion.*
3. *Inhalation.*

Conclusions

*Provide a professional conclusion regarding the activities conducted for the subject release(s) to date. Indicate if the full nature and extent of contamination has been defined or if additional investigation is required. If not defined, identify any information and data gaps that exist regarding the subject release(s) and complete **Section 8**. If the nature and extent has been defined, the remediation objective(s) must be stated and complete **Section 9**. If all RRC concentrations are less than current R2 Published Levels, **Section 9** is not required.*

8. FSI Work Plan (if applicable)

Further Site Investigation Work Plan

*If the full nature and extent of contamination has not been defined, provide recommendations for additional site activities in a FSI work plan. The FSI work plan should be a brief document provided as **Appendix I** and include:*

1. *A description of how samples will be collected.*
2. *The number of and rationale for samples that will be collected.*
3. *The RRCs to be analyzed.*
4. *Methods for analysis.*
5. *The number and location of soil borings or monitoring wells proposed (depicted on a map).*
6. *An estimated timeline to complete the work along with the identification of any potential obstacles which may delay or prevent complete site characterization.*
7. *Other activities to address the information/data gaps identified in **Section 7**.*

9. SITE EVALUATIONS

*Per IC 13-23-13-1, evaluations of the following must be submitted to IDEM prior to IDEM's request for execution of a restrictive covenant, or a determination of closure or no further action status is made. These evaluations should be included as **Appendix J**.*

Closure Options

*Based on the remediation objectives identified in **Section 7** and if contamination will remain onsite or at an offsite property, closure options must be evaluated in pursuit of achieving no further action status.*

1. *Unconditional.*
2. *Unconditional with Lines of Evidence.*
3. *Conditional with Institutional Controls. Potential deed restrictions must be included.*

Evaluation of Potential Remedial Activities

*Provide an evaluation of remedies given preliminary consideration at this site based on the remediation objective(s) identified in **Section 7**. The evaluation must consider onsite and offsite properties, as applicable, and include the following:*

1. *A discussion of the applicability and potential effectiveness of the proposed remedy(ies).*
2. *The treatability of the RRCs at the site given the contaminant and site conditions.*
3. *A brief description of any pilot tests anticipated to support potential remedy decisions at the site, if applicable.*
4. *Estimated cost of the potential remedy(ies).*
5. *Estimated timeframe to achieve no further action via the potential remedy(ies).*