REMEDIATION/PROGRESS MONITORING (R/PM) COVER SHEET AND REPORT FORMAT

State Form **57327 (3-24)**
IC 13-25-4 and 13-25-5
Indiana Department of Environmental Management
Office of Land Quality
State Cleanup and Voluntary Remediation Programs

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
Attention: Remediation Services Branch
Office of Land Quality
100 N. Senate Ave., IGCN 1101
Indianapolis, IN 46204-2251
or enroll in IDEM's e-submission portal

INSTRUCTIONS:

1. *The Remediation/Progress Monitoring Cover Sheet and Report Format (R/PM) form should be used to report on the sampling events over the preceding monitoring/remediation period.*
2. *This form is intended to assist with the organization of the R/PM for either the State Cleanup or Voluntary Remediation Program.*
3. *The R/PM Cover Sheet should be attached as a cover to your R/PM report.*
4. *Depending on the nature of the project, some of the following sections in the R/PM Report Format or appendices may not be applicable. If this is the case, do not leave the section blank, omit, or reorder the appendices. Instead, enter "Not Applicable" or other explanation to indicate that the section does not apply or that information is not available, and why. * Although the Risk-based Closure Guide (R2) published levels are referenced throughout, some VRP projects rely on previously agreed upon guidance through their Voluntary Remediation Agreement (VRA).*

R/PM COVER SHEET

A. FACILITY INFORMATION

Report Period Beginning:	Report Period Ending:	**Quarter/Sampling event of**
Facility Name:		Program Project Number:
Street Address *(number and street)*:		
City:	County:	ZIP Code:
Assigned IDEM Project Manager:	**AGENCY INTEREST ID NUMBER:**	

B. CURRENT SITE PRIORITY INFORMATION

Was free product present?	☐ YES	☐ NO
Are vapors in any occupied structures impacted with release related chemicals (RRCs) at levels greater than R2 published levels?	☐ YES	☐ NO
Are utility corridors impacted with RRCs at levels greater than R2 published levels or likely to be acting as conduits for contaminant migration?	☐ YES	☐ NO
Are any municipal supply water wells and/or private water wells impacted, or likely to be impacted, with RRCs at levels greater than R2 published levels?	☐ YES	☐ NO

C. SUMMARIZE CHANGES IN SITE CONDITIONS SINCE LAST MONITORING EVENT

D. SAMPLING INFORMATION

Monitoring Purpose:	☐ Remediation Progress ☐ Mitigation Monitoring	☐ Plume Behavior ☐ Monitored Natural Attenuation	☐ Closure ☐ Other
RRC categories: *Check all that apply*	☐ Petroleum ☐ Metals	☐ Chlorinated Solvents (cVOCs) ☐ Volatile Organic Compounds	☐ SVOCs/PAHs ☐ Other
Media Impacted with RRCs at levels greater than R2 published levels: *Check all that apply*	☐ Soil ☐ Groundwater	☐ Indoor Air ☐ Sub-slab ☐ Conduit Vapor	☐ Soil Gas ☐ Drinking Water ☐ Other
Number of monitoring wells sampled this event:		Total number of monitoring wells:	

E. REMEDIATION STRATEGY		
Approved Remediation Work Plan (RWP)? ☐ Yes ■ No		RWP VFC Document #(s):
Active remediation system start-up date *(month, day, year)*:		Anticipated System Stop Date:
Percent of time system was operational since last event: %		Number of years expected to run
☐ Vapor Extraction	☐ Air Sparging	☐ Multi-phase/Dual-phase Extraction (MPE/DPE)
☐ Pump and Treat	☐ Excavation	☐ Groundwater Injections
☐ Sub-slab Depressurization System (SSDS)		☐ Monitored Natural Attenuation (MNA)
☐ Exposure Control (i.e. ERC)	☐ Plume Stability	☐ Other

F. RESPONSIBLE PARTY or APPLICANT INFORMATION		
Name:		
Street Address *(number and street)*:		
City:	State:	ZIP Code:
Contact Person:	Telephone Number:	
E-mail Address:		
Other parties copied (attorneys, property owner, etc.):		

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

R/PM REPORT FORMAT

Please attach the R/PM cover sheet to your R/PM report. The R/PM report should follow the outline and section headings 1.0-4.0 provided below.

1.0 INTRODUCTION

Executive Summary: Brief discussion and summary of the project, release history, monitoring conducted to date, etc.

1.1 Project Background

1.1.1 Facility Name and Information

*- **Figure 1**: Township, range, and section on a 7.5-minute series United States Geological Survey (USGS) topographic map*

*- **Figure 2**: Appropriately scaled regional map of the site showing site buildings, locations of former USTs/ASTs, underground utilities, etc.*

1.1.2 Current Owner Information

1.1.3 Historical Ownership, Facility Type, Past and Current Operations

1.1.4 Initial Discovery, Spill History, Known or Suspected Release Area(s)

1.2 Summary of Monitoring Event (if applicable) - summarize the monitoring event, provide information on any investigation derived waste (IDW), include a summary of recent changes that may affect current or future field work, i.e. off-site construction, access issues, changes in property ownership, etc.

1.3 Summary of Remediation Activities (if applicable) - summarize remediation system performance, monitoring data, treatment system discharge sampling requirements, and system influent and effluent analytical results. Any system failures and/or modifications made to the remediation system during the reporting period should be included.

- ***Figure 3***: *Appropriately scaled site map depicting known/suspected release areas, injection locations, soil excavation boundaries, groundwater monitoring well network, remediation system (trenches, piping, etc.) as applicable.*

2.0 SAMPLING METHODOLOGY

2.1 Hydrogeology

- ***Table 1***: *Current Groundwater Gauging depth-to-groundwater measurements and measured/calculated groundwater elevations in feet*

- ***Figure 4***: *Gauging data and groundwater flow direction depicted with potentiometric surface contours*

** Separate into Figures 4a, 4b, etc. for multiple water bearing zones/aquifers (shallow/deep intervals), if applicable*

2.2 Groundwater Sampling Methodology

- ***Appendix A***: *Low-flow sampling summary sheets (if applicable)*

2.3 Soil Sampling Methodology (if applicable)

- ***Appendix B***: *Soil boring logs (if applicable)*

2.4 Vapor Sampling Methodology (if applicable)

- ***Appendix C***: *Indoor Air Building Survey Checklists (if applicable)*

3.0 ANALYTICAL RESULTS

3.1 Groundwater Analytical Results

- ***Table 2***: *Current and Historical Groundwater Analytical Results. Compare this sampling event and previous sampling events against applicable R2 published levels. Use separate tables for VOCs, SVOCs, PAHs, and metals, as site requires.*

- ***Figure 5***: *Map(s) displaying the groundwater analytical results for RRCs at levels greater than R2 published levels with lateral extent contours depicting extent of RRC concentrations by regulatory published level.*

** Separate into Figures 5a, 5b, etc. for specific RRC contours, if applicable*

- ***Appendix D***: *Laboratory analytical reports*

3.2 Groundwater Concentration Trends

- ***Appendix E***: *Concentration trend graphs depicting RRCs at greater than R2 published levels over time with dates of remedial measures marked (if applicable)*

3.3 Groundwater Geochemical Results (if applicable)

3.4 Quality Assurance / Quality Control

3.4.1 QA/QC Samples (duplicate identification, trip blanks, etc.)

3.4.2 QA/QC Results

3.5 Soil Analytical Results (if applicable)

- ***Table 3***: *Current and Historical Soil Analytical Results. Compare this sampling event and previous sampling events against applicable R2 published levels.*

- ***Figure 6***: *Map displaying the soil analytical results for RRCs at greater than R2 published levels with lateral extent contours (if applicable)*

- ***Appendix D***: *Laboratory analytical reports (if applicable)*

3.6 Vapor Analytical Results (if applicable)

- ***Table 4***: *Current and Historical (Sub-Slab, Exterior Soil Gas, or Conduit Vapor) Analytical Results. Compare this sampling event and previous sampling events against applicable R2 published levels.*

- ***Table 5***: *Current and Historical Indoor Air Analytical Results. Compare this sampling event and previous sampling events against applicable R2 published levels.*

- ***Figure 7***: *Map displaying the vapor analytical results for RRCs at greater than R2 published levels (if applicable)*

- ***Appendix D***: *Laboratory analytical reports (if applicable)*

4.0 CONCLUSION

Provide a discussion, conclusions, and recommendations about the results of the event. An explanation should be provided about any data gaps. Recommendations on future monitoring, remedial action, or site closure should be included in this section.

RECOMMENDED TABLE TEMPLATES

*Please use the following table templates in your submitted report. All tables should be titled Table # and Table Name as described in **R/PM** Report Format and include in subsequent title rows the Site Name, Site Address, and Program Number.*

Table 1. Current Groundwater Gauging

	Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation	Free Product Thickness	Corrected Groundwater Elevation	Monitoring Well Depth	Monitoring Well Screen Interval
MW-ID								
MW-ID								

Table 2. Current and Historical Groundwater Analytical Results

Sample-ID	Depth of Sample	Date of Sample	Detected Release Related Chemical (RRC) and Result *[in micrograms per liter (µg/l)]*		
			RRC	RRC	RRC
		GWPL			

Notes: results ≥ groundwater published levels *(GWPLs)* should be **bolded**

Table 3: Current and Historical Soil Analytical Results

Sample-ID	Depth of Sample	Date	Detected Release Related Chemical (RRC) and Result *[in milligrams per kilogram (mg/kg)]*		
			RRC	RRC	RRC
		RSPL			
		CSPL			
		XSPL			

Notes: results ≥ residential soil published levels *(RSPLs)* should be *italicized*
results ≥ commercial soil published levels *(CSPLs)* should be *underlined*
results ≥ excavation worker published levels *(XSPLs)* should be ***bolded***

Table 4: Current and Historical (Sub-Slab, Exterior Soil Gas or Conduit Vapor) Analytical Results

Location of Sample	Sample-ID	Date	Detected Release Related Chemical (RRC) and Result *[in micrograms per cubic meter (µg/m^3)]*		
			RRC	RRC	RRC
		RSSPL or CSSPL			
		RDSGPL or CDSGPL			
		RCPL or CCPL			
		RSSGPL or CSSGPL			

Notes: results ≥ residential sub-slab soil gas published levels *(RSSPLs)* should be *italicized*
results ≥ commercial sub-slab soil gas published levels *(CSSPLs)* should be ***bolded***
results ≥ residential deep exterior soil gas published levels *(RDSGPLs)* should be *italicized*
results ≥ commercial deep exterior soil gas published levels *(*CDSGPLs) should be ***bolded***
results ≥ residential conduit published levels *(RCPLs)* should be *italicized*
results ≥ commercial conduit published levels *(CCPLs)* should be ***bolded***
results ≥ residential shallow exterior soil gas published levels *(RSSGPLs)* should be *italicized*
results ≥ commercial shallow exterior soil gas published levels *(*CSSGPLs) should be ***bolded***

Table 5: Current and Historical Indoor Air Analytical Results

Location of Sample	Sample-ID	Date	Detected Release Related Chemical (RRC) and Result *[in micrograms per cubic meter (µg/m^3)]*		
			RRC	RRC	RRC
		RIAPL			
		CIAPL			

Notes: results ≥ residential indoor air published levels *(RIAPLs)* should be *italicized*
results ≥ commercial indoor air published levels *(CIAPLs)* CIAPL should be ***bolded***