

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 purpose of this form is to create consistency and to ensure the submittal of all information required by IC 13-25-5<sup>1</sup> for a voluntary remediation investigation plan (VRIP). The VRIP must be submitted within sixty (60) days of the signing of the Voluntary Remediation Agreement (VRA) by the Commissioner.
- 2. Completion of this form is mandatory and should be submitted along with the VRIP and the Report Cover Sheet.
- 3. All forms must be submitted through IDEM's e-submission portal. If you are not currently enrolled, please follow the link to get started: idem.IN.gov/myesubmission.

**Purpose:** The goal of the VRIP is to lay out a path to contaminant delineation. The plan may be for either a proposed or completed investigation, with this checklist providing guidance on the required elements of the VRIP.

	Report Element	Location in Document			
	Chapter I: Introduction				
a.	General Site Information.  i. Include the site name and identification numbers, general description, and location.				
b.	i. Describe previous owners/operators, past uses of the site, and all potential/known sources (both on-site and off-site) of contamination (e.g., petroleum storage tanks, manufacturing processes, chemical storage, etc.).  ii. Include approximate dates or periods of past product and waste spills, identification of the materials spilled, and amount/location of the spill.				
C.	Site Use.  i. Describe current site uses, land use/zoning, and future use plans.				
	Chapter II: Investigations				
d.	Previous Environmental Investigations.  i. Discuss prior work performed, samples obtained, why sampling locations were chosen, etc.  ii. Cite any previous environmental reports.				
e.	<ul> <li>Site Characterization. <ol> <li>Discuss current site characterization activities for each site media (surface water/sediments, soils, groundwater, vapor, etc., if applicable).</li> <li>Name site contaminants of concern (COCs).</li> <li>Identify likely sources of contamination, the extent and magnitude of contamination, actual and potential impacts, and information needed to design corrective actions.</li> <li>Describe any potentially completed pathways.</li> </ol> </li></ul>				
f.	Sampling/Analytical Results.  i. Discussion of sampling/analytical results should include contaminants analyzed for in samples from each applicable site media (soil, groundwater, vapor, surface water).  ii. Include comparison of the results to the applicable cleanup objective, sampling method, laboratory method, and any special sampling or analytical protocols (silica gel, filtration, etc.).				
	Chapter III: Conceptual Site Model				
g.	Conceptual Site Model (CSM).  i. Discuss contaminant release, fate and transport, exposure pathways (surface water, groundwater wells, air, direct contact, etc.), and potential receptors (human, aquatic, terrestrial).  ii. Describe typical concerns for this type of environmental contamination and include a discussion of site-specific concerns (hydro-geologic setting, receptors, current or future site zoning/land use etc.).				

<sup>&</sup>lt;sup>1</sup> For more information, review the Risk-based Closure Guide (R2) at https://www.in.gov/idem/files/nrpd\_waste-0015\_attach.pdf

Chapter IV: Summary, Conclusions, and Recommendations				
h.	Summary and Conclusions.  i. Summarize what is known about the site and the area of contamination.			
i.	Recommendations.  i. Future sampling to complete delineation ii. Outline possible interim/remedial actions if appropriate.			
Chapter V. Preliminary Quality Assurance Plan				
j.	Data Quality Objectives			
Chapter VI. Description of Sampling and Analysis				
k.	Verification that subsurface and hydrogeological investigation has been or will be performed in general accordance with R2 2.2.4 and describe methods.			
Chapter VII. Preliminary Health & Safety				
l.	Health and Safety Plan (HASP)			
m.	Other Site Health & Safety Considerations			
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## **Chapter VIII. Implementation Schedule**

A schedule timeline must be provided in the submittal to show the estimated deadlines that would need to be met while in the VRP. You may reference the voluntary remediation agreement (VRA) for the deadlines that would be needed for each item. The following schedules would need to be included in the VRIP:

- Investigation Schedule
- Remediation Schedule
- · Monitoring Schedule
- · Reports Submission Schedule

It should be noted that while the schedule provides an estimated timeline, these plans are susceptible to change depending on various conditions as the project continues moving forward.

## **Chapter IX. Appendices**

Appendices may be submitted as part of the VRIP. However, it is understandable that not every package may have this inclusion. The plan must state how any data gaps will be addressed, and any documents included in the appendix must include but not be limited to:

- Quality assurance plan
- Safety Data Sheets for RRCs/COCs
- Analytical laboratory reports and chain-of-custody sheets
- Soil boring logs
- Water well records

## **Chapter X. Tables**

Tables may be submitted as part of the VRIP. However, it is understandable that not every package may have this inclusion. The plan must state how any data gaps will be addressed, and examples of table to be included would be:

- Sampling depths in wells
- Low flow parameters
- Analytical results
- IDEM published levels

## **Chapter XI. Figures**

Figures may be submitted as part of the VRIP. However, it is understandable that not every package may have this inclusion. The plan must state how any data gaps will be addressed, must be appropriately scaled, and examples of figures to be included would be:

- Site maps
- Building outlines
- Known or suspected source areas
- Extent of area of contamination
- On- and off-site monitoring wells
- Any known utility lines on-site