Site Assessment & Management Manual

Site Assessment & Management

Environmental Services Division

Indiana Department of Transportation

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MISSION

The mission of Site Assessment & Management (SAM) is to provide support and guidance to INDOT employees, consultants, and contractors in the areas of:

- Processing, developing, reviewing, and approving Red Flag Investigations (RFIs), Phase I Environmental Site Assessments (ESAs) and Phase II ESAs for INDOT transportation project development and implementation;
- Management of the investigation and remediation of INDOT-owned contaminated properties;
- Hazardous materials management;
- Hazardous waste management;
- Maintenance of internal Geographic Information Systems (GIS) layer associated with Notice of Contamination sites; and
- Day-to-day guidance as needed.

CHAPTER 1 – ORGANIZATION AND ADMINISTRATIVE ITEMS

1.1 MANUAL ORGANIZATION

The INDOT Site Assessment & Management (SAM) Manual has seven chapters. **Chapter 1** provides general information on INDOT's organization as well as helpful administrative items that will assist with the generation of reports, the submittal of documents for review, and will also describe how to obtain access to various INDOT databases. **Chapter 2** includes a brief introduction to hazardous materials. **Chapter 3** provides guidance on processing, preparation, and review of Red Flag Investigation (RFI) reports. A step-by-step explanation is provided on how the written report is prepared based on ArcGIS maps and various databases. **Chapter 4** describes the integration of the RFI into the National Environmental Policy Act (NEPA) process, with a special emphasis on Environmental Commitments. The unique provisions for the Local Public Agency (LPA) process are also discussed here. **Chapter 5** discusses information required by INDOT for Phase I and Phase II Environmental Site Assessments (ESAs). These documents are prepared in general accordance with American Society for Testing and Materials (ASTM) Standards; however, the emphasis is placed on worker safety and handling and disposal of contaminated media. **Chapter 6** provides guidance on management of INDOT-owned contaminated properties, as well as the process for handling discoveries of contamination encountered by field personnel during construction projects and maintenance activities. Finally, **Chapter 7** discusses miscellaneous items such as what the SAM does and does not do.

1.2 INDOT ENVIRONMENTAL SERVICES DIVISION ORGANIZATION

The Environmental Services Division (ESD) is a part of INDOT Central Office. The ESD is responsible for ensuring that INDOT projects comply with all local, state, and federal environmental laws and regulations during the project development process. ESD also provides technical support for projects under construction. There are three offices within ESD: Cultural Resources, Environmental Policy, and Ecology and Waterway Permitting. SAM is part of the Environmental Policy group. Each office provides technical assistance and training to INDOT personnel, consultants, and the public on the environmental requirements that pertain to transportation projects.

1.3 ADMINISTRATIVE ITEMS

In order to effectively do business with INDOT and, more specifically, INDOT SAM, access to and general knowledge of the following resources is highly recommended:

1.3.1 Access to ProjectWise

ProjectWise is a suite of software provided by Bentley Systems which is used to transfer, share, and store files associated with various INDOT projects. ProjectWise is being used by INDOT as a project lifecycle tool and is the location of all active project data, including email communications, project-specific files, Geographic Information Systems (GIS) layers, maps, permits, and approved reports.

Obtaining access and using ProjectWise will:

- Provide access to shared files
- Standardize the method of document submittals
- Reduce the number of emails containing large files
- Remove the need for file share websites

- Reduce the potential for document loss or misplacement
- Assist with document review (i.e., access to multiple document versions)

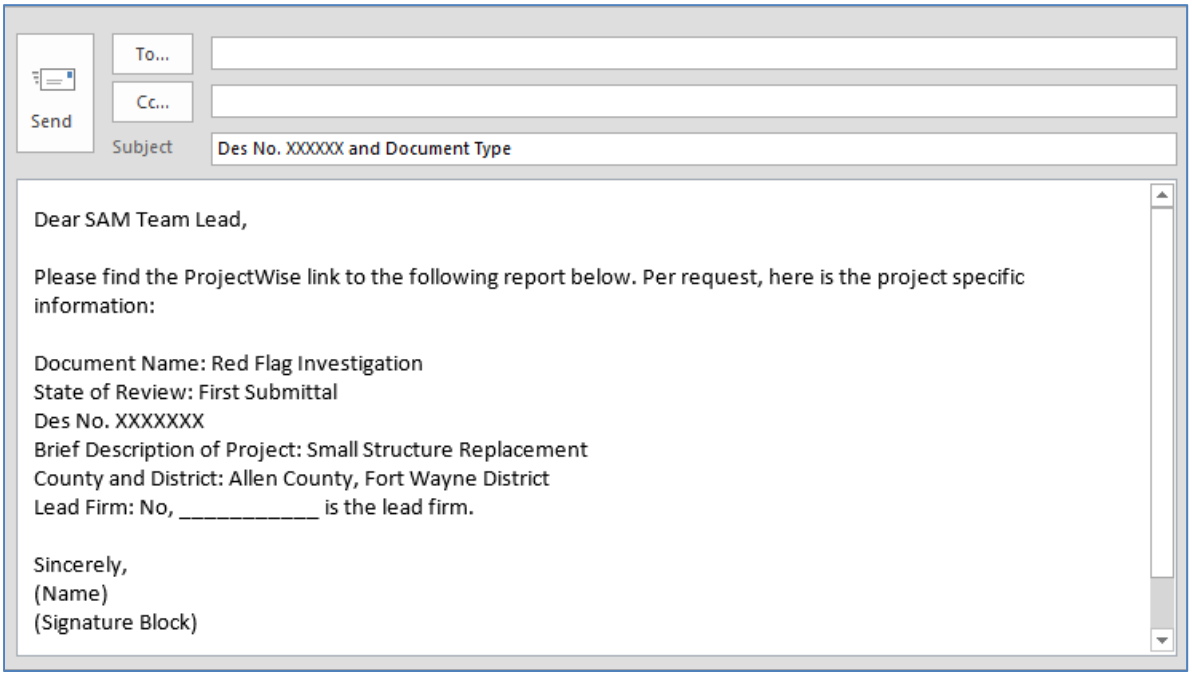
It is highly recommended that consulting parties obtain access to ProjectWise. This can be completed by following the instructions provided at: http://www.in.gov/indot/3116.htm. A copy of the INDOT Consultant Quick Start User Guide can be accessed using the following link: http://www.in.gov/indot/div/cad/pubs/INDOT_Consultant_New_User.pdf.

1.3.1.1 Submitting Documents

When a document, such as an RFI, a Phase I ESA, Scope of Work (SOW) or a Phase II ESA, is ready to be submitted to SAM for review, please send an email to the SAM Team Lead with the ProjectWise link and, at a minimum, the Designation Number (Des No.) and work product information within the subject line of the email. The body of the email should include the following information:

Document Name
Stage of Review (i.e., Initial, Second, Final)
Des No.
Brief Description of Project
County and District Information
Lead Firm (Yes or No)

For example,



1.3.1.2 Naming Documents

In order to provide consistency among reports submitted from various authors and companies, the following naming system for reports is preferred:

RFI_Des No_ Road Name_Type of Project_Status_Initials and Date

Examples: RFI_Des XXXXXXX_SR 45_Bridge_Original_JK MM/DD/YY

RFI_Des XXXXXXX_Small Structure_First Review_MM MM/DD/YY

RFI_Des XXXXXXX _HMA Overlay_Revised1_JK MM/DD/YY

RFI_Des XXXXXXX_Trail Project_Signed_MM MM/DD/YY

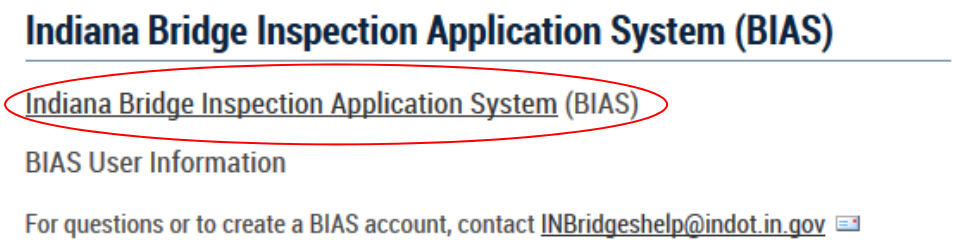
1.3.2 Access to Bridge Inspection Application System

The Bridge Inspection Application System (BIAS) is an online database containing bridge inventory and inspection data for both state-owned and county-owned bridges, culverts, and small structures in Indiana. Consultants and individuals completing RFI reports for INDOT should obtain access to BIAS in order to:

- Verify the location of proposed projects involving bridges, small structures, and culverts.
- Obtain the most recent bridge, small structure, and/or culvert inspection report to summarize information for the Ecological Section.

Obtaining a BIAS account is free and easily accessible. In order to obtain an account, please email INBridgeshelp@indot.in.gov.

A link to the database can be found at:
http://www.in.gov/dot/div/contracts/standards/bridge/bridgeinspect.htm



1.3.3 Access to ArcGIS

According to the IN.gov website, GIS is a collection of tools to build, maintain, and use electronic maps and associated databases. There are different formats for obtaining GIS information; however, in order to access data and generate figures specifically for RFI reports, access and use of ArcGIS is imperative. An updated consultant version of the RFI Template MXD (zip files) is available on the INDOT website (www.in.gov/indot/2523.htm) under the SAM heading. This file can be opened with ArcGIS using a Basic Viewer license and will provide information that is required when generating an RFI.

CHAPTER 2 - INTRODUCTION TO HAZARDOUS MATERIAL CONCERNS

2.1 WHAT ARE HAZARDOUS MATERIAL CONCERNS?

According to the Institute of Hazardous Materials Management website (www.ihmm.org), a "hazardous material is any item or agent (biological, chemical, radiological, and/or physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors."

The management of hazardous waste is regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as well as applicable state laws. These laws apply to wastes (such as contaminated soil and groundwater) generated by construction and maintenance activities and must be considered when developing transportation projects.

Even if no wastes are expected to be generated on a project, workers must be protected from health risks presented by hazardous materials (solvents, gases for welding, metals, or similar) that they encounter as part of their work.

2.2 HOW ARE HAZARDOUS MATERIAL CONCERNS IDENTIFIED?

The following process has been developed to assist in determining the potential presence of hazardous materials associated with a project and, if warranted, determining the nature and extent of the material:

1) A Red Flag Investigation (RFI) must be performed for all INDOT-sponsored projects, and must be reviewed by INDOT Environmental Services Division (ESD). It is recommended that Local Project Agency (LPA) and other state projects be reviewed by INDOT ESD in order to avoid procedural delays in the NEPA process, which could result in possible loss of funding. The purpose of this investigation is to highlight areas of concern which appear on publicly available standard sources. If no areas of concern are found in the RFI, the finding "no impact is expected" is applicable. However, if unknown or potential environmental risks are identified, further assessment may need to be conducted, generally in the form of a Phase I or Phase II Environmental Site Assessment (ESA).

2) A Phase I ESA is a review of state and federal databases and other historical sources to determine whether environmental concerns are already known by resource agencies to be present on or in the vicinity of the property in question. The ESA is conducted in general accordance with the standard established by the American Society for Testing Materials (ASTM E1527-13). If the Phase I ESA identifies properties or areas of concern that warrant additional investigation, then a Phase II ESA may be recommended.

3) A Phase II ESA is conducted in general accordance with ASTM E1903-11 and typically includes the collection of subsurface soil and water samples for laboratory analysis. This investigation is typically used to determine the presence or absence of hazardous materials by obtaining analytical data that is project specific and is needed in order to determine project specific worker safety, waste handling, and disposal recommendations.

Additional information and guidance for each of the three documents is provided in the following chapters.

2.3 ITEMS AND ROLES NOT ADDRESSED BY SITE ASSESSMENT & MANAGEMENT

INDOT Site Assessment & Management (SAM) provides guidance and can serve as a liaison between contractors and agencies when working through environmental issues; however, there are items SAM is typically not involved in, such as:

- Emergency response including accidental spills
- Asbestos surveys
- Health and Safety
- Indiana Occupational Safety and Health Administration (IOSHA)-related items
- Regulatory authority for enforcing laws and regulations

CHAPTER 3 – RED FLAG INVESTIGATION REPORT

3.1 INTRODUCTION TO RED FLAG INVESTIGATION REPORTS

3.1.1 What is the Purpose of a Red Flag Investigation Report?

In general, the purpose of a Red Flag Investigation (RFI) is to:

- Provide a general overview of the environmental condition of a project area,
- Highlight areas that may need additional environmental work or coordination,
- Highlight areas that you might want to avoid (i.e., Superfund site, wetland mitigation site, or similar); and
- Assist in prioritizing projects.

3.1.2 What Information is Included in a Red Flag Investigation?

There are six (6) sections that are evaluated in an RFI for each project. The sections are:

- Infrastructure
- Water Resources
- Urbanized Area Boundary
- Mining and Mineral Exploration
- Hazardous Material Concerns
- Ecological Information

An RFI report template, which includes specific section tables (where applicable) and the report layout, is provided in **Appendix A**. An RFI report template in word document format for both State and Local Public Agency (LPA)-sponsored projects is available on the INDOT Environmental Policy webpage (www.in.gov/indot/2523.htm).

While the template provides a brief overview of the layout of an RFI report, essential companion documents, referred to as the *Red Flag Investigation Guidance Document – State Projects* and *Red Flag Investigation Guidance Document – LPA Projects*, provide instructions on how to present the data for each section, provide standard language for recommendations, and include additional guidance for specific resources in each section for both State and LPA-sponsored projects. The guidance documents for both project-type are provided in **Appendix B**. These documents are used by Site Assessment & Management (SAM) to prepare and review RFI reports and should be referenced frequently. It is also strongly recommended that the provided recommendations are used verbatim from the guidance document. This increases the speed of review for the reviewers, standardizes reports coming from a wide range of document preparers (i.e., consultants, INDOT, or other agencies), and typically reduces confusion between the document preparer and the reviewer.

3.1.3 When Should a Red Flag Investigation be Prepared?

An RFI should be one of the, if not *the*, first document prepared during the development of a project. Once a project has been programmed and assigned a Designation Number (Des No.), the RFI should be submitted to SAM for review and approval. For LPA projects, submittal of the RFI in advance of the environmental document is highly recommended. If the LPA or its representative elects not to submit the RFI for review early, it should be included as an attachment to the environmental document.

Because an RFI should be one of the first documents generated, do not attach coordination letters, emails, reference to permits that have been obtained, and/or details of field visits (including photo logs) to the document.

In general, a project above the level of a Programmatic Categorical Exclusion (PCE) should have an RFI. An RFI is not necessary when the following criteria are met for a PCE:

- No new temporary or permanent right-of-way
- No resource agency permits are required
- No excavation in undisturbed soils (in reference to Cultural Resources)
- Project fits under the Minor Projects Programmatic Agreement
- No significant excavation

There are instances when a project falls under a PCE designation, but includes excavation (i.e., Americans with Disabilities Act (ADA) curb ramp installation, signal pole replacement, railroad signal replacement, excavation for placement of rip rap, or similar). In this case, a Limited RFI can be prepared. Before generating the Limited RFI, the document preparer must receive approval from the applicable district (i.e., LaPorte, Fort Wayne, Crawfordsville, Greenfield, Vincennes, or Seymour) confirming the project falls under the PCE designation, and it is at the discretion of the district to decide which sections should be included. At a minimum, the Limited RFI should include the Hazardous Material Concerns section; however, as indicated above, the district can request to have additional sections included (i.e., Infrastructure Resources, Water Resources, or similar). A *Limited Red Flag Investigation* template is included in **Appendix C** for reference. Although the Limited RFI is an abbreviated report, the instructions and recommendations outlined in the *Red Flag Investigation Guidance Document*, provided in **Appendix B**, should still be applied.

3.1.4 What is the Shelf Life of a Red Flag Investigation?

Once an RFI has been reviewed and approved, the following timeline before environmental document approval is recommended:

- Less than 1 year old (from generation or approval) - proceed with using the approved RFI.
- Between 1 and 3 years old – the RFI report should be re-examined to determine if any new information is now available (i.e., ArcGIS layers, Google Maps, programmatic or policy updates, or similar). If there are significant updates (significant change in scope, scale, and extents of the project that were not included in the initial RFI report or newly identified resources that will be impacted by the project area), an RFI Addendum can be completed and added to the front of the previously approved document. An example of the *Red Flag Investigation Addendum* can be found in **Appendix D**.
    - Please contact either SAM or the appropriate district to determine if an RFI Addendum should be generated.
    - In some cases, a minor update or resource adjustment can be detailed in the environmental document and does not warrant an RFI Addendum.
- More than 3 years old – a new RFI report may be necessary. Contact SAM to determine the best path forward.

CHAPTER 4 - RED FLAG INVESTIGATION REPORTS AND THE NEPA PROCESS

4.1 RED FLAG INVESTIGATION RECOMMENDATIONS – GENERAL

As indicated in the above sections, Red Flag Investigation (RFI) reports are an early screening tool that should be used to determine if additional coordination or investigation associated with the proposed project is warranted. Recommendations made within the approved RFI should be discussed in the environmental document. If recommendations made within the RFI report are no longer valid or appropriate, based on a change in the project scope or based on guidance received from other programs, then it is the document preparer's responsibility to explain and provide reasoning for why a recommendation is no longer applicable.

If there are recommendations within the RFI that request coordination with other agencies, the coordination, either phone call logs, email communications, or letters, should be included in the environmental document and should include responses, if received.

If there is a recommendation within the RFI for a Phase I Environmental Site Assessment (ESA) to be completed, a Scope of Work (SOW) plan should be submitted for review. After SOW approval, the Phase I ESA should be prepared, and subsequently submitted for Site Assessment & Management (SAM) review and concurrence. Finally, the Phase I ESA should be included in the environmental document for review by INDOT.

If there is a recommendation within the RFI, or a recommendation made following the review of a Phase I ESA or the environmental document, for a Phase II ESA, then the Phase II ESA needs to be performed prior to letting. The results of the Phase II ESA should be submitted to INDOT SAM for review and concurrence prior to letting.

4.2 RED FLAG INVESTIGATION RECOMMENDATIONS – HAZARDOUS MATERIAL CONCERNS

There are a few common recommendations that can be made in the Hazardous Material Concerns section of the Red Flag Investigation. Specific guidance language for these recommendations can be found in the *Red Flag Investigation Guidance Manual* (**Appendix B**). Common recommendations may include:

- If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.
- Before proper handling, removal, and disposal of soil and/or groundwater, analysis for lead will be necessary.
- Coordination will be conducted with IDEM before further site investigation activities occur.
- No investigation has been conducted on this property. A Phase II Environmental Site Assessment is recommended.

These recommendations are made following the review of the various sites on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC) or through identifying sites that may be a concern within or adjacent to the project area. If the scope of work changes, then the recommendations associated with a particular site may no longer apply. It is the responsibility of the document preparer to explain and provide evidence indicating that further coordination, investigation, or other associated activities are not warranted.

If a recommendation for additional coordination (i.e., IDEM project manager) is necessary, the coordination should occur prior to or during the generation of the environmental document. A phone log summary, email communication, or letter should be included in the environmental document.

If a recommendation to perform a Phase I ESA is made, coordination with INDOT SAM should occur to determine if the Phase I ESA is still warranted and to review the recommendations provided in the Phase I ESA prior to submittal of the environmental document. Recommendations will be made as to whether additional investigation (a Phase II ESA) is necessary.

If a recommendation for sampling is made (i.e., lead sampling or a Phase II ESA), coordination with INDOT SAM should occur to assist with developing the SOW for the Phase II ESA. If the Phase II ESA is completed prior to the environmental document being generated, then details of the Phase II ESA, along with any recommendations specific to the sampling (i.e., personal protective equipment and/or waste handling and disposal protocol), should be included in the environmental document. If the Phase II ESA is not completed prior to developing the environmental document, then a commitment to complete the Phase II ESA work should be included and the investigation should be completed prior to project letting.

4.3 LOCAL PUBLIC AGENCY PROJECTS

For Local Public Agency (LPA)-sponsored projects, submittal of the RFI in advance of the environmental document is optional, but highly recommended. If recommendations made within an RFI that has not been reviewed by SAM do not appear to adequately address potential hazardous material concerns associated with the project area, then additional investigation may be warranted and may be made during the review of the environmental document. Failure to identify and/or investigate potential hazardous material concerns can jeopardize federal funding for the project. Recommendations and procedures detailed in **Sections 4.1** and **4.2** above can be applied to LPA projects as well.

CHAPTER 5 – PHASE I AND PHASE II ENVIRONMENTAL SITE ASSESSMENTS

A Phase I Environmental Site Assessment (ESA) is a review of state and federal databases and other historical sources to determine whether environmental concerns are already known by resource agencies to be present on the property in question. The Phase I ESA is conducted in general accordance with the standard established by the American Society for Testing Materials (ASTM E1527-13). If the Phase I ESA identifies properties or areas of concern that warrant additional investigation, then a Phase II ESA may be recommended.

A Phase II ESA is conducted in general accordance with ASTM E1903-11 and typically includes the collection of subsurface soil and water samples for laboratory analysis to determine the nature and extent of potential contaminants typically within the extents of the project area.

5.1 PHASE I ENVIRONMENTAL SITE ASSESSMENT

As indicated above, a Phase I ESA is a review of information about past property use to determine whether environmental contamination may be present and is usually geared toward property transactions. Due to the high volume of sites and documents available on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC), the recommendation to complete a Phase I ESA for a project area can usually be bypassed depending on the scope and nature of the project and the project location. If the project area is extensive and traverses through a city center with properties that appear to be historical fueling and/or service stations or manufacturing facilities and information regarding the potential property cannot be identified on the IDEM VFC, then a Phase I ESA may be warranted. A Phase I ESA recommendation can be added to the Red Flag Investigation (RFI) report. In order to save time and money, INDOT recommends Phase I ESA requests be submitted and approved in advance.

If a project or project area appears to necessitate a Phase I ESA, the document preparer should keep in mind that INDOTs two main objectives for the review are:

1) Worker safety
2) Proper handling and disposal of waste (i.e., soil and/or water) generated from construction activities

With those objectives in mind, a Phase I ESA can be focused toward identifying sites that may have releases within or adjacent to the project area and identifying sites that may need additional sampling in order to ensure workers are aware of the conditions during construction. Typical Phase I ESAs that identify dozens of Recognized Environmental Concerns (RECs), but then do not provide an evaluation of the potential impact of the REC to the specific project area, are less effective at assisting with developing a potential sampling plan for a Phase II ESA. INDOT recommends identifying potential RECs within the vicinity of the project and project area, but then also requests the document preparer provide a rational determination of whether the REC needs additional investigation within the extents of the project area or if the risk is considered low. Therefore, a modified Phase I ESA report can be prepared, as most of the Phase I ESAs generated for INDOT have less to do with property transfers and more to do with the two main objectives identified above.

For example, a trail project is occurring through an old city center in central Indiana. A Phase I ESA was generated to identify historical concerns along the project area. The Phase I ESA identified a historical gasoline station approximately 0.15 mile north of the project area and tagged the site as an REC and recommended a Phase II ESA be completed. Additional review of the site on the IDEM VFC indicated the extents of a historical release had been defined and the residual chemicals of concern (CoCs), including

lead, were found to remain on the off-site property and do not extend toward the proposed project area. Therefore, in the development of the subsequent Phase II ESA scope of work plan, the site was identified as an REC, but, upon further evaluation, was not recommended for further sampling based on the low risk of impacting the project area.

5.2 PHASE II ENVIRONMENTAL SITE ASSESSMENT

In general, a Phase II ESA is a subsurface investigation that typically includes the collection of subsurface soil and/or water samples for laboratory analysis. As indicated above, INDOT is interested in answering two fundamental questions when performing a Phase I or a Phase II ESA:

1) Worker safety
2) Proper handling and disposal of waste (i.e., soil and/or water) generated from construction activities

With those objectives in mind, it should be noted that the goal of a Phase II ESA is not to delineate or "chase" the extents of potential contamination within or surrounding the project area, but to determine the presence or absence and concentration of potential contamination impacting the proposed project as defined by the proposed project scope.

For example, a project involving excavation to a depth of approximately five feet below the ground surface (5 ft-bgs) is found to be in proximity of a shallow chlorinated solvent plume originating from an off-site dry cleaning facility. In order to determine if the soil and/or groundwater generated during the project would need to be handled as hazardous waste, a Phase II ESA is recommended in the RFI report. The proposed boring locations are set within the extents of the proposed project area (not off-site) and should extend to the anticipated depth of the project (i.e., in this example 5 ft-bgs). A soil sample is collected at depth and, in this case, groundwater is not encountered so a water sample is not collected. Analytical results obtained from the sampling indicate that chlorinated solvents were not identified above the laboratory detection limits; therefore, the soil generated during the project would not need to be disposed as hazardous waste.

5.2.1 Phase II Environmental Site Assessment Development

Prior to completing a Phase II ESA, a Scope of Work (SOW) should be developed and submitted to INDOT Site Assessment & Management (SAM) for review and approval. The SOW should include:

- The approximate depth and general description of activities proposed to occur in the vicinity of the REC,
- The number of boring(s)/temporary monitoring well(s) proposed for the investigation,
- Proposed depth of the sampling locations and the anticipated number of samples to be collected per boring,
- Proposed analysis to be performed on the samples and reasoning for selecting the analytical methods,
    - Please note that all RCRA 8 Metals do not need to be analyzed for most sites
- Brief description of sampling methods and protocols to be used
    - Utility coordination
    - Hand augering to clear unmarked utilities
    - Equipment anticipated to be used during the investigation (i.e., GeoProbe, hand auger, or others).
    - Sampling procedures
        - This includes the recommendation to collect both unfiltered and filtered groundwater samples (if applicable). Remember, when construction activities are occurring, the typical conditions generated are turbid. Solely collecting a

filtered water sample is not necessarily reflective of the conditions that will be present during construction.
    - Health and safety measures
    - Decontamination procedure
    - Abandonment of soil boring(s) and/or temporary well(s) procedure
    - Details concerning drumming or containerizing waste generated during the investigation and disposal information. Note that the waste generated during a Phase II ESA is not similar to material generated during a geotechnical investigation. An environmental investigation is being recommended due to the potential for chemicals of concern (CoCs) within the project area and should therefore be considered impacted media until laboratory analytical results are obtained.
- A figure depicting the project area, the surrounding REC(s), and the proposed boring locations. If there is a large variation of depth to excavation throughout the project area, color coding can be beneficial to depict the variation in depth.
- Itemized cost estimate, which includes time and materials and indicates associated mark-ups.

The SOW plans should be submitted to INDOT SAM Team Lead via email. After the SOW is submitted, reviewed, and approved by INDOT SAM, the approved Phase II ESA can be performed.

5.2.2 Phase II Environmental Site Assessment Reporting and Guidelines

After the Phase II ESA investigation is performed, the sampling activities and analytical results obtained from the Phase II ESA should be summarized in a report and submitted to INDOT SAM for review and approval.

Details that should be included in the Phase II ESA report include:

- A brief description detailing the rationale behind the sampling and a summary of the proposed project,
- A summary of the investigation completed
    - Location and number of borings and/or temporary monitoring wells completed
- A summary of the analytical results within the text
- Tables summarizing the analytical results
- Figure(s) depicting the sample locations and analytical results
- Boring logs (if applicable)
- Well construction logs (if applicable)
- Recommendations and conclusions that are meaningful for the project and to INDOT.

5.2.3 Phase II Environmental Site Assessment Conclusions and Recommendations

The conclusions and recommendations should be focused on providing worker safety recommendations and proper waste handling and disposal based on the analytical data received.

- If chemicals of concern (CoCs) are not reported above the laboratory detection limits, then standard personal protective equipment (PPE) and use of the Uncontaminated Soil Policy (Waste-0064-NPD) (**Appendix E**) can be applied.

- Regarding adsorbed CoCs in soil:

    - If adsorbed CoCs in soil are identified at a concentration at or above the applicable IDEM Remediation Closure Guide (RCG) Migration to Groundwater (MTG) screening levels (https://www.in.gov/idem/cleanups/2392.htm), the associated media should include a recommendation for proper handling, removal, and disposal at an approved

landfill and, if applicable, additional PPE above and beyond standard safety requirements.

- Regarding dissolved CoCs in water:

  - If the analytical results obtained from an unfiltered water sample are below the applicable IDEM RCG Tap screening levels, then standard handling is appropriate.

$$CoCs \ < \ IDEM\ RCG\ Tap\ screening\ levels \ \Rightarrow \ Standard\ Handling$$

  - If the analytical results obtained from an unfiltered groundwater sample contain CoC concentrations at or above the applicable IDEM RCG Tap screening level, but the analytical results obtained from the filtered groundwater sample are below the applicable IDEM RCG Tap screening level, then a recommendation to include engineering methods for sediment control during construction is required.

    Please note that the contractor is responsible for worker safety requirements based on the analytical data collected during the Phase II ESA.

$$\left.\begin{array}{l} Unfiltered\ Sample\ CoCs \ \geq \ IDEM\ RCG\ Tap\ screening\ levels \\ Filtered\ Sample\ CoCs \ \leq \ IDEM\ RCG\ Tap\ screening\ levels \end{array}\right\} \boxed{\textit{Proper handling, removal, and disposal needed}}$$

  - If the analytical results obtained from a filtered groundwater sample contain CoC concentrations above the applicable IDEM RCG Tap screening levels, then proceed to the RCRA Guidance below.

$$Filtered\ Sample\ CoCs \ \geq \ IDEM\ RCG\ Tap\ screening\ levels \ = \ See\ RCRA\ Guidance$$

In addition to applying the IDEM RCG Guidance document as a basis for recommendations, the below guidelines should be followed as well:

5.2.3.1 Use of RCRA Guidance

Remember that, for construction purposes, when a waste is generated (i.e., shovel to soil), Resource Conservation and Recovery Act (RCRA) guidelines are to be followed. As such, if analyte concentrations are detected above the RCRA 20x rule, then the material is considered hazardous waste and may require additional analysis. This is typically encountered with metals, more specifically lead, in soil samples.

  - For example, if adsorbed total lead is detected at a concentration greater than 100 milligrams per kilogram (mg/Kg) (which is 20x the RCRA Toxicity Characteristic Leaching Procedure (TCLP) concentration of 5 mg/Kg), then the media would be classified as hazardous waste. The laboratory should be contacted and the sample should be analyzed for TCLP lead. In general, the TCLP analysis mimics landfill conditions and can be used to assist with waste disposal. An initial total lead concentration greater than 100 mg/Kg may have a below detection result following the TCLP analysis, allowing the material to be disposed as non-hazardous waste instead of hazardous.

A table summarizing the RCRA 8 Metals and the TCLP Limit and 20x TCLP limit is provided below:

RCRA Metals (6010)	TCLP Limit (ppm)	20 x TCLP Limit (ppm)
Arsenic	5	100
Barium	100	2000
Cadmium	1	20
Chromium	5	100
Lead	5	100
Mercury	0.2	4
Selenium	1	20
Silver	5	100

Additional analytes and their TCLP threshold are provided on the U.S. Environmental Protection Agency (EPA) website. If a water sample exceeds the TCLP limit, then it is hazardous and needs no additional analysis.

5.2.3.2 Chromium and Hexavalent Chromium

According to the *Agency for Toxic Substances and Disease Registry* (February 2001) fact sheet, chromium is a naturally occurring element that is present in several different forms including chromium (0), chromium (III), and chromium (VI). A copy of the fact sheet is provided in **Appendix F** for reference.

Chromium (VI) is also referred to as hexavalent chromium and has been found to be a known carcinogen and is significantly more toxic than other forms of chromium. Hexavalent chromium is generally produced by industrial processes and is used for chrome plating, dyes and pigments, leather tanning, and wood preserving. Common pathways to exposure include ingestion, dermal, and respiratory.

Typically, a request to include the analysis of total chromium during a Phase II ESA is associated with sites that are identified as a potential concern, such as manufacturing facilities, automotive repair and salvage yards, and metal finishing industries. If total chromium is analyzed, and the analytical results provide a concentration above the IDEM RCG MTG screening level for hexavalent chromium (mg/Kg), then the sample should also be analyzed for hexavalent chromium.

5.3 DOCUMENT SUBMITTAL PROCESS AND TIMELINE

The following guidance applies to Phase I ESAs, SOWs, and Phase II ESAs that are submitted to SAM for review and approval. Document preparers should plan accordingly and submit documentation a minimum of three weeks prior to a deadline or needing approval. INDOT SAM personnel will try to accommodate requests for expedited reviews; however, if the document is not received within the three-week time period, it may be reflected in the PSCS review.

Refer to **Section 1.3.1.1** for guidance on how to submit documents for SAM review and approval. In general, once a report has been reviewed and approved, a concurrence email will be sent to the document preparer. A signature can be added upon request.

CHAPTER 6 – MANAGING INDOT-OWNED PROPERTIES AND RIGHT-OF-WAY

6.1 INDOT-OWNED PROPERTIES

On occasion, INDOT will acquire properties with potential or known contamination. These sites may require investigation, routine sampling, or remediation.

INDOT will utilize an on-call consultant that has met qualifications for investigating and remediating sites. The selected consultant should work in tandem with INDOT Site Assessment & Management (SAM) to determine the most effective path forward for the site and discuss the options available for pursuing closure. INDOT SAM will review documents, reports, Scope of Work (SOW) plans, cost estimates, and invoices associated with the activities.

6.2 DISCOVERY OF CONTAMINATION MATERIALS OR ORPHAN UNDERGROUND STORAGE TANKS IN INDOT-OWNED RIGHT-OF-WAY

Developing a Red Flag Investigation (RFI) is the first platform in identifying areas with potential or known contamination that may be encountered during project construction. While the goal is to identify as many, if not all, of the contaminated sites, unidentified contamination can still be encountered. In the event that contaminated media is encountered, remember that personal safety is always a first priority. Do not endanger yourself by entering hazardous environments. Stay upwind of spills and never taste spilled material or inhale odors to identify a spill.

Reference the process flow diagram in **Appendix G** for guidance on who to contact and what to do in the event that unplanned contaminated media is discovered within INDOT-owned right-of-way. Note that contamination within the INDOT right-of-way does not need to be “chased” or delineated, nor does the right-of-way need remediated. The main focus is to identify the contamination and determine the appropriate methods for handling and disposal (if warranted). In addition, historical petroleum releases can often smell and look (i.e., gasoline odor and staining) as though they are fresh. Often a hydrocarbon odor may exist, but the associated contaminate concentrations have degraded to below applicable screening levels. Therefore, contacting an environmental consultant to obtain and analyze samples is essential and may reduce the overall cost that could be incurred through handling and disposal.

6.3 NOTIFICATION OF CONTAMINATED SITES WITHIN INDOT-OWNED PROPERTY AND RIGHT-OF-WAY

The IDEM Office of Land Quality (OLQ) manages contaminated sites throughout Indiana. Typically the type of site determines which program the facility will be evaluated under. For example, a fueling station that has a release from the underground storage tank (UST) system will be evaluated in the Leaking Underground Storage Tank (LUST) program. A listing of the investigation and cleanup programs is provided at https://www.in.gov/idem/cleanups/2332.htm for reference.

Each program has guidance on how to evaluate and remediate sites based on the type of contamination and the contaminated media present at the site. One of the main objectives of each program is to oversee the clean-up of contaminated sites to a level that will achieve closure or No Further Action (NFA) status. In some instances, a contaminated site may have impacted media that extends off-site into an INDOT-owned right-of-way or roadway and the contamination may not be able to be addressed during remediation activities. If the risk associated with the site is low, IDEM may approve the application of an institutional control on the deed of the property which places restrictions on the use of the property. If a site is being closed using the application of an institutional control and there is contamination remaining within INDOT-owned property, IDEM will request that a notification letter be sent to INDOT as part of closure activities. These notification letters typically include a brief summary of the site, remediation activities completed, the location, depth, and concentration of

contamination that remains on the site, and recommendations on proper management. These notices should be mailed to:

INDOT Environmental Services Division
Site Assessment & Management Team Lead
100 North Senate Avenue, IGCN 642
Indianapolis, IN 46204

INDOT SAM has an internal ArcGIS layer called Notice of Contamination sites, which is updated as these letters are received. These notification letters are greatly appreciated as they reduce the amount of time spent on the IDEM Virtual File Cabinet (VFC) and quickly identify sites that may impact a proposed project area.

6.4 LEAD-BASED AND LEAD-CONTAINING PAINT

Lead can be found in all parts of our environment and is one component of concern when reviewing historical (pre-1970) fueling stations during the generation of the RFI. In addition to looking for lead in the soil or groundwater within a project area involving excavation, there is also concern regarding the presence of lead-based paint (LBP) that may have been used historically on structures, including bridges. Demolition and maintenance activities that may result in lead dust generation can harm workers, stakeholders, and the surrounding environment. In circumstances where LBP is being removed, contractors play a critical role in helping to prevent lead exposure.

Further guidance on identifying LBP concerns, obtaining and analyzing samples for waste characterization and handling, management, and disposal of media is forthcoming.

7.1 PROFESSIONAL SERVICES CONTRACTING SYSTEM

Following both the initial review and the approval of a document, Site Assessment & Management (SAM) personnel evaluate the document and the receptiveness of the consultant by completing a performance evaluation within the Professional Services Contracting System (PSCS). Since the guidance associated with several documents (i.e., Red Flag Investigation) has been updated and standardized, there is now a need to update the PSCS evaluation criteria. These updates are forthcoming; however, consultants have access to the PSCS website to review the associated scoring rubric by obtaining access and logging in to the INDOT Technical Application Pathway (ITAP) https://itap.indot.in.gov/login.aspx.

7.2 ANTIQUE LANDFILLS

IDEM has become aware of historical unpermitted landfills that were once locally operated. These sites are considered antique landfills and have begun to be mapped by IDEM and populated on the Hazardous Material Concerns ArcGIS layer. These sites are relatively new and the potential impacts from them are still being determined; however, if an antique landfill is mapped within the 0.5-mile search of a project area, SAM recommends coordination with IDEM Office of Land Quality occur. If the project is located within or adjacent to a mapped antique landfill, then the following have been recommended from IDEM and should be submitted in a Scope of Work (SOW) plan to SAM for review and approval before work occurs:

- Perform initial exploratory test pits to confirm the presence of waste and its extent,
- If waste is excavated, it needs to be properly disposed of in a permitted municipal solid waste landfill. IDEM can provide guidance and approval for remediation and/or excavation or use of the dumps,
- Special attention should be given to leachate control during the excavation activities, including run-on and run-off controls for excavated areas,
- Special attention should be given to the potential for explosive gas to be present, and
- All exposed waste not removed will need to be re-covered with an appropriate soil cap two (2) feet in depth, graded, and vegetated.

APPENDIX A

Red Flag Investigation Template

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: (month, day, year)

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: (Requestor's Name)
(District)
(Address)
(City, State)
(e-mail)

Re: RED FLAG INVESTIGATION
DES #, State Project
Project description (i.e. Pipeliner, Small Structure Replacement, HMA Overlay, Bridge Replacement, Road Reconstruction, Bridge Deck Overlay, etc)
Road
County, Indiana

PROJECT DESCRIPTION

Brief Description of Project:
Bridge and/or Culvert Project: Yes ☐ No ☐ Structure # _____
If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).
Proposed right of way: Temporary ☐ # Acres _____ Permanent ☐ # Acres _____, Not Applicable ☐
Type of excavation:
Maintenance of traffic:
Work in waterway: Yes ☐ No ☐ Below ordinary high water mark: Yes ☐ No ☐
State Project: ☐ LPA: ☐
Any other factors influencing recommendations:

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities		Recreational Facilities	
Airports[1]		Pipelines	
Cemeteries		Railroads	
Hospitals		Trails	
Schools		Managed Lands	

[1]In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points		Canal Routes - Historic	
Karst Springs		NWI - Wetlands	
Canal Structures – Historic		Lakes	
NPS NRI Listed		Floodplain - DFIRM	
NWI-Lines		Cave Entrance Density	
IDEM 303d Listed Streams and Lakes (Impaired)		Sinkhole Areas	
Rivers and Streams		Sinking-Stream Basins	

Explanation:

URBANIZED AREA BOUNDARY SUMMARY

Explanation:

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells		Mineral Resources	
Mines – Surface		Mines – Underground	

Explanation:

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund		Manufactured Gas Plant Sites	
RCRA Generator/ TSD		Open Dump Waste Sites	
RCRA Corrective Action Sites		Restricted Waste Sites	
State Cleanup Sites		Waste Transfer Stations	
Septage Waste Sites		Tire Waste Sites	
Underground Storage Tank (UST) Sites		Confined Feeding Operations (CFO)	
Voluntary Remediation Program		Brownfields	
Construction Demolition Waste		Institutional Controls	
Solid Waste Landfill		NPDES Facilities	
Infectious/Medical Waste Sites		NPDES Pipe Locations	
Leaking Underground Storage (LUST) Sites		Notice of Contamination Sites	

Explanation:

ECOLOGICAL INFORMATION SUMMARY

The _____ County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services _____ indicate the presence of ETR species within the 0.5 mile search radius.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE:

WATER RESOURCES:

URBANIZED AREA BOUNDARY:

MINING/MINERAL EXPLORATION:

HAZMAT CONCERNS:

ECOLOGICAL INFORMATION:

INDOT Environmental Services concurrence: _____(Signature)

Prepared by:
(Signature or name of preparer)
(Job Title)
(Organization)

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES or N/A

INFRASTRUCTURE: YES or N/A

WATER RESOURCES: YES or N/A

URBANIZED AREA BOUNDARY: YES or N/A

MINING/MINERAL EXPLORATION: YES or N/A

HAZMAT CONCERNS: YES or N/A

APPENDIX B

Red Flag Investigation Guidance – State and LPA Projects

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness,
Commissioner

ATTENTION PREPARERS: IF THIS IS A STATE PROJECT, PLEASE USE THIS LETTERHEAD AND NOT A COMPANY LETTERHEAD

Date: (month, day, year)

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: (Requestor's Name)
(District)
(Address)
(City, State)
(e-mail)

Black text = template
Blue text = suggested language
Red text = guidance material
Green text = fill in information

Re: RED FLAG INVESTIGATION
DES #, State Project
Project description (i.e. Pipeliner, Small Structure Replacement, HMA Overlay, Bridge Replacement, Road Reconstruction, Bridge Deck Overlay, etc)
Road
County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: A short paragraph explaining the location of the project and the scope and type of work being done.

Bridge and/or Culvert Work Included in Project: Yes ☐ No ☐ Structure #(s) _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ # Acres _____, Permanent ☐ # Acres _____, Not Applicable ☐

Type of excavation: Depth, location, and extent of excavation. Please provide the most recent available information.

Maintenance of traffic: Road closure, detour, temporary signal, maintain traffic using lane closures

Work in waterway: Yes ☐ No ☐ Below ordinary high water mark: Yes ☐ No ☐

Any other factors influencing recommendations: N/A or Emergency projects (i.e. slide corrections, potential bridge failure, safety issues) – please expedite (provide due date); project description subject to additional changes; project area not completely defined; etc.

General Guidance:

1) Please use the ArcGIS Red Flag Investigation template layers found on the INDOT website (http://www.in.gov/indot/2523.htm) to map the project area, determine the number of features within the 0.5 mile search radius, and generate the RFI figures.
   a. Use of IndianaMap is not preferred.
2) General outline of describing each feature: # of features within the 0.5 mile search radius. Nearest feature including distance and direction. Need for coordination or further investigation or No Impact.
3) Report the distance of the feature to the project area in hundredths of a mile(s) NOT feet.
4) Some features are cataloged as segments in GIS (i.e. pipelines, railroads, trails, NWI-lines, IDEM 303d Listed Rivers and Streams (Impaired), and Rivers and Streams). Please report using the # of segments detailed in the GIS attribute table.
   For example: The White River is located within the 0.5 mile search radius. The attribute table has broken the White River into 10 segments within the 0.5 mile search radius. The number of items would be 10 and the text would reach something akin to: Ten (10) River and Stream segments are located within the 0.5 mile search radius. The nearest segment, associated with the White River, is located approximately 0.49 mile east of the project area. No impact is expected.
5) Please DO NOT include coordination letters, field visit information, permitting information, etc. in this document.
6) The below examples are provided using suggested language, please tailor the Red Flag Investigation to your project specific information.

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities		Recreational Facilities	
Airports[1]		Pipelines	
Cemeteries		Railroads	
Hospitals		Trails	
Schools		Managed Lands	

[1]In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required. Please see the Airports section below for specific direction and guidance.

Explanation: If no resources are found, please use the following statement: No infrastructure resources were identified within the 0.5 mile search radius.

Please provide a separate paragraph for each item. If resources are found in the 0.5 mile search radius, please include the number of resources. If there is no impact, state how close the nearest resource is (hundredths of a mile i.e. 0.43 mile) and the direction from the project area – see the statement for religious facilities.

PLEASE NOTE: Religious facilities, schools, cemeteries, and hospitals are not always identified correctly in the GIS layers. It is the document preparer's responsibility to check within and adjacent to the project area for potential unmapped features through the use of other desktop resources (i.e. Topographic Map, Google Maps, Bing Maps, etc.).

Religious Facilities: # religious facilities are located within the 0.5 mile search radius. The nearest facility is (distance and direction) of the project area. No impacted is expected. OR

religious facilities are located within the 0.5 mile search radius. The nearest facility, (name), is adjacent to the project area. Traffic will be maintained through the use of a detour. Coordination with (name) will occur. OR

religious facilities are located within the 0.5 mile search radius. The nearest facility, (name), is adjacent to the project area. Traffic will be maintained throughout construction using lane closures, allowing for continued access. No impact is expected; however, coordination with (name) will occur.

Recreational Facilities: See religious facilities.

Airports: One (1) airport is located within the 0.5 mile search radius. The airport, _____, is a private airport and is located approximately (distance) mile (direction) of the project area. Coordination with the (owner) will occur.

Airports: # airports are located within the 0.5 mile search radius. All (#) of the airports are privately owned and are located approximately (distance) mile (direction) of the project area. Coordination with the (list owners) will occur.

If a project is within 20,000 feet (3.8 miles) of a **public-use** airport and/or has the potential to involve construction or use of any object above 200 feet, coordination with INDOT Aviation is required. While not always easy to notice outside the 0.5 mile search radius, please make a best effort to include public airports. INDOT Aviation does not want to be notified about private airports. Coordination directly with private airports within the 0.5 mile search radius will be required. Coordination with INDOT Aviation is NOT required for private airports.

If needed, the FAA website allows for a "circle search" of all airports by entering the project coordinates and a search radius. https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=showCircleSearchAirportsForm

Airports (continued – **public** airport within 3.8 miles example): Although not located within the 0.5 mile search radius, one (1) public airport, _____, is located within 3.8 miles (20,000 feet) of the project area. The public airport is located approximately (distance) mile (direction) of the project area; therefore, early coordination with INDOT Aviation will occur.

Pipelines: # pipelines (segments) are located within the 0.5 mile search radius. # pipeline(s) crosses (or is adjacent to) the project area. Coordination with INDOT Utilities and Railroads should occur. If the pipeline is within 0.05 mile of the project area, please recommend coordination.

-OR-

pipeline segments are located within the 0.5 mile search radius. The nearest segment, associated with _____, is located approximately (distance) mile north of the project area. No impact is expected.

Cemeteries: # cemeteries are located within the 0.5 mile search radius. _____Cemetery is adjacent to the project area. A Cemetery Development Plan may be required since this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources is recommended.

In order to ensure complete coverage of mapped cemeteries, two databases are currently being used resulting in duplicate symbols. Please provide distance and direction to the nearest cemetery.

For MOT, see religious facilities.

Railroads: # railroads are located within the 0.5 mile search radius. # railroad segment(s) crosses (or is adjacent to) the project area. Coordination with INDOT Utilities and Railroads should occur. If the railroad is within 0.05 mile of the project area, please recommend coordination.

Hospitals: The _____ hospital is located within the 0.5 mile search radius. No impact is expected by the proposed project as traffic will be maintained with lane closures throughout construction; however, coordination with the hospital will occur to identify any potential issues arising with emergency services.

Trails: # trails (segments) are located within the 0.5 mile search radius. One (1) trail (or planned or potential trail) (segment) is located in the project area. Coordination with (the agency managing the trail) will occur. Coordination is necessary with the managing agency even if your project is a trail project.

Schools: For MOT, see religious facilities. Please check to see if the school also serves as a transportation hub or maintenance facility.

Managed Lands: # Managed Lands are located within the 0.5 mile search radius. _____ is within (or adjacent to) the project area. Coordination with (agency managed the managed land) is recommended.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points		Canal Routes - Historic	
Karst Springs		NWI - Wetlands	
Canal Structures – Historic		Lakes	
NPS NRI Listed		Floodplain - DFIRM	
NWI-Lines		Cave Entrance Density	
IDEM 303d Listed Streams and Lakes (Impaired)		Sinkhole Areas	
Rivers and Streams		Sinking-Stream Basins	

Explanation: Please provide a separate paragraph for each item. If there is no impact, state how close the nearest resource is and the direction from the project area – see the statement for religious facilities. If a water feature is within or adjacent to a project area and there is a potential impact, the following statement should suffice:

Water Feature Name: # (water feature name(s)) are located within the 0.5 mile search radius. Two (2) (water feature name(s)) are located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

On occasion, ArcMap will either not map a water feature or will not extend a water feature to a known culvert or bridge. In this instance, please use the following recommendation to account for the potential presence of a water feature within or near a culvert or bridge. Due to the proximity of (feature), it is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. A Waters of the US Report will be prepared and coordination with INDOT Ecology and Waterway Permitting will occur.

NWI-Wetlands: # wetlands are located within the 0.5 mile search radius. One wetland is located adjacent to the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur. OR

> # wetlands are located within the 0.5 mile search radius. One wetland is located approximately 0.49 mile north of the project area. No impact is expected.

Floodplains: # floodplain polygons are located within the 0.5 mile search radius. The project area is located within one of the floodplain polygons. Coordination with INDOT Ecology and Waterway Permitting will occur. OR

> # floodplain polygons are located within the 0.5 mile search radius. The nearest floodplain polygon is located approximately 0.45 mile south of the project area. No impact is expected.

Karst Features (cave entrance density, sinkhole area, sinking-stream basin, etc.): If karst features are identified within or adjacent to the project area, the following recommendation is needed: Coordination with INDOT Ecology and Waterway Permitting will occur.

EXCEPTIONS:

IDEM 303d Listed Streams and Lakes: # 303d Listed Streams are located within the 0.5 mile search radius. (Name of water body) is located within (or adjacent to) the project area. (Name of water body) is listed as impaired for _____.

The following are recommended statements for impairments.

- (Name) is listed for Impaired Biotic Communities (IBC). Coordination with INDOT ES Ecology and Waterway Permitting should occur. This statement applies to Nutrient Impairment and Dissolved Oxygen as well.

- (Name) is listed for E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

- (Name) is impaired for PCBs (and/or mercury or dioxin) in fish tissue. Exposure to PCBs (and/or mercury or dioxin) in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body. At this point, the statement can be No impact is expected; however, workers will be informed OR If there will be sediment and/or soils disturbed by construction, additional investigation may be necessary. Coordination with INDOT ES will occur.

Canal Routes/Canal Structures – Historic – These features, if impacted, may require coordination with INDOT ES Cultural Resources.

If an impacted river is identified on the GIS maps as being on the National Rivers Inventory (NRI), coordination with National Park Service and US Department of Agriculture will be necessary.

URBANIZED AREA BOUNDARY SUMMARY

If the project is not located in an Urbanized Area Boundary (UAB), please indicate N/A. If the project is in a UAB, please use the following statement and include the statement in the recommendations. On occasion, a UAB may not have an assigned MS4 permit, in that case, please use the second UAB statement.

Urbanized Area Boundary (UAB): This project lies within the (Name) UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the (Name) MS4 Coordinator at (mailing address). The MS4 Contact List can be downloaded from the INDOT Storm Water website: www.in.gov/indot/2892.htm

OR

Urbanized Area Boundary (UAB): This project lies within the (Name of Organization) UAB; however, a Rule 13 Permit from IDEM has not been issued. No further coordination is necessary at this time.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells		Mineral Resources	
Mines – Surface		Mines – Underground	

Explanation: Please provide a separate paragraph for each item. If there is no impact, state how close the nearest resource is and the direction from the project area – see the statement for religious facilities.

Petroleum Wells: # petroleum wells are located within the 0.5 mile search radius. # petroleum wells are located within or adjacent to the project area. Coordination with IDNR Oil and Gas Division will occur.

Mines – Surface and Mines – Underground: # (surface or underground) mines are located within the 0.5 mile search radius. # (surface or underground) mines are located within or adjacent to the project area. Coordination with IDNR Reclamation Division will occur.

Mineral Resources: One (1) mineral resource facility is located within the 0.5 mile search radius. The facility, identified as (Name), is located adjacent to the project area. Due to the proposed MOT, which is anticipated to be full road closure with a detour, coordination with the facility will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund		Manufactured Gas Plant Sites	
RCRA Generator/ TSD		Open Dump Waste Sites	
RCRA Corrective Action Sites		Restricted Waste Sites	
State Cleanup Sites		Waste Transfer Stations	
Septage Waste Sites		Tire Waste Sites	
Underground Storage Tank (UST) Sites		Confined Feeding Operations (CFO)	
Voluntary Remediation Program		Brownfields	
Construction Demolition Waste		Institutional Controls	
Solid Waste Landfill		NPDES Facilities	
Infectious/Medical Waste Sites		NPDES Pipe Locations	
Leaking Underground Storage (LUST) Sites		Notice of Contamination Sites	

Explanation: Each site is unique. There is no good formula for determining next steps. The following information is general in nature, and not to be taken as a template, even though these statements are often applicable. A word of caution, don't be fooled by the location of the symbol on the GIS map, especially for large facilities. Some of the facility symbols are incorrectly located, or the facility covers several acres.

If the search radius has several sites (usually identified via street view maps or a site visit) with unknown past uses, or that look like old gas stations or factories, a Phase I Environmental Site Assessment (ESA) is appropriate. If the use of facilities is known and records are available in IDEM's Virtual File Cabinet (VFC), a Phase I is not needed.

IDEM's VFC can be found at the following link: http://vfc.idem.in.gov/. The easiest way to find documents associated with a site is to check the GIS attribute table for the Agency Interest ID. Go to the VFC, "Search by Document", select Additional Fields, select AI ID #, select Add, and input the Agency Interest ID from the attribute table. The page listing documents associated with the site will appear. Find the most recent document and select. If the Agency ID # is not available, a search can be completed using either the FID # or the Address (using the Facility Search tab on the IDEM VFC website).

Brownfield, State Cleanup, LUST, UST, Voluntary Remediation Program, and Institutional Control Sites have the most impact to construction projects. If there is a Site Closure or Institutional Control document, those documents are the most informative. For active remediation sites, monitoring reports usually contain most of the information we need. Be aware that some sites can have ground water contamination that extends beyond the 0.5 mile search radius. Depending on the situation, statements similar to the following can be used.

- (Facility name, address and AI #) was formerly the site of a gas station. According to the No Further Action (NFA) Determination Pursuant to Risk Integrated System of Closure (RISC) issued by IDEM on (month, day, year), contamination remains in the area surrounding the site and exists in the ROW. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

- (Facility name, address, and AI #) was formerly the site of a gas station. According to the IDEM Virtual File Cabinet (VFC) _____ operated a gas station at the site pre-1980. The UST (it says there was only one) was filled with sand, and no further investigation has ever been done. In addition to petroleum contamination, it is likely that lead would be in the soil/groundwater. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Before proper removal and disposal of soil and/or groundwater, analysis for lead will be necessary.

- (Facility name, address, and AI #). IDEM issued a No Further Action Approval Determination Pursuant to Remediation Closure Guide on (month, day, year). Low levels of soil and ground water contamination remain on the site. An Environmental Restrictive Covenant (ERC) was placed on the property on (month, day, year). The ERC specifically prohibits the use of ground water, but not soil. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM before further site activities occur.

- (Facility name, address, and AI#). According to the _____ report, a _____ was formerly located on the _____ corner of the intersection. The report states that the _____ representative made the case that ground water contamination was coming from the former _____ onto the _____ site. No other investigation has ever been conducted on this property. A Phase II Environmental Site Assessment is recommended.

Occasions arise where monitoring wells are mapped or present within the footprint of a project area. If this occurs, the following statement can be added as a recommendation (modify as needed):

- If groundwater monitoring wells are encountered in the project area, they should be maintained in place. If they cannot be maintained, then the contractor must contact the INDOT Project Manager who will notify the INDOT Permits Group. The INDOT Permits Group will notify the permit holder that the well must be removed prior to construction. The permit holder is responsible for coordination with IDEM and the INDOT Permits Group for replacement or relocation of the well. If a property owner cannot be found in connection with the monitoring well, then well abandonment will be included in the project contract. All well abandonment activities must be completed by an Indiana Licensed Well Driller in accordance with IAC 312-13-10. Regardless of whether the well is abandoned by the contractor or the property owner, a record of well abandonment, including the well driller's license number, must be provided to the INDOT Project Manager once the well has been abandoned.

For UST and RCRA Generator Waste sites, it is often a matter of finding the most recent inspection and noting that the date and results of the inspection (site was/was not in compliance). Examples:

- (Facility Name, address, and AI #). IDEM conducted an Underground Storage Tank Inspection on (Date), and the facility was found to be in compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. No impact is expected.

- (Facility name, address, and AI #). IDEM an Underground Storage Tank Inspection on (Date), and the facility was found to be out of compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9; however, documentation reviewed does not indicate that a release occurred. No impact is expected.

- (Facility name, address, and AI #). IDEM an Underground Storage Tank Inspection on (Date), and the facility was found to be out of compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. Documentation reviewed indicates that a release occurred. (Next steps taken and possible impacts should be documented here.)

Solid waste facilities and some remediation sites have flammable vapor/gas conditions that can be hazardous. Landfills, active and closed, often have methane gas pockets that can migrate off-site.

As stated before, each site is unique, and an in-depth discussion would go far beyond the scope of this guidance. If you have questions, please don't hesitate to contact INDOT ES Hazardous Materials Section.

ECOLOGICAL INFORMATION SUMMARY

The _____ County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did/did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

If the project falls under the USFWS Interim Policy, the following statement can be used; however, if a Waters of the US Report is prepared for the project, coordination will need to occur with IDNR at a minimum.

Due to the nature of project activities, this project will fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. No further coordination is necessary.

Bat Protocol:

The document preparer must contact INDOT ES to request a review of a confidential database provided by USFWS to check for the presence of endangered bats in or near the project area. Please contact the appropriate District to request a review of the database. The generalized results of the review will be provided to the preparer of the RFI for its inclusion. ****Please note, this step MUST be completed regardless of the separate inquiry completed using the USFWS IPaC System****

If no bats are found in or within 0.5 mile of a project area, here is the statement that should go in the RFI.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

The following information should be included for all bridge and small structure projects. *Note – if the bridge or culvert inspection report is older than 2 years, please use the recommendation indicating that additional investigation to confirm the presence or absence of bats will be necessary.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a (describe area, i.e. rural area surrounded by farm fields). The (Month, Day, Year), inspection report for Culvert (or Bridge) #XXX-XX-XXXX contains no information about whether bats are present or absent in (or on) the culvert (bridge). Additional investigation to confirm the presence or absence of bats in (or on) the culvert (bridge) will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

OR

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a (describe area, i.e. rural area surrounded by farm fields). The (Month, Day, Year), inspection report for Bridge (Culvert) #XXX-XX-XXXX states that no evidence of bats was seen or heard under (or in) the bridge (culvert). The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

OR

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a (describe area, i.e. rural area surrounded by farm fields). The (Month, Day, Year), inspection report for Bridge (Culvert) #XXX-XX-XXXX states that evidence of bats was seen or heard under (in) the bridge (culvert). Additional coordination with INDOT ES will be necessary, and the range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

If bats are found in or within 0.5 mile of a project area, here is the statement that should go in the RFI.

A review of the USFWS database indicated the presence of endangered bat species in or within 0.5 mile of the project area. Additional coordination with INDOT ES will be necessary, and the range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

If bats are found in or within 0.5 mile of a project area, here is the information that should be provided in an e-mail to the document preparer to enable continuation of the coordination process.

Species
Gender
Roosting, hibernacula, or capture
Direction and distance (tenth of a mile) from the project
The following statement should go on all e-mails with this information.

Site specific MYSO and/or MYSE hibernacula, capture, or roost tree location data (e.g., geographic coordinates, GIS shapefiles or maps) will not be shared, distributed, or published without prior written consent from USFWS Bloomington Field Office.

Rusty Patched Bumble Bee Protocol:

The consultant version of the Red Flag Investigation Template MXD file has a new layer called **Ecology** that depicts the distribution of the Rusty Patched Bumble Bee. If you cannot access the GIS layer, the same information can be found at:

- Information for Planning and Consultation (IPaC) website https://ecos.fws.gov/ipac/
- Rusty Patched Bumble Bee GIS mapper https://ecos.fws.gov/ecp0/profile/speciesProfile.action?spcode=I0WI

The current guidance requires coordination with INDOT ES if the high potential zone (designated in red) is mapped within the 0.5 mile search radius.

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

OR

An inquiry using the USFWS Information for Planning and Consulting (IPaC) website indicates that the federal endangered species, the Rusty Patched Bumble Bee, is likely to be present in or within 0.5 mile of the project area. Coordination with INDOT Environmental Services will occur.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:
Keep recommendations concise. Information provided in this section should reflect the findings from the above sections. New information should not be introduced in this section. Usually just a statement of the resource impacted, if it is in or adjacent to the project area, and next steps. For example, "One (1) railroad is located within the project area. Coordination with INDOT Utilities and Railroads should occur."

INFRASTRUCTURE (example):

Religious Facilities: Two (2) religious facilities are located adjacent to the project area. Coordination with (name) and (name) will occur.

Airports: Although not mapped within the 0.5 mile search radius, one (1) public airport, (name), is located within 3.8 miles (20,000 feet) of the project area. Coordination with INDOT Aviation will occur.

Trails: Three (3) trail segments, associated with (name) trail, cross the project area. Coordination with (the agency managing the trail) will occur.

WATER RESOURCES: In order to keep from repeating a statement several times, the following should be used:

The presence of the following water resources will require the preparation of a Waters of the US Report and coordination with INDOT ES Ecology and Waterway Permitting:

wetlands are located adjacent to the project area.

The project area is located within a floodplain (coordination only).

One (1) stream segment, _____ Creek, flows through the project area.

URBANIZED AREA BOUNDARY (example): This project lies within the (Name) UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the (Name of Organization) MS4 Coordinator at (mailing address).

MINING/MINERAL EXPLORATION (example): N/A

HAZMAT CONCERNS (example): If the HazMat review identified a site with a specific recommendation, please copy and paste the site and associated information verbatim into this section.

- LUST: One (1) LUST site, (name, address, Agency ID #), is located adjacent to the project area. A review of the IDEM VFC indicates the site is currently being monitored and remediated for a release of petroleum chemicals of concern (CoCs) which extends into the right-of-way and project area. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

ECOLOGICAL INFORMATION (example): Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: _____(Signature)

Prepared by:
(Signature or name of preparer)
(Job Title)
(Organization)

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION (Topographic map as base map and zoomed out so the project area is easily located): YES or N/A

INFRASTRUCTURE (Aerial Image Base Map): YES or N/A

WATER RESOURCES (Aerial Image Base Map): YES or N/A

URBANIZED AREA BOUNDARY (Aerial Image Base Map): YES or N/A

MINING/MINERAL EXPLORATION (Aerial Image Base Map): YES or N/A

HAZMAT CONCERNS (Aerial Image Base Map): YES or N/A

General Comment: The Site Location map should depict the project area in a manner that makes it easy to locate. In general, an aerial image should be provided as the base map for the majority of the figures (excluding the Site Location map). If the aerial image as a base map impedes the ability to easily see all the mapped features, then a blank base map can be applied. This is a common issue in areas with high density cave entrance polygons, karst features, and water features.

ORGANIZATION LETTERHEAD

ATTENTION PREPARERS: PLEASE USE THE ORGANIZATION OR PROJECT SPONSOR LETTERHEAD

Date: (month, day, year)

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: (Requestor's Name)
(District)
(Address)
(City, State)
(e-mail)

Black text = template
Blue text = suggested language
Red text = guidance material
Green text = fill in information

Re: RED FLAG INVESTIGATION
DES #, Local Project
Project description (i.e. Pipeliner, Small Structure Replacement, HMA Overlay, Bridge Replacement, Road Reconstruction, Bridge Deck Overlay, etc)
Road
County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: A short paragraph explaining the location of the project and the scope and type of work being done.

Bridge and/or Culvert Project: Yes ☐ No ☐ Structure # _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ # Acres _____ Permanent ☐ # Acres _____ , Not Applicable ☐

Type of excavation: Depth, location, and extent of excavation

Maintenance of traffic: Road closure, detour, temporary signal, maintain traffic using lane closures

Work in waterway: Yes ☐ No ☐ Below ordinary high water mark: Yes ☐ No ☐

State Project: ☐ LPA: ☐

Any other factors influencing recommendations: N/A or Emergency projects (i.e. slide corrections, potential bridge failure, safety issues) – please expedite (provide due date); project description subject to additional changes; project area not completely defined; etc.

Odds and Ends:

1) Please use the ArcGIS Red Flag Investigation template layers found on the INDOT website (http://www.in.gov/indot/2523.htm) to map the project area, determine the number of features within the 0.5 mile search radius, and generate the RFI figures.
    a. Use of IndianaMap is not preferred.
2) General outline of describing each feature: # of features within the 0.5 mile search radius. Nearest feature including distance and direction. Need for coordination or further investigation or No Impact.
3) Report the distance of the feature to the project area in hundredths of a mile(s) NOT feet.
4) Some features are cataloged as segments in GIS (i.e. pipelines, railroads, trails, NWI-lines, IDEM 303d Listed Rivers and Streams (Impaired), and Rivers and Streams). Please report using the # of segments detailed in the GIS attribute table.
   For example: The White River is located within the 0.5 mile search radius. The attribute table has broken the White River into 10 segments within the 0.5 mile search radius. The number of items would be 10 and the text would reach something akin to: Ten (10) River and Stream segments are located within the 0.5 mile search radius. The nearest segment, associated with the White River, is located approximately 0.49 mile east of the project area. No impact is expected.
5) Please DO NOT include coordination letters, field visit information, permitting information, etc. in this document.
6) The below examples are provided using suggested language, please tailor the Red Flag Investigation to your project specific information.

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities		Recreational Facilities	
Airports[1]		Pipelines	
Cemeteries		Railroads	
Hospitals		Trails	
Schools		Managed Lands	

[1]In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required. Please see the Airports section below for specific direction and guidance.

Explanation: If no resources are found, please use the following statement: No infrastructure resources were identified within the 0.5 mile search radius.

Please provide a separate paragraph for each item. If resources are found in the 0.5 mile search radius, please include the number of resources. If there is no impact, state how close the nearest resource is (hundredths of a mile i.e. 0.43 mile) and the direction from the project area – see the statement for religious facilities.

PLEASE NOTE: Religious facilities, schools, cemeteries, and hospitals are not always identified correctly in the GIS layers. It is the document preparers responsibility to check within and adjacent to the project area for potential unmapped features through the use of other desktop resources (i.e. Topographic Map, Google Maps, Bing Maps, etc.).

Religious Facilities: # religious facilities are located within the 0.5 mile search radius. The nearest facility is (distance and direction) of the project area. No impacted is expected. OR

religious facilities are located within the 0.5 mile search radius. The nearest facility, (name), is adjacent to the project area. Traffic will be maintained through the use of a detour. Coordination with (name) will occur. OR

religious facilities are located within the 0.5 mile search radius. The nearest facility, (name), is adjacent to the project area. Traffic will be maintained throughout construction using lane closures, allowing for continued access. No impact is expected; however, coordination with (name) will occur.

Recreational Facilities: See religious facilities.

Airports: One (1) airport is located within the 0.5 mile search radius. The airport, _____, is a private airport and is located approximately (distance) mile (direction) of the project area. Coordination with the (owner) will occur.

Airports: # airports are located within the 0.5 mile search radius. All (#) of the airports are privately owned and are located approximately (distance) mile (direction) of the project area. Coordination with the (list owners) will occur.

If a project is within 20,000 feet (3.8 miles) of a **public-use** airport and/or has the potential to involve construction or use of any object above 200 feet, coordination with INDOT Aviation is required. While not always easy to notice outside the 0.5 mile search radius, please make a best effort to include public airports. INDOT Aviation does not want to be notified about private airports. Coordination directly with private airports within the 0.5 mile search radius may be required. Coordination with INDOT Aviation is NOT required for private airports.

If needed, the FAA website allows for a "circle search" of all airports by entering the project coordinates and a search radius. https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=showCircleSearchAirportsForm

Airports (continued – **public** airport within 3.8 miles example): Although not located within the 0.5 mile search radius, one (1) public airport, _____, is located within 3.8 miles (20,000 feet) of the project area. The public airport is located approximately (distance) mile (direction) of the project area; therefore, early coordination with INDOT Aviation will occur.

Pipelines: # pipelines (segments) are located within the 0.5 mile search radius. # pipeline(s) crosses (or is adjacent to) the project area. Coordination with the (name) will occur. If the pipeline is within 0.05 mile of the project area, please recommend coordination. LPAs – please coordinate directly with the pipeline owner/operator.

-OR-

pipeline segments are located within the 0.5 mile search radius. The nearest segment, associated with _____, is located approximately (distance) mile north of the project area. No impact is expected.

Cemeteries: # cemeteries are located within the 0.5 mile search radius. _____Cemetery is adjacent to the project area. A Cemetery Development Plan may be required since this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources is recommended.

In order to ensure complete coverage of mapped cemeteries, two databases are currently being used resulting in duplicate symbols. Please provide distance and direction to the nearest cemetery.

For MOT, see religious facilities.

Railroads: # railroads are located within the 0.5 mile search radius. # railroad segment(s) crosses (or is adjacent to) the project area. Coordination with (name) should occur. If the railroad is within 0.05 mile of the project area, please recommend coordination. LPAs – please coordinate directly with the railroad owner/operator.

Hospitals: The _____ hospital is located within the 0.5 mile search radius. No impact is expected by the proposed project as traffic will be maintained with lane closures throughout construction; however, coordination with the hospital will occur to identify any potential issues arising with emergency services.

Trails: # trails (segments) are located within the 0.5 mile search radius. One (1) trail (or planned or potential trail) (segment) is located in the project area. Coordination with (the agency managing the trail) will occur. Coordination is necessary with the managing agency even if your project is a trail project.

Schools: For MOT, see religious facilities. Please check to see if the school also serves as a transportation hub or maintenance facility.

Managed Lands: # Managed Lands are located within the 0.5 mile search radius. _____ is within (or adjacent to) the project area. Coordination with (agency managed the managed land) is recommended.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points		Canal Routes - Historic	
Karst Springs		NWI - Wetlands	
Canal Structures – Historic		Lakes	
NPS NRI Listed		Floodplain - DFIRM	
NWI-Lines		Cave Entrance Density	
IDEM 303d Listed Streams and Lakes (Impaired)		Sinkhole Areas	
Rivers and Streams		Sinking-Stream Basins	

Explanation: Please provide a separate paragraph for each item.

1) If there is no impact, state how close the nearest resource is and the direction from the project area – see the statement for religious facilities or wetlands (below) for example.

2) If a water feature is within or adjacent to a project area and there is a potential impact, the statement A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur will be used. Exceptions: floodplains and karst features (see below).

Water Feature Name: # (water feature name(s)) are located within the 0.5 mile search radius. Two (2) (water feature name(s)) are located within the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

On occasion, ArcMap will either not map a water feature or will not extend a water feature to a known culvert or bridge. In this instance, please use the following recommendation to account for the potential presence of a water feature within or near a culvert or bridge. Due to the proximity of (feature), it is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

NWI-Wetlands: # wetlands are located within the 0.5 mile search radius. One wetland is located adjacent to the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

OR

wetlands are located within the 0.5 mile search radius. One wetland is located approximately 0.49 mile north of the project area. No impact is expected.

Floodplains: # floodplain polygons are located within the 0.5 mile search radius. The project area is located within one of the floodplain polygons. Coordination with the appropriate agency will occur. OR

floodplain polygons are located within the 0.5 mile search radius. The nearest floodplain polygon is located approximately 0.45 mile south of the project area. No impact is expected.

Karst Features (cave entrance density, sinkhole area, sinking-stream basin, etc.): If karst features are identified within or adjacent to the project area, the following recommendation can be used: Coordination with the appropriate agency will occur.

EXCEPTIONS:

IDEM 303d Listed Rivers and Streams: # 303d Listed Rivers and Streams are located within the 0.5 mile search radius. (Name of water body) is located within (or adjacent to) the project area. (Name of water body) is listed as impaired for _____.

The following are recommended statements for impairments.

- (Name) is listed for Impaired Biotic Communities (IBC). Coordination with the Indiana Department of Environmental Management (IDEM) will occur. This statement applies to Nutrient Impairment and Dissolved Oxygen as well.

- (Name) is listed for E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

- (Name) is impaired for PCBs (and/or mercury) in fish tissue. Exposure to PCBs (and/or mercury) in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body. At this point, the statement can be No impact is expected OR If there will be sediment and/or soils disturbed by construction, additional investigation may be necessary. Coordination with INDOT ES will occur.

Canal Routes/Canal Structures – Historic – These features, if impacted, may require coordination with INDOT ES Cultural Resources.

If an impacted river is identified on the GIS maps as being on the National Rivers Inventory (NRI), coordination with National Park Service and US Department of Agriculture will be necessary.

URBANIZED AREA BOUNDARY SUMMARY

If the project is not located in an Urbanized Area Boundary (UAB), please indicate N/A. If the project is in a UAB, please use the following statement and include the statement in the recommendations. On occasion, a UAB may not have an assigned MS4 permit, in that case, please use the second UAB statement.

Urbanized Area Boundary (UAB): This project lies within the (Name) UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the (Name) MS4 Coordinator at (mailing address). The MS4 Contact List can be downloaded from the INDOT Storm Water website: www.in.gov/indot/2892.htm

OR

Urbanized Area Boundary (UAB): This project lies within the (Name of Organization) UAB; however, a Rule 13 Permit from IDEM has not been issued. No further coordination is necessary at this time.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells		Mineral Resources	
Mines – Surface		Mines – Underground	

Explanation: Please provide a separate paragraph for each item. If there is no impact, state how close the nearest resource is and the direction from the project area – see the statement for religious facilities.

Petroleum Wells: # petroleum wells are located within the 0.5 mile search radius. # petroleum wells are located within or adjacent to the project area. Coordination with IDNR Oil and Gas Division will occur.

Mines – Surface and Mines – Underground: # (surface or underground) mines are located within the 0.5 mile search radius. # (surface or underground) mines are located within or adjacent to the project area. Coordination with IDNR Reclamation Division will occur.

Mineral Resources: One (1) mineral resource facility is located within the 0.5 mile search radius. The facility, identified as (Name), is located adjacent to the project area. Due to the proposed MOT, which is anticipated to be full road closure with a detour, coordination with the facility will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund		Manufactured Gas Plant Sites	
RCRA Generator/ TSD		Open Dump Waste Sites	
RCRA Corrective Action Sites		Restricted Waste Sites	
State Cleanup Sites		Waste Transfer Stations	
Septage Waste Sites		Tire Waste Sites	
Underground Storage Tank (UST) Sites		Confined Feeding Operations (CFO)	
Voluntary Remediation Program		Brownfields	
Construction Demolition Waste		Institutional Controls	

Solid Waste Landfill		NPDES Facilities	
Infectious/Medical Waste Sites		NPDES Pipe Locations	
Leaking Underground Storage (LUST) Sites		Notice of Contamination Sites	

Explanation: Each site is unique. There is no good formula for determining next steps. The following information is general in nature, and not to be taken as a template, even though these statements are often applicable. A word of caution, don't be fooled by the location of the symbol on the GIS map, especially for large facilities. Some of the facility symbols are incorrectly located, or the facility covers several acres.

If the search radius has several sites (usually identified via street view maps or a site visit) with unknown past uses, or that look like old gas stations or factories, a Phase I Environmental Site Assessment (ESA) is appropriate. If the use of facilities is known and records are available in IDEM's Virtual File Cabinet (VFC), a Phase I is not needed.

IDEM's VFC can be found at the following link: http://vfc.idem.in.gov/. The easiest way to find documents associated with a site is to check the GIS attribute table for the Agency Interest ID. Go to the VFC, "Search by Document", select Additional Fields, select AI ID #, select Add, and input the Agency Interest ID from the attribute table. The page listing documents associated with the site will appear. Find the most recent document and select. If the Agency ID # is not available, a search can be completed using either the FID # or the Address (using the Facility Search tab on the IDEM VFC website).

Brownfield, State Cleanup, LUST, UST, Voluntary Remediation Program, and Institutional Control Sites have the most impact to construction projects. If there is a Site Closure or Institutional Control document, those documents are the most informative. For active remediation sites, monitoring reports usually contain most of the information we need. Be aware that some sites can have groundwater contamination that extends beyond the 0.5 mile search radius. Depending on the situation, statements similar to the following can be used.

- (Facility name, address and AI #) was formerly the site of a gas station. According to the No Further Action (NFA) Determination Pursuant to Risk Integrated System of Closure (RISC) issued by IDEM on (month, day, year), contamination remains in the area surrounding the site and exists in the ROW. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

- (Facility name, address, and AI #) was formerly the site of a gas station. According to the IDEM Virtual File Cabinet (VFC) _____ operated a gas station at the site pre-1980. The UST (it says there was only one) was filled with sand, and no further investigation has ever been done. In addition to petroleum contamination, it is likely that lead would be in the soil/groundwater. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Before proper removal and disposal of soil and/or groundwater, analysis for lead will be necessary.

- (Facility name, address, and AI #). IDEM issued a No Further Action Approval Determination Pursuant to Remediation Closure Guide on (month, day, year). Low levels of soil and groundwater contamination remain on the site. An Environmental Restrictive Covenant (ERC) was placed on the property on (month, day, year). The ERC specifically prohibits the use of groundwater, but not soil. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM before further site activities occur.

- According to the _____ report, a _____ was formerly located on the _____ corner of the intersection. The report states that the _____ representative made the case that groundwater contamination was coming from the former _____ onto the _____ site. No other investigation has ever been conducted on this property. A Phase II Environmental Site Assessment is recommended.

Occasions arise where monitoring wells are mapped or present within the footprint of a project area. If this occurs, the following statement can be added as a recommendation (modify as needed):

- If groundwater monitoring wells are encountered in the project area, they should be maintained in place. If they cannot be maintained, then the contractor must contact the INDOT Project Manager who will notify the INDOT Permits Group. The INDOT Permits Group will notify the permit holder that the well must be removed prior to construction. The permit holder is responsible for coordination with IDEM and the INDOT Permits Group for replacement or relocation of the well. If a property owner cannot be found in connection with the monitoring well, then well abandonment will be included in the project contract. All well abandonment activities must be completed by an Indiana Licensed Well Driller in accordance with IAC 312-13-10. Regardless of whether the well is abandoned by the contractor or the property owner, a record of well abandonment, including the well driller's license number, must be provided to the INDOT Project Manager once the well has been abandoned.

For UST and RCRA Generator Waste sites, it is often a matter of finding the most recent inspection and noting that the date and results of the inspection (site was/was not in compliance). Examples:

- (Facility Name, address, and AI #). IDEM conducted an Underground Storage Tank Inspection on (Date), and the facility was found to be in compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. No impact is expected.

- (Facility name, address, and AI #). IDEM an Underground Storage Tank Inspection on (Date), and the facility was found to be out of compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9; however, documentation reviewed does not indicate that a release occurred. No impact is expected.

- (Facility name, address, and AI #). IDEM an Underground Storage Tank Inspection on (Date), and the facility was found to be out of compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. Documentation reviewed indicates that a release occurred. (Next steps taken and possible impacts should be documented here.)

Solid waste facilities and some remediation sites have flammable vapor/gas conditions that can be hazardous. Landfills, active and closed, often have methane gas pockets that can migrate off-site.

As stated before, each site is unique, and an in-depth discussion would go far beyond the scope of this guidance. If you have questions, please don't hesitate to contact INDOT ES Hazardous Materials Section.

ECOLOGICAL INFORMATION SUMMARY

The _____ County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did/did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

If the project falls under the USFWS Interim Policy, the following statement can be used; however, if a Waters of the US Report is prepared for the project, coordination will need to occur with IDNR at a minimum.

Due to the nature of project activities, this project will fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. No further coordination is necessary.

Bat Protocol:

The document preparer must contact INDOT ES to request a review of a confidential database provided by USFWS to check for the presence of endangered bats in or near the project area. Please contact the appropriate District to request a review of the database. The generalized results of the review will be provided to the preparer of the RFI for its inclusion. ****Please note, this step MUST be completed regardless of the separate inquiry completed using the USFWS IPaC System****

If no bats are found in or within 0.5 mile of a project area, here is the statement that should go in the RFI.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

The following information should be included for all bridge and small structure projects. *Note – if the bridge or culvert inspection report is older than 2 years, please use the recommendation indicating that additional investigation to confirm the presence or absence of bats will be necessary.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a (describe area, i.e. rural area surrounded by farm fields). The (Month, Day, Year), inspection report for Culvert (or Bridge) #XXX-XX-XXXX contains no information about whether bats are present or absent in (or on) the culvert (bridge). Additional investigation to confirm the presence or absence of bats in (or on) the culvert (bridge) will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

OR

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a (describe area, i.e. rural area surrounded by farm fields). The (Month, Day, Year), inspection report for Bridge (Culvert) #XXX-XX-XXXX states that no evidence of bats was seen or heard under (or in) the bridge (culvert). The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

OR

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a (describe area, i.e. rural area surrounded by farm fields). The (Month, Day, Year), inspection report for Bridge (Culvert) #XXX-XX-XXXX states that evidence of bats was seen or heard under (in) the bridge (culvert). Additional coordination with INDOT ES will be necessary, and the range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

If bats are found in or within 0.5 mile of a project area, here is the statement that should go in the RFI.

A review of the USFWS database indicated the presence of endangered bat species in or within 0.5 mile of the project area. Additional coordination with INDOT ES will be necessary, and the range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

If bats are found in or within 0.5 mile of a project area, here is the information that should be provided in an e-mail to the document preparer to enable continuation of the coordination process.

Species
Gender
Roosting, hibernacula, or capture
Direction and distance (tenth of a mile) from the project
The following statement should go on all e-mails with this information.

Site specific MYSO and/or MYSE hibernacula, capture, or roost tree location data (e.g., geographic coordinates, GIS shapefiles or maps) will not be shared, distributed, or published without prior written consent from USFWS Bloomington Field Office.

Rusty Patched Bumble Bee Protocol:

The consultant version of the Red Flag Investigation Template MXD file has a new layer called **Ecology** that depicts the distribution of the Rusty Patched Bumble Bee. If you cannot access the GIS layer, the same information can be found at:

- Information for Planning and Consultation (IPaC) website https://ecos.fws.gov/ipac/
- Rusty Patched Bumble Bee GIS mapper https://ecos.fws.gov/ecp0/profile/speciesProfile.action?spcode=I0WI

The current guidance requires coordination with INDOT ES if the high potential zone (designated in red) is mapped within the 0.5 mile search radius.

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

OR

An inquiry using the USFWS Information for Planning and Consulting (IPaC) website indicates that the federal endangered species, the Rusty Patched Bumble Bee, is likely to be present in or within 0.5 mile of the project area. Coordination with INDOT Environmental Services will occur.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:
Keep recommendations concise. Information provided in this section should reflect the findings from the above sections. New information should not be introduced in this section. Usually just a statement of the resource impacted, if it is in or adjacent to the project area, and next steps. For example, "One (1) railroad is located within the project area. Coordination with INDOT Utilities and Railroads should occur."

INFRASTRUCTURE (example):

Religious Facilities: Two (2) religious facilities are located adjacent to the project area. Coordination with (name) and (name) will occur.

Airports: Although not mapped within the 0.5 mile search radius, one (1) public airport, (name), is located within 3.8 miles (20,000 feet) of the project area. Coordination with INDOT Aviation will occur.

Trails: Three (3) trail segments, associated with (name) trail, cross the project area. Coordination with (the agency managing the trail) will occur.

WATER RESOURCES: In order to keep from repeating a statement several times, the following should be used:

The presence of following water resources will require the preparation of a Waters of the US Report:

wetlands are located adjacent to the project area. Coordination with (name) will occur.

The project area is located within a floodplain. Coordination with (name) will occur.

One (1) stream segment, _____ Creek, flows through the project area. Coordination with (name) will occur.

URBANIZED AREA BOUNDARY (example): This project lies within the (Name) UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the (Name of organization) MS4 Coordinator at (mailing address).

MINING/MINERAL EXPLORATION (example): N/A

HAZMAT CONCERNS (example): If the HazMat review identified a site with a specific recommendation, please copy and paste the site and associated information verbatim into this section.

- LUST: One (1) LUST site, (name, address, Agency ID #), is located adjacent to the project area. A review of the IDEM VFC indicates the site is currently being monitored and remediated for a release of petroleum chemicals of concern (CoCs) which extends into the right-of-way and project area. If excavation occurs in this area, proper removal and disposal of soil and/or ground water will be necessary.

ECOLOGICAL INFORMATION (example): Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation INDOT Projects".

INDOT Environmental Services concurrence: _____(Signature)

Prepared by:
(Signature or name of preparer)
(Job Title)
(Organization)

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION (Topographic map as base map and zoomed out so the project area is easily located): YES or N/A

INFRASTRUCTURE (Aerial Image Base Map): YES or N/A

WATER RESOURCES (Aerial Image Base Map): YES or N/A

URBANIZED AREA BOUNDARY (Aerial Image Base Map): YES or N/A

MINING/MINERAL EXPLORATION (Aerial Image Base Map): YES or N/A

HAZMAT CONCERNS (Aerial Image Base Map): YES or N/A

General Comment: The Site Location map should depict the project area in a manner that makes it easy to locate. In general, an aerial image should be provided as the base map for the majority of the figures (excluding the Site Location map). If the aerial image as a base map impedes the ability to easily see all the mapped features, then a blank base map can be applied. This is a common issue in areas with high density cave entrance polygons, karst features, and water features.

APPENDIX C

Limited Red Flag Investigation Template

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

ATTENTION PREPARERS: IF THIS IS A STATE PROJECT, PLEASE USE THIS LETTERHEAD AND NOT A COMPANY LETTERHEAD

Date: (month, day, year)

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: (Requestor's Name)
(District)
(Address)
(City, State)
(e-mail)

Black text = template
Blue text = suggested language
Red text = guidance material
Green text = fill in information

Re: LIMITED RED FLAG INVESTIGATION
DES #, State Project
Project description (i.e. Pipeliner, Small Structure Replacement, HMA Overlay, Bridge Replacement, Road Reconstruction, Bridge Deck Overlay, etc)
Road
County, Indiana

Please review the below guidance prior to generating a Limited Red Flag Investigation:

1) In order to complete a Limited Red Flag Investigation RFI (RFI) the following items MUST apply:
   a. The project falls under the PCE **BUT**
      i. has limited excavation (not associated with maintenance activities or replacement of structures in-kind),
      ii. is within a sensitive ecological area,
      iii. has a special coordination issue.
   b. The document preparer has contacted the applicable INDOT District and has received approval to complete a Limited RFI for the selected project.
   c. The applicable INDOT District has stated what section(s), in addition to the Hazardous Material Concerns (HazMat) section, should be included.
2) Continue to use ArcGIS Red Flag Investigation template layers found on the INDOT website (http://www.in.gov/indot/2523.htm) to map the project area
3) In general, the main reason a Limited RFI is being completed is due to excavation along or within a project area. Please tailor the document (both text and figures) to focus on the area(s) where excavation is going to occur.

***Note* The below document is intended to be an example of best practices and is for formatting purposes only.**

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) has identified the need to address the deteriorated condition of the pavement along SR 46 and update select curb ramp locations to comply with ADA standards. This is a PCE project with limited excavation activities, therefore, a request to complete a Limited RFI was submitted to the Seymour District on October 1, 2018, and approval was received on December 11, 2018. The project spans from the SR 229 intersection and proceeds west approximately 6.69 miles through the City of New Point. INDOT proposes to mill 1.5 inches off the existing pavement and overlay with 1.5 inches of hot mix asphalt (HMA) surface material. In addition to the HMA overlay activities, four intersections will have ADA curb ramp work completed in order to meet ADA-complaint standards. The intersections where ADA curb ramp work is proposed to occur are provided in the below table:

Intersections:	Quadrants:	Depth of Excavation (feet below ground surface (ft-bgs))
SR 46 and 8th Street	All four corners	5 ft-bgs
SR 46 and Bobs Street	SE and SW corner	5 ft-bgs
SR 46 and 1st Street	SW and SW corner	5 ft-bgs
SR 46 and Kalb Street	All four corners	5 ft-bgs

Bridge and/or Culvert Work Included in Project: Yes ☐ No ☒ Structure #(s) _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ # Acres _____, Permanent ☐ # Acres _____, Not Applicable ☒

Type of excavation: Excavation to a depth of approximately 5 feet below the ground surface (ft-bgs) will occur at the locations requiring ADA curb ramp updates. Please see the above table for specific locations.

Maintenance of traffic: Traffic will be maintained using flaggers

Work in waterway: Yes ☐ No ☒ Below ordinary high water mark: Yes ☐ No ☐

Any other factors influencing recommendations: Not Applicable

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**N/A**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**N/A**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**1**
Solid Waste Landfill	**N/A**	NPDES Facilities	**N/A**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**N/A**

Leaking Underground Storage (LUST) Sites	**3**	Notice of Contamination Sites	**N/A**

Explanation: This Limited RFI is being generated due to the proposed excavation activities at the below intersections:

SR 46 and 8th Street-

Leaking Underground Storage Tank (LUST): Liquid Transport Systems, 8005 State Road 46, Agency ID # 2533, is the site of a commercial tanker service and is located on the southeast corner of the intersection. The IDEM issued a *Request to Record Environmental Restrictive Covenant (ERC)* letter, dated September 5, 2018, determining that the site is eligible for no further action status following recommended revisions. It appears as though shallow residual chemicals of concern (CoCs) remain on-site in the vicinity of the former underground storage tank (UST) cavity and have not been fully delineated. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary.

SR 46 and Bobs Street- There do not appear to be any Hazardous Material Concern sites mapped or located at this intersection. No impact is expected.

SR 46 and 1st Street- There do not appear to be any Hazardous Material Concern sites mapped or located at this intersection. No impact is expected.

SR 46 and Kalb Street –

LUST: New Point Food Mart, 1810 South CR 850 East, FID # 24906, is the site of a convenience store and gas station on the northeast corner of the intersection. The IDEM issued a *Deactivated LUST* letter, dated January 28, 2013, following the closure and replacement of UST piping at the facility. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Decatur and Franklin County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities are attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of ETR species. Due to the nature of project activities, this project will fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. No further coordination is necessary.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation INDOT Projects".

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

HAZMAT CONCERNS:

SR 46 and 8th Street-

LUST: Liquid Transport Systems, 8005 State Road 46, Agency ID # 2533 is the site of a commercial tanker service and is located on the southeast corner of the intersection. The IDEM issued a *Request to Record Environmental Restrictive Covenant* letter, dated September 5, 2018, determining that the site is eligible for no further action status following recommended revisions. It appears as though shallow residual CoCs remain on-site in the vicinity of the former UST cavity and have not been fully delineated. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary.

ECOLOGICAL INFORMATION: The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: _____(Signature)

Prepared by:
(Signature or name of preparer)
(Job Title)
(Organization)

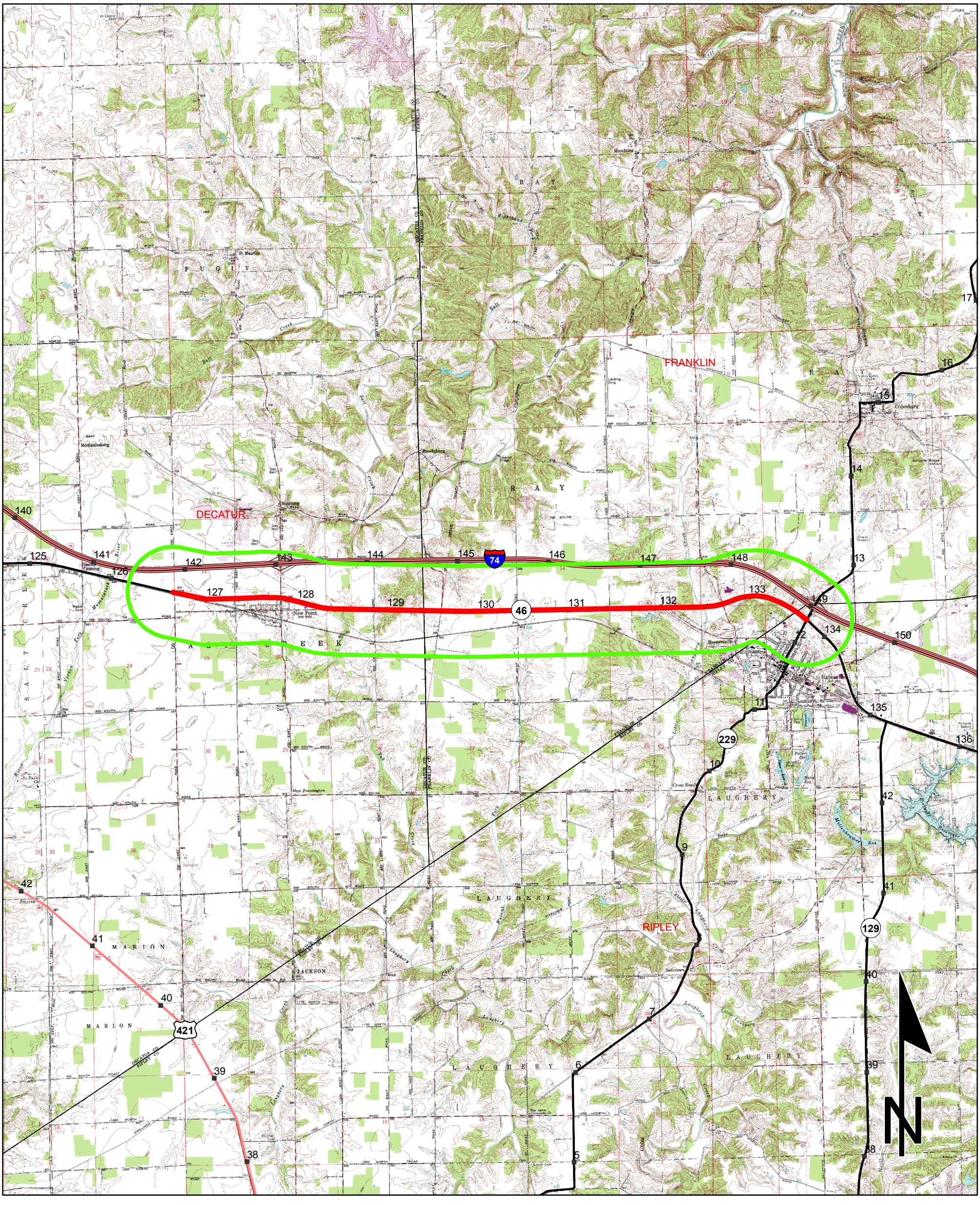
Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION (For a Limited RFI, the Site Location map should show the full extents of the project area. In this example, the figure would show the full extents of the HMA overlay including the ADA curb ramp locations): YES

HAZMAT CONCERNS (For this example, the main reason that a Limited RFI is being prepared is because of the limited excavation activities associated with the ADA curb ramp locations. Therefore, the most effective method is to provide a figure that zooms in on the curb ramp work, clearly identifies the intersections where work will occur, and include a 0.5 mile search radius around that focused "project area".): YES

Red Flag Investigation - Site Location
SR 46 from SR 229 to County Road S 725 East
Des No. 000000, HMA Overlay and ADA Curb Ramps
Decatur and Franklin County, Indiana



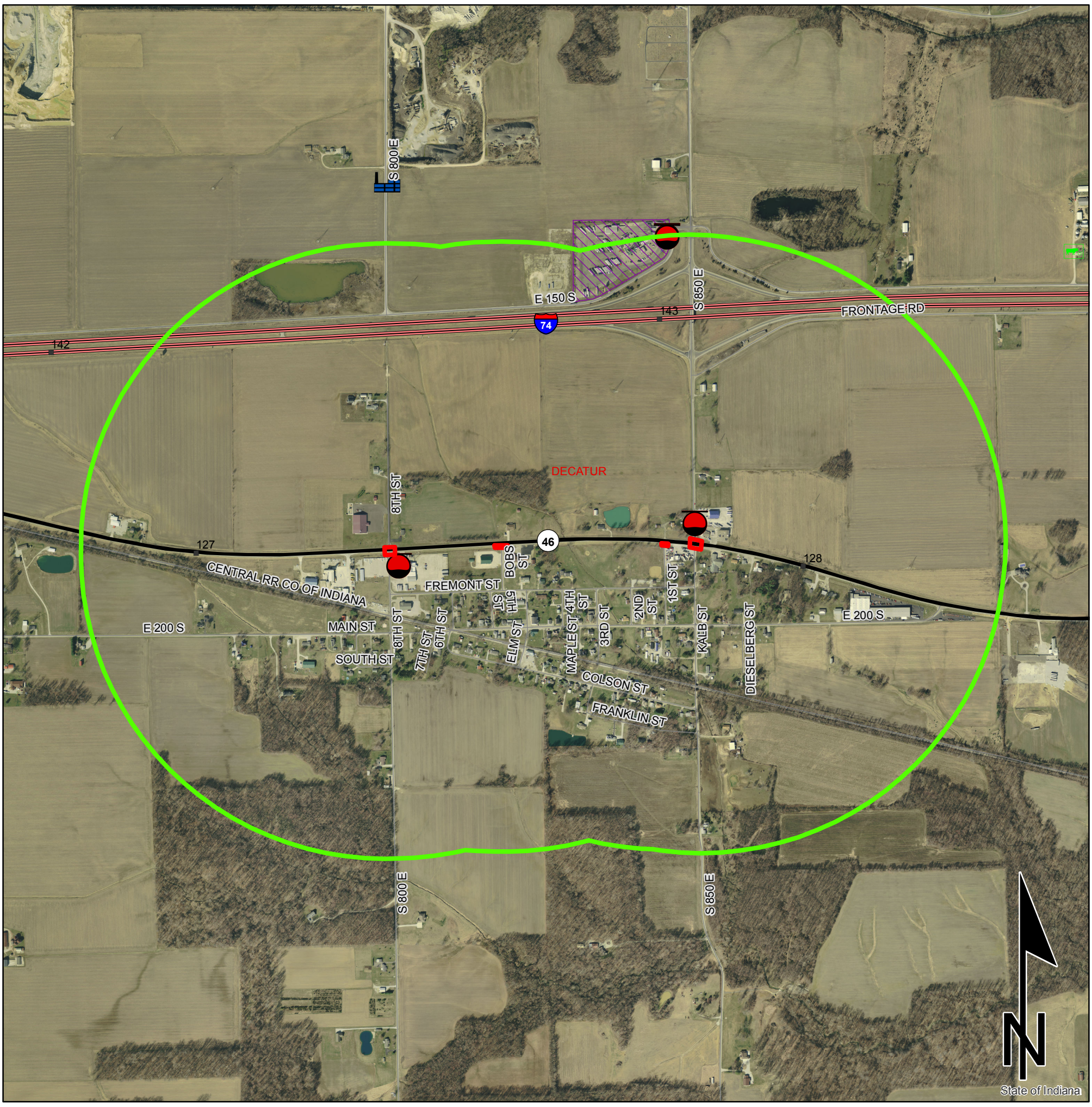
Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

1 0.5 0 1 Miles

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

NEW POINT AND BATESVILLE
QUADRANGLE
INDIANA
7.5 MINUTE SERIES

Red Flag Investigation - Hazardous Material Concerns
SR 46 from SR 229 to County Road S 725 East
Des No. 000000, HMA Overlay and ADA Curb Ramps
Decatur and Franklin County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.2 0.1 0 0.2 Miles

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Sources:

Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

Indiana County Endangered, Threatened and Rare Species List

County: Decatur

Species Name	Common Name	FED	STATE	GRANK	SRANK
Crustacean: Malacostraca					
Caecidotea rotunda	Northeastern Cave Isopod		SR	G2G4	S3
Mollusk: Bivalvia (Mussels)					
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Odonata (Dragonflies & Damselflies)					
Tachopteryx thoreyi	Gray Petaltail		wl	G4	S3
Reptile					
Clonophis kirtlandii	Kirtland's Snake	C	SE	G2	S2
Bird					
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Mammal					
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Carex flava	Yellow Sedge		ST	G5	S2
Conioselinum chinense	Hemlock Parsley		SE	G5	S1
Crataegus pedicellata	Scarlet Hawthorn		ST	G5	S2
Juglans cinerea	Butternut		WL	G4	S3
Linum striatum	Ridged Yellow Flax		WL	G5	S3
Panax trifolius	Dwarf Ginseng		WL	G5	S2
High Quality Natural Community					
Forest - flatwoods bluegrass till plain	Bluegrass Till Plain Flatwoods		SG	G3	S2
Forest - upland dry-mesic Bluegrass	Bluegrass Dry-mesic Upland Forest			GNR	S1
Wetland - fen	Fen		SG	G3	S3
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Franklin

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Insect: Coleoptera (Beetles)					
Cicindela marginipennis	Cobblestone Tiger Beetle	C	SE	G2	S1
Insect: Lepidoptera (Butterflies & Moths)					
Polygonia progne	Gray Comma		SR	G5	S2
Fish					
Clinostomus elongatus	Redside Dace		SE	G3G4	S1
Etheostoma variatum	Variegate Darter		SE	G5	S1
Amphibian					
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	C	SE	G3G4T3T4	S1
Bird					
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Pandion haliaetus	Osprey		SE	G5	S1B
Setophaga magnolia	Magnolia Warbler			G5	SNA
Mammal					
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Acalypha deamii	Mercury		SR	G4?	S2
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper		SR	G5	S2
Gentiana alba	Yellow Gentian		SR	G4	S2
Lilium canadense	Canada Lily		SR	G5	S2
Onosmodium hispidissimum	Shaggy False-gromwell		SE	G4G5T4	S1
Rubus centralis	Illinois Blackberry		SE	G2?Q	S1
Rubus deamii	Deam Dewberry		SX	G4?	SX
Scutellaria parvula var. parvula	Small Skullcap		SE	G4T4	S1
Viburnum molle	Softleaf Arrow-wood		SR	G5	S2
Waldsteinia fragarioides	Barren Strawberry		SR	G5	S2
Zizia aptera	Golden Alexanders		SR	G5	S2
High Quality Natural Community					
Barrens - bedrock limestone	Limestone Glade		SG	G4	S2S3
Forest - upland mesic Bluegrass	Bluegrass Mesic Upland Forest			GNR	S3
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

APPENDIX D

Red Flag Investigation Addendum Example

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

The following is an EXAMPLE of a Red Flag Investigation Addendum. Please refer to the SAM Manual for additional guidance on when to prepare a Red Flag Investigation Addendum.

Date: (month, day, year)

To: Site Assessment & Management
Environmental Policy Office – Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: (Requestor's Name)
(District)
(Address)
(City, State)
(e-mail)

Black text = template
Blue text = suggested language
Red text = guidance material
Green text = fill in information

Re: RED FLAG INVESTIGATION ADDENDUM
DES #, State Project, LPA Project
Project description
Road
County, Indiana

A review of the original RFI signed on (or dated) (Date), for the above DES # did not indicate (or indicated) substantive changes have (have not) occurred within the 0.5 mile radius and project area limits that will have an impact to the project. Brief Description of project or updates following the approval of the original RFI (for example, project scope, project extent, depth of excavation, etc. Please be clear and concise).

The following features and/or items were not detailed in the original RFI document (date), but have since been identified as having an impact on the project area and requiring additional coordination. This document should be attached to the original, signed RFI (The RFI may not be signed if the project is an LPA).

1. Infrastructure –
   Cemeteries: As indicated above, the project extents have expanded to include storm sewer installation activities approximately 0.25 mile north of Broadway Street. As such, the _____ Cemetery identified in the original RFI (date), is now adjacent to the project area. Coordination with INDOT Cultural Resources will occur.

2. Urbanized Area Boundary (UAB): This project lies within the (Name) UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the MS4 Coordinator, (Address).

3. Hazardous Material Concerns –

   LUST: (Facility name, address, and AI#). This site is located adjacent to the project area at the intersection of First and Main Street. The initial RFI (date), indicated that a No Further Action Approval letter had been issued and no impact was expected; however, after re-checking the IDEM VFC, the facility had an emergency response on (date) that resulted in a release of free product likely extending into the project area. Coordination with IDEM will occur and proper handling, removal, and disposal of soil and/or groundwater will be necessary.

4. Ecological Information: A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a commercial area. The (Date), inspection report for Culvert (#) states that no evidence of bats was seen or heard under the culvert. Preparation of the Scoping Sheet for the Indiana Bat and Northern Long-Eared Bat Range-Wide Programmatic Information Consultation will be required.

   An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumblebee, in or within 0.5 mile of the project area. No impact is expected.

   OR

   An inquiry using the USFWS Information for Planning and Consulting (IPaC) website indicates that the federally endangered species, the Rusty Patched Bumblebee, is likely to be present in or within 0.5 mile of the project area. Coordination with INDOT Environmental Services will occur.

INDOT Environmental Services concurrence: _____ (Signature)

Prepared by:

(Signature or name of preparer)
(Job Title)
(Organization)

APPENDIX E

IDEM Uncontaminated Soil Policy

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	**STATUS:** Effective	**POLICY NUMBER:** WASTE-0064-NPD	
AGENCY NONRULE POLICY DOCUMENT **SUBJECT:** Uncontaminated Soil Policy	**AUTHORIZED:** Thomas Easterly, Commissioner		
	SUPERSEDES: New	**ISSUING OFFICE(S):** Office of Land Quality	
	ORIGINALLY EFFECTIVE: April 10, 2015	**RENEWED/REVISED:**	

Disclaimer: *This non-rule policy document (NPD) is being established by the Indiana Department of Environmental Management (IDEM), consistent with its authority in state law under the Indiana Code at IC 13-14-1-11.5. It is intended solely to provide guidance and shall be used in conjunction with applicable rules or laws. It does not replace applicable rules and laws, and if it conflicts with these rules or laws, the rules or laws shall control. Pursuant to IC 13-14-1-11.5, this policy will be available for public inspection for at least 45 days prior to presentation to the appropriate State Environmental Board, and may be put into effect by IDEM 30 days afterward. If the non-rule policy is presented to more than one board, it will be effective 30 days after presentation to the last. IDEM also will submit the policy to the Indiana Register for publication.*

1.0 PURPOSE

The solid waste rules in the Indiana Administrative Code at 329 IAC 10-3-1(1) and 329 IAC 11-3-1(1) exclude from regulation the disposal of uncontaminated dirt (soil) and, alternatively, would consider contaminated soil to be a solid waste that is subject to solid waste regulations. Neither the rules nor the laws define 'uncontaminated,' so the policy of IDEM's solid waste program has been to interpret the presence of any non-natural constituent in a soil as being a contaminant, making the soil subject to the solid waste regulations.

IDEM has developed risk-based non-rule policy documents (NPDs) to address and drive the cleanup of contaminated soil. These NPDs include IDEM's Remediation Closure Guide (RCG) and the Remediation Program Guide (RPG). Screening levels found in the RCG are used for determining if soil contains chemicals at concentrations that may present a threat to human health.

This NPD applies to soils, which do not include waste streams that are specifically regulated by 329 IAC 10 and which contain human introduced constituents (or chemicals) below RCG residential screening levels, and designates how those soils may be managed when excavated. Soils with concentrations of a human introduced chemical not exceeding RCG residential screening levels are considered uncontaminated if they are handled in accordance with this NPD. Soils with concentrations of human introduced chemicals or contaminants exceeding the RCG residential screening levels are considered contaminated soil and are not exempt from the solid waste rules under this NPD.

As defined in the RCG, a screening level is a chemical-specific concentration level that IDEM has determined to be sufficiently protective at any site, provided it is applied under appropriate land use scenarios. The RCG does not assess all environmental risk factors so its consideration is limited to surface and subsurface soils and ground water that may be used as drinking water.

This NPD is to provide consistent standards for excavated soil remaining on-site, reused on-site, or taken offsite for reuse or disposal.

2.0 SCOPE

The scope of this NPD applies to how excavated soil may be managed when found to contain human introduced chemicals below RCG residential screening levels.

The scope of this NPD does not include soils impacted by spilled materials subject to the IDEM Spill Rule at 327 IAC 2-6.

This NPD is not intended to address naturally occurring chemical constituents in soil.

This NPD does not exempt from regulation historical fill material made up of specifically regulated wastes and waste streams, which include, but are not limited to, coal ash, foundry sand, or other waste streams. Such materials are considered solid waste and must either be disposed in a permitted landfill or be approved for a legitimate use project.

This NPD also does not address situations when soil is intermingled with regulated solid waste. Examples include, but are not limited to, ash and debris mixed with soil after a fire, municipal wastewater treatment sludge mingled with soil from a lagoon liner, or similar situations where soil has become part of a waste. If soil can be physically separated from the wastes and is found to be uncontaminated, as specified in this NPD, it would no longer need to be handled as a waste.

In general, this NPD is not intended to address soils containing identifiable industrial wastes, solid wastes, or hazardous wastes that are inseparable from the soil.

3.0 DEFINITIONS

3.1. "Agency" – The Indiana Department of Environmental Management (IDEM).

3.2. "Chemical" – A substance with unique properties consisting of a combination of one or more elements.

3.3. "Contaminant" – "Contaminant" for purposes of environmental management laws, means any solid, semi-solid, liquid, or gaseous matter, or any odor, radioactive material, pollutant (as defined by the federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as in effect on January 1, 1989), hazardous waste (as defined in the federal Solid Waste Disposal Act [42 U.S.C. 6901 et seq.], as in effect on January 1, 1989), any constituent of a hazardous waste, or any combination of the items described in this section, from whatever source, that:

(1) is injurious to human health, plant or animal life, or property;
(2) interferes unreasonably with the enjoyment of life or property, or otherwise violates:
(A) environmental management laws; or
(B) rules adopted under environmental management laws
(329 IAC 10-2-41, IC 13-11-2-42)

3.4. "Contaminants of concern" – Chemicals that are the focus of screening, investigation or closure in Office of Land Quality remediation programs. For petroleum sites, potentially harmful chemicals within a mixture that are present in sufficient quantity to serve as indicator compounds for that particular mixture.

3.5. "Dirt" – The term "dirt" is used in state rules at 329 IAC 10-3-1(1)(1), but is not defined in statute or rule. For the purpose of this policy, 'dirt' and 'soil' are considered synonymous terms. See 'Soil'.

3.6. "Endangered species" – Any species listed as endangered or threatened under rules of the Indiana Natural Resources Commission at 312 IAC 9-3-19, 312 IAC 9-4-14, 312 IAC 9-5-4, 312 IAC9-6-9, 312 IAC 9-9-4. (329 IAC 10-2-64)

3.7. "Flood plain" – The areas adjoining a river, stream, or lake that are inundated by the base flood. (329 IAC 10-2-75 and 329 IAC 10-2-22)

3.8. "Hazardous waste" – Hazardous waste as defined in the Code of Federal Regulations at 40 CFR 261 subpart B and Indiana Code at IC13-11-2-99.

3.9. “Karst physiographic feature” – Characteristic physiographic features present in karst terrains including any of the following: sinkholes, sinking streams, caves, large springs, blind valleys, grikes, karren, solution widened joints or bedding planes, loss of drilling fluid during core drilling, anastomosis and conduits of less than one meter but more than two and five-tenths (2.5) millimeters, and karst aquifers.

3.10. “Non-rule policy” - The term IDEM assigns to those policies identified in IC 13-14-1-11.5 as any policy that: A. Interprets, supplements, or implements a statute or rule; B. Has not been adopted in compliance with IC 4-22-2; C. Is not intended by IDEM to have the effect of law; and D. Does not apply solely to the internal IDEM organization (is not an administrative policy).

3.11. “Remediation Closure Guide” – IDEM’s Remediation Closure Guide (RCG) is an NPD describing selected approaches to investigation and risk-based closure of contaminated or potentially contaminated sites. Its purpose is to provide for consistent application of Indiana Code (IC) 13-12-3-2 and IC 13-25-5-8.5, which form the statutory basis for risk-based cleanup in Indiana.

3.12. “Screening levels” – Screening levels and, more specifically, the residential screening levels, can be found in Table A-6 in Appendix A: Screening Levels (also referred to as Screening Levels Table) of the IDEM Remediation Closure Guide (RCG).

3.13. “Soil” – Unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand or gravel as classified by the U.S. Natural Resources Conservation Service. For the purpose of this NPD, ‘dirt’ and ‘soil’ are considered to be synonymous terms. (40 CFR 268.2(k) [not inclusive])

3.14. “Solid waste" - As defined in 329 IAC 10-2-174:
(a) Has the meaning as set forth in IC 13-11-2-205(a).
(b) The following are examples of other discarded material:
(1) Ash residue.
(2) Contaminated sediments.
(3) Commercial solid waste.
(4) Construction/demolition waste.
(5) Hazardous waste.
(6) Household waste.
(7) Infectious waste.
(8) Liquid waste.
(9) Pollution control waste.
(10) Municipal solid waste.
(11) Regulated hazardous waste.
(12) Residential waste.
(13) Industrial process waste.

3.15. “Wetlands“ – Areas classified as jurisdictional wetlands or jurisdictional waters of the United States by the United States Army Corps of Engineers under the authority from the federal Clean Water Act, 33 U.S.C. 1344, and areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include (1) swamps, (2) marshes (3) bogs, and (4) similar areas. (329 IAC10-2-207 and IC 13-11-2-265.7)

4.0 ROLES

4.1 The Site Owner/Consultant/Operator or other person responsible for the soil shall:
Be responsible for conducting an investigation of the soils and the site or area where the soil will be removed to determine if the soil contains contaminants. This can include but is not limited to:

- Reviewing site records to determine previous uses of the property, including uses that may have adversely impacted the site. This could include, but is not limited to, records of ownership and taxation, property transfer disclosures, or descriptions of property use (i.e., Sanborn Maps.)

- Reviewing or inspecting the site to determine the presence of stained soil(s) or other indications of contaminated soil, if deemed necessary. During the record review or site inspection, conducting a characterization of the soil(s).
- Determining if the soil contains human introduced chemicals. This will likely require collecting and analyzing representative samples of the soil in accordance with SW846 or other accepted methods and standards.
- Inspecting for stained soils or other wastes and/or other indications of contamination during excavation.
- If present, determining if the concentration of the human introduced chemicals or contaminant in the soil are at levels greater than the RCG residential screening levels.
- Maintaining records/documentation used as a basis for determining the concentration of the human introduced chemicals in the soil.
- If human introduced chemicals are present, maintaining records of where and how much soil was placed on-site or where and how much soil was sent off-site.
- Ensuring that the soils containing any level of human introduced chemicals are not placed in an environmentally sensitive area.

4.2 Excavator/Transporter responsible for the relocation of soils shall:

- Ensure that the soils containing any level of human introduced chemicals are not placed in an environmentally sensitive area.

4.3 IDEM Compliance and Response Branch

- IDEM has been tasked with protecting the environment and shall be responsible for:
  a. Answering questions related to this NPD, and
  b. Investigating improper application of this NPD.

5.0 POLICY

This NPD is meant to aid in determining and explaining when, through the use of the RCG residential screening levels, soil containing detectable levels of human introduced chemicals is considered 'uncontaminated'. As 'uncontaminated' soil, the exclusion in 329 IAC 10-3-1(1) will apply according to the qualifications listed below.

<u>Use of Residential Screening Levels</u>

For excavated soils containing detectable amounts of human introduced chemicals, the residential screening levels provided in Table A-6 in Appendix A: Screening Levels (also referred to as Screening Levels Table) of the IDEM Remediation Closure Guide (RCG) should be used when the soils are:

- Not subject to RCRA hazardous waste regulatory requirements, and
- Going to be deposited on-site, or
- Used as fill on-site or off-site, or
- Managed in a way other than disposal at a municipal solid waste landfill

There are two residential screening levels in Table A-6; the "Migration to Groundwater" and the "Direct Contact" screening levels. The lower of the two screening levels must be used as the residential screening level when comparing the concentrations of the human introduced chemicals in the soil with the residential screening level.

<u>Placement in Environmentally Sensitive Areas</u>

In order to protect the environment, soils with any detectable levels of human introduced chemicals cannot be placed in environmentally sensitive areas.

Environmentally sensitive areas include the following locations:

- Areas of karst physiographic features.
- A wetland, floodway, or standing water, where the standing water reflects the water table.

Additionally, any placement of soil, on-site or off-site, could be subject to other regulations that include, but may not be limited to, the following regulations:

- 327 IAC 15-5 - Storm Water Run-Off Associated with Construction Activity.
- 327 IAC 15-6 - Storm Water Discharges Exposed to Industrial Activity.
- IC 14-28 - Flood Control Act (i.e., IC 14-28-1-22 Construction permits).
- 312 IAC 10 - Flood Plain Management (i.e., 312 IAC 10-4-1 License requirements for construction in a floodway).
- 312 IAC 10-2-39 - Unreasonable detrimental effects upon fish, wildlife, or botanical resources, and IC 14-28-1-22.
- Section 401 of the federal Clean Water Act - State Certification of Water Quality.
- 326 IAC 6-4 - Fugitive Dust Emissions.
- 326 IAC 6-5 - Fugitive Particulate Matter Emission Limitations
- IC 14-21 - Historic Preservation and Archeology.
- Section 404 of the federal Clean Water Act – Wetlands.
- The critical habitat of an endangered species as defined by the Code of Federal Regulations, 50 CFR 17.

Determination/Approval

At any given time, there are large numbers of excavations and large volumes of soil being excavated and moved throughout the state. Putting in place a formal process to require the review and assessment of every excavation by IDEM is not practical or an efficient use of IDEM's time. Therefore, this NPD is meant to be self-implementing.

The owner/operator will still be responsible for adhering to the statutory requirements, rules, and for following this NPD, but will not be required to obtain approval from IDEM.

Case-by-Case Site-Specific Levels

When an RCG screening level does not exist, facilities may develop a site-specific risk analysis to establish a site specific 'screening level'. If a case-by-case site-specific risk analysis is necessary, the owner/operator must submit a written proposal to the IDEM Solid Waste Compliance Section. A written approval from IDEM will be required before excavation may begin. The written proposal will be routed by the IDEM Solid Waste Compliance Section to the IDEM Office of Land Quality Science Services Branch, Risk Services Section.

More Information and/or Questions

If there are questions regarding the application of this NPD, please contact staff of the Solid Waste Compliance Section of IDEM's Office of Land Quality, at (317) 234-6923 or, toll free in Indiana, at (800) 451-6027, ext. 4-6923.

6.0 REFERENCES

6.1. Indiana Administrative Codes:

A. 329 IAC 3.1, Hazardous Waste Management Permit Program and Related Hazardous Waste Management

B. 329 IAC 10, Solid Waste Land Disposal Facilities

C. 329 IAC 11-3-1(1), Solid Waste Processing Facilities; Exclusions; general

6.2. Indiana Statutes:

A. IC 13-13, Department of Environmental Management

6.3 Agency Policies:

A. Remediation Closure Guide NPD (Waste-0046-R1)

B. Contained-In Determination NPD (Waste-0061)

7.0 Signatures

Thomas W. Easterly, Commissioner
Indiana Department of Environmental Management

12/24/14
Date

Bruce Palin, Assistant Commissioner
Office of Land Quality

3/13/14
Date

Carol Comer, Assistant Commissioner
Office of Legal Counsel and Criminal Investigations

4/8/2014
Date

This policy is consistent with agency requirements.

Quality Improvement Program
Office of Planning and Assessment
Indiana Department of Environmental Management

12-29-2014
Date

APPENDIX F

Agency for Toxic Substances and Disease Registry Fact Sheet

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

CHROMIUM
CAS # 7440-47-3

Division of Toxicology ToxFAQs™ February 2001

This fact sheet answers the most frequently asked health questions (FAQs) about chromium. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to chromium occurs from ingesting contaminated food or drinking water or breathing contaminated workplace air. Chromium(VI) at high levels can damage the nose and can cause cancer. Chromium has been found at 1,036 of the 1,591 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is chromium?

Chromium is a naturally occurring element found in rocks, animals, plants, soil, and in volcanic dust and gases. Chromium is present in the environment in several different forms. The most common forms are chromium(0), chromium(III), and chromium(VI). No taste or odor is associated with chromium compounds.

Chromium(III) occurs naturally in the environment and is an essential nutrient. Chromium(VI) and chromium(0) are generally produced by industrial processes.

The metal chromium, which is the chromium(0) form, is used for making steel. Chromium(VI) and chromium(III) are used for chrome plating, dyes and pigments, leather tanning, and wood preserving.

What happens to chromium when it enters the environment?

❏ Chromium enters the air, water, and soil mostly in the chromium(III) and chromium(VI) forms.
❏ In air, chromium compounds are present mostly as fine dust particles which eventually settle over land and water.
❏ Chromium can strongly attach to soil and only a small amount can dissolve in water and move deeper in the soil to underground water.
❏ Fish do not accumulate much chromium in their bodies from water.

How might I be exposed to chromium?

❏ Eating food containing chromium(III).
❏ Breathing contaminated workplace air or skin contact during use in the workplace.
❏ Drinking contaminated well water.
❏ Living near uncontrolled hazardous waste sites containing chromium or industries that use chromium.

How can chromium affect my health?

Chromium(III) is an essential nutrient that helps the body use sugar, protein, and fat.

Breathing high levels of chromium(VI) can cause irritation to the nose, such as runny nose, nosebleeds, and ulcers and holes in the nasal septum.

Ingesting large amounts of chromium(VI) can cause stomach upsets and ulcers, convulsions, kidney and liver damage, and even death.

Skin contact with certain chromium(VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium(VI) or chromium(III). Allergic reactions consisting of severe redness and swelling of the skin have been noted.

How likely is chromium to cause cancer?

Several studies have shown that chromium(VI) compounds can increase the risk of lung cancer. Animal studies have also shown an increased risk of cancer.

The World Health Organization (WHO) has determined that chromium(VI) is a human carcinogen.

The Department of Health and Human Services (DHHS) has determined that certain chromium(VI) compounds are known to cause cancer in humans.

The EPA has determined that chromium(VI) in air is a human carcinogen.

How can chromium affect children?

We do not know if exposure to chromium will result in birth defects or other developmental effects in people. Birth defects have been observed in animals exposed to chromium(VI).

It is likely that health effects seen in children exposed to high amounts of chromium will be similar to the effects seen in adults.

How can families reduce the risk of exposure to chromium?

❑ Children should avoid playing in soils near uncontrolled hazardous waste sites where chromium may have been discarded.

❑ Although chromium(III) is an essential nutrient, you should avoid excessive use of dietary supplements containing chromium.

Is there a medical test to show whether I've been exposed to chromium?

Since chromium(III) is an essential element and naturally occurs in food, there will always be some level of chromium in your body. There are tests to measure the level of chromium in hair, urine, and blood. These tests are most useful for people exposed to high levels. These tests cannot determine the exact levels of chromium that you may have been exposed to or predict how the levels in your tissues will affect your health.

Has the federal government made recommendations to protect human health?

EPA has set a limit of 100 μg chromium(III) and chromium(VI) per liter of drinking water (100 μg/L).

The Occupational Safety and Health Administration (OSHA) has set limits of 500 μg water soluble chromium(III) compounds per cubic meter of workplace air (500 $\mu g/m^3$), 1,000 $\mu g/m^3$ for metallic chromium(0) and insoluble chromium compounds, and 52 $\mu g/m^3$ for chromium(VI) compounds for 8-hour work shifts and 40-hour work weeks.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological Profile for Chromium. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

APPENDIX G

IDEM Emergency Response Quick Reference Sheet and Process Flow Diagram for Spills

GUIDANCE DOCUMENT

FEBRUARY 22, 2017

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Emergency Response Quick Reference Sheet

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

(317) 232-8603 • (800) 451-6027 **www.idem.IN.gov** 100 N. Senate Ave., Indianapolis, IN 46204

Contact numbers and evaluation techniques for environmental threats

PERSONAL SAFETY, ESPECIALLY YOURS, IS ALWAYS THE FIRST PRIORITY. Do not endanger yourself by entering hazardous environments. Stay upwind of spills and air releases. Never taste spilled materials. Never inhale smells to identify spills. Never touch unknown materials without proper Personal Protective Equipment. Be aware of highway, water and night- time safety issues. The burden of providing information and performing spill responses ALWAYS falls on the spiller, not you. Please let us know if you need additional guidance or do not feel comfortable being involved in a situation.

Contact Telephone Numbers

State Contacts:

IDEM Emergency Response, 24 hour spill reporting	888-233-7745
IDEM, general information	800-451-6027
IDEM, complaints	800-451-6027 ext. 2-4464
IERC (Indiana Emergency Response Commission)	317-232-4679
ISFM (Indiana State Fire Marshal)	317-232-2222
ISDH (Indiana State Department of Health)	800-382-9480
IDNR (Indiana Department of Natural Resources), customer service center	877-463-6367
OISC (Office of the Indiana State Chemist)	765-494-1492
IOSHA (Indiana Occupational Safety and Health)	317-232-2655
Illinois Environmental Protection Agency, 24 hours spill reporting	800-782-7860
Michigan Department of Environmental Quality, 24 hour spill reporting	800-292-4706
Ohio Environmental Protection Agency, 24 hour spill reporting	800-282-9378
Kentucky Department of Environmental Protection, 24 hour spill reporting	800-928-2380

Federal Contacts:

NRC (National Response Center)	800-424-8802
U.S. EPA Region V, spill reporting	312-353-2318
Agency for Toxic Substance and Disease Registry	800-232-4636
U.S. Coast Guard, Marine Safety Office, Louisville, KY	502-969-4006
U.S. Coast Guard, Marine Safety Office, Chicago, IL	773-775-2451
FBI (Federal Bureau of Investigations), Indianapolis Field Office	317-595-4000

Other Contacts:

Indiana 811, Know what's below. Call before you dig.	811 or 800-382-5544
Chemtrec, chemical data information	800-424-9300

Quick Reference Information Sheet for assessing spills and threats to water

CONTACTS

1. **Spiller information**: name, address, contact numbers
2. **Land owner information** (if different): name, address, contact numbers
3. **Spill location** (if different): facility name, address, directions, contact numbers
4. **Other contacts**: for lease holders, contractors, response agencies

CIRCUMSTANCES

5. **Spilled material/description**. Safety Data Sheet. What is it used for?
6. **Date and time** of spill (when found vs. when spill likely began)
7. **Cause** of spill.
8. Has the spill led to threats of **human** safety? Any evacuations? Any injuries?
9. Has the **release stopped?** Can it be stopped without compromising safety?
10. Was there an immediate or any **spill response**? Many fire and street departments initially dam or absorb spills with kitty litter or sand. Spillers are ultimately responsible for initiating and completing a spill response.

SPILL CHARACTERISTICS

11. Describe **area affected**, estimate square feet or miles of affected water.
12. Describe **amount spilled**, amount contained, and capacity of containers or vessels.
13. **Amount recovered** or why no recovery (very few exceptions).

SPILLS TO WATER

14. Are there **surface waters** nearby or involved? Roadside ditches, streams, ponds?
15. Are the surface waters **standing, flowing, discharging**? To where?
16. Do you see **fish** or other animals in or near the water? Are they alive, stressed, dead?
17. Are there ditches, low areas, storm drains inlets, field tile risers to water?

SPILLS TO SOIL

18. Are there **sandy or gravelly native soils**, backfill areas, dry wells nearby/involved?
19. Are there **water wells, pipelines, phone lines, or utilities** that spills might follow?

SPILLS TO TILES, SEWERS, STORM DRAINS

20. For impacted **storm drains/storm sewers**, are there signs of the spilled material in **manholes or catchment basins?** Check where the storm drain exits into surface water. Can spilled materials be safely contained and collected from catchment basins or storm drain outlets before entering water?
21. For impacted **combined or sanitary sewer** systems, contact the wastewater utility. Will the material be safely treated? Will it upset or flow through the plant? Can they safely separate and contain it without hurting their plant? Are they experiencing any bypass events where spilled materials may discharge directly to water? Check bypass outfalls for spilled material. **Call IDEM Emergency Response Section at *888-233-7745* immediately for upset plants**. Non-emergency treatment plant questions will be advised during normal business hours by calling IDEM, Office of Water Quality (OWQ), at 317-232-8670.

Discovery of Contaminated Materials or

Unknown Underground Storage Tanks (USTs) in **INDOT Owned Right-of-Way**

INDOT Office of Environmental Services (ES)
Site Assessment and Management (SAM)
Team Lead: 317-232-5113

Discovery of Suspicious Material
*staining, chemical odor, free phase product, sheen on surface of water, etc.

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Notify Project Engineer/Project Supervisor

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Collect Information
*Location of encountered contamination (address, parcel #, intersection information, etc.)
*Date and Time (when impacts were encountered)
*Cause of spill (if known)
*Number, estimated size, and material of encountered USTs (example: Two 10,000 gallon steel USTs)
*Type and visual estimated amount of impacted media (example: Petroleum impacted soils and 100 square feet)
*Nearby receptors (example: utility corridor, ditches, waterways or waterbodies, and/or water wells)

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Call INDOT ES SAM Unit
1) INDOT ES can call IDEM to report spill while an environmental subcontractor is being obtained
OR
2) Hire an environmental subcontractor who will then report the spill to IDEM

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IDEM Spill Line
888-233-7745
Record Incident Number assigned by IDEM

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Add pay items to contract as a change order

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Final Reporting
1) Environmental Subcontractor will generate a report including:
   a. Summary of activities and site conditions
   b. Tables
   c. Figures
   d. Boring Logs (if applicable)
   e. Analytical data

The report should be submitted to INDOT ES for review and approval and then submitted to IDEM

Personal Safety is ALWAYS first priority

Do not endanger yourself by entering hazardous environments. Stay upwind of spills. Never taste spilled material or inhale smells to identify spills.

INDOT ES Responsibilities
*work alongside the environmental subcontractor to develop a sampling plan
*review analytical results
*assist with determining appropriate PPE needed based on the site conditions
*assist with soil disposal recommendations based on the site conditions
*review and approve soil management plans (if applicable)
*review and approve environmental documents.