

**BUREAU OF ENVIRONMENTAL REMEDIATION/REMEDIAL SECTION
GUIDANCE
SCOPE OF WORK (SOW) FOR A PRELIMINARY
INVESTIGATION**

BER POLICY # BER-RS-017

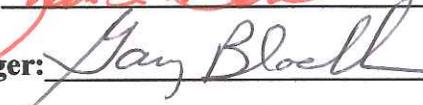
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Section Chief: 

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REVISIONS

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Date: May 1996

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INTRODUCTION

The Preliminary Investigation (PI) is an investigation undertaken by a potentially responsible party (PRP) or responsible party (hereinafter referred to as the “Respondent”) to establish the groundwork or foundation for future activity at a site. A PI may be beneficial when readily available data are not necessarily considered current, or when the Respondent desires to verify or validate existing data that are available. Ultimately the data collected during the PI provide the framework for determining future assessment needs, as well as evaluation of cleanup alternatives at a site. PI activities must be completed with KDHE—BER oversight under a formal legal instrument with the Respondent (e.g., consent order, environmental agreement, etc.). PI activities should be considered on a case-by-case basis and may not be warranted in certain situations or for every type of site. KDHE-BER will make the final determination if a PI is appropriate for a site. The primary objectives of the PI are variable depending on the specific situation, but generally include the following objectives:

- To determine and document historical use and ownership/operational history of the site;
- To identify and evaluate the known and suspected primary origin(s) or source(s) of contamination at the site;
- To delineate and/or characterize the nature and extent of contamination for contaminants of concern (COCs) for affected and/or potentially affected environmental media within the subject property boundaries; please note that evaluation of secondary contamination issues may also be applicable (i.e., mobilization of naturally-occurring elements/substances in the presence of site-related contamination, degradation byproducts, etc.)
- To confirm or evaluate the potential for contaminant migration beyond the subject property boundaries for all known and suspected COCs for all affected or potentially affected environmental media;
- To identify and evaluate all potential human and ecological receptors adversely affected by the COCs associated with the site; and,

- To evaluate the need for interim measures for source control purposes and/or to mitigate imminent threats to human health or the environment consistent with KDHE—BER Policy #BER-RS-029 (*Policy and Scope of Work for Interim Measures*).

Notwithstanding, if there is uncertainty in site history or potential release mechanisms, a broader, more robust sampling and analytical program should be evaluated for the purposes of streamlining future assessment needs. Furthermore, the more up front identification/quantification that is completed, the less the overall future assessment needs (during the CI). KDHE—BER encourages implementing parties to participate in scoping/planning meetings with KDHE—BER early in the PI process to help ensure that the PI satisfies the investigation objectives.

PI PROCESS

This guidance and scope of work outlines the primary activities to be completed as part of the PI process. At KDHE—BER's discretion, this general process may be streamlined and focused to best serve project needs.

STEP 1 PI Work Plan—The first step in the PI process is development and submittal of the PI Work Plan for KDHE—BER review and approval. KDHE encourages a scoping meeting between KDHE, the implementing party, and the Respondent's consultant prior to development of the Work Plan. The purpose of a scoping meeting is to promote communication between all parties to ensure the investigative objectives are efficiently and effectively met. KDHE encourages communication upfront, as well as throughout the entire PI process. The PI Work Plan must be approved by KDHE-BER before any investigation activities commence. The PI Work Plan shall include the following project- or site-specific elements: 1) site assessment/evaluation plan (field sampling plan-equivalent); 2) quality assurance project plan; and, 3) health and safety plan. A detailed PI working schedule, presented graphically in the form of a milestone chart (e.g., Gantt chart) to show the duration and interdependencies of the various activities should be included in the PI Work Plan.

The PI Work Plan shall include a review of available information and documented findings such as: a description of physical location, including legal description, and street address; a complete summary of ownership and operational history; facility layout identifying operational features; chemical/waste management/storage/disposal areas or units (e.g., vapor degreaser, sumps, etc.); a description of all past and present activities/operations conducted (i.e., nature of business operations, chemicals used, permits obtained, wastes generated, chemical and waste disposal methods, and records or descriptions of all known discharges, releases, spills, etc.); a description of the physical site characteristics (e.g., geology, hydrogeology, surface hydrology, land use, etc.); a detailed description of the type(s) of contaminants/wastes involved, release characteristics and contaminated media; a discussion of known or suspected source areas; and identification of past environmental investigations performed at the Site.

A detailed description of field activities proposed to satisfy the primary objectives of the PI must be included in the PI Work Plan. Depending on the objectives of the PI effort, PI activities may include any of several components, including but not limited to the following: on-site investigation of waste, soil, groundwater, surface water, sediment, or air; geotechnical evaluations; inspection and tightness testing of tanks, pipelines, sewers, etc.; geophysical surveys; land elevation surveys; personnel interviews; etc. All data gathered during site characterization must be included in the report. With KDHE—BER’s advance approval, the PI may be implemented in a phased manner; however, the expectation is that the total duration of the effort be limited to the extent possible, generally within six months to a year.

STEP 2 Implementation— Once the PI Work Plan has been approved by KDHE, the second step in the PI process is implementation of the KDHE-approved Work Plan per the specified working schedule. All work performed shall be consistent with activities and procedures proposed in the KDHE-approved Work Plan and consistent with KDHE policies and guidance documents. The Respondent or their consultant must notify the KDHE Project Manager of field work by completing a “Field Activities Notification Form”, a minimum of seven (7) days prior to initiation of work. The form is available on KDHE’s web site at: http://www.kdheks.gov/remedial/fieldactivities_notification.html.

KDHE provides oversight throughout the implementation of the investigative process. A KDHE project manager may be present onsite for a portion or all of the field activities, depending on the site specific circumstances or objectives. Oversight during the implementation step may include, but not be limited to, field oversight, collection of split samples, site reconnaissance (including the collection of photographic documentation), quality assurance/quality control audits, and/or field screening. Furthermore, it is imperative that project specific documentation be recorded to support the approved procedures (i.e., field sampling plan, quality assurance project plan, etc.). All activities must be documented in a field notebook, with photographic documentation as appropriate. Detailed field notes are required to document the activities performed, significant findings and deviations from the approved work plan. All field deviations must be approved by the KDHE Project Manager prior to implementation.

STEP 3 PI Report— Once the PI field work is complete, the third step in the PI Process is development of the PI Report. The PI Report shall present the results of the PI including, but not limited to, the following:

- 1) Summary of site investigation/evaluation work completed with relevant presentation of the data in figures and tables (including appendices with all ancillary documentation such as field notes; photographs; chain of custody records; laboratory reports; survey report; data validation summary; etc.).
- 2) Description of all COCs, including a discussion and summary of data collected (with appropriate quality assurance/quality control (QA/QC) and data validation information);

- 3) An evaluation of possible exposure pathways including areal extent of all COCs;
- 4) Comparison of data collected to appropriate threshold levels (e.g., Tier 2 screening levels in the *Risk-Based Standards for Kansas RSK Manual*); and,
- 5) Conclusions and recommendation(s) for further investigation or interim measure activities.

Upon successful completion of the PI Report, KDHE—BER and the Respondent shall meet (either face-to-face or via telecommunication) to determine a path forward to address any environmental contamination identified at the site, including further site investigation and cleanup. Following the meeting KDHE-BER will determine the next step in the process.