



## Remedial Investigation and Feasibility Study Process

### Introduction

Northern Indiana Public Service Company (NIPSCO) and Brown Inc. (Brown) are conducting an investigation of the nature and occurrence of coal combustion by-products in the Area of Investigation, located in the vicinity of the Town of Pines, Indiana. *Pines Update* No. 6 (February 2005), available at [www.pinesupdate.com](http://www.pinesupdate.com), provided a general description of the steps of the investigation process being conducted under an Administrative Order on Consent with the US Environmental Protection Agency (USEPA). That Update also provided a more detailed description of one particular step, the Work Plan. This *Pines Update* describes the Remedial Investigation/ Feasibility Study (RI/FS) process in more detail.

### What is the overall RI/FS process?

RI/FS activities in the Pines Area of Investigation follow the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This Act (and its corresponding guidance) provides procedures for environmental investigations. The figure to the right shows the progression of steps in the investigation process, which include:

- Remedial Investigation
- Risk Assessments
  - Human Health Risk Assessment
  - Ecological Risk Assessment
- Feasibility Study

### The Remedial Investigation

The Remedial Investigation (RI) is the step in the process where environmental samples (i.e., soil, groundwater, etc.) are collected and analyzed.

The RI is a flexible process tailored to specific circumstances of a location. For the Pines Area of Investigation, it involves determining where constituents derived from coal combustion by-products are present in the soil, groundwater, etc. The levels of these constituents are also determined for comparison purposes. Where and how constituents derived from coal combustion by-products may be moving/migrating is also evaluated.

Information will be collected, evaluated, and pieced together much like the pieces of a puzzle, to give a complete picture of conditions at the Area of Investigation.

The tasks in the RI step of the process are as follows:

*Develop Preliminary Conceptual Site Model (CSM)* – In this first task, a picture of the environment based on what is known about the hydrology, geology, hydrogeology, and physical setting and characteristics of the Area of Investigation is gathered.

*Work Plan* – In this second task, the Work Plan specifies the approach for the field investigation and specifies environmental samples and other data to be collected.

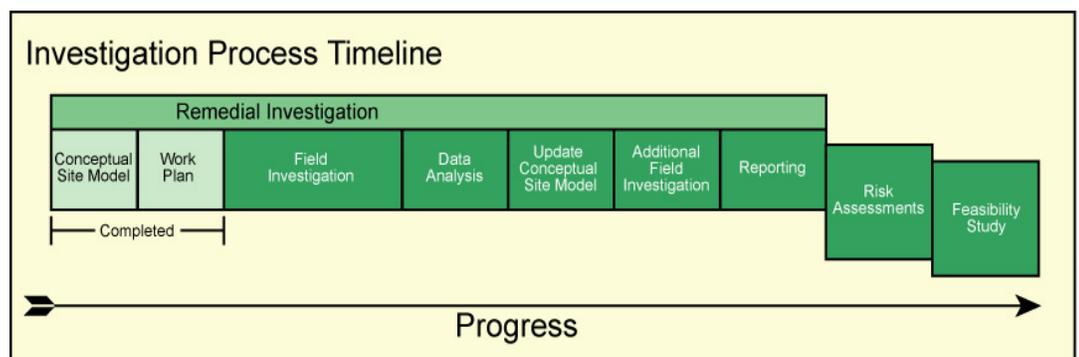
*Field Investigation* – Once the USEPA approves the Work Plan, it is implemented. This includes collecting environmental samples for analysis, and collecting other data as specified in the Work Plan (such as groundwater levels).

*Data Analysis and Management* – Data collected during the field investigation are analyzed and evaluated.

*Update Conceptual Site Model* – Based on the information from the field investigation and the data analysis, the CSM is updated.

*Additional Field Investigations* – This task may be necessary if more data and information are needed. A work plan may be needed for an additional field investigation.

*Reporting* – Once sufficient data and information are collected and analyzed, the RI Report is prepared. The RI report will present the collected data and information and describe the environmental conditions in the Area of Investigation. This is the final task of the RI.



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### ***The Risk Assessments***

Upon USEPA approval of the RI Report, the Human Health and Ecological Risk Assessments are conducted. These assessments are based on the information presented in the RI Report. They are conducted to assess the potential current and future risk to human health and the environment associated with potential exposure/contact to constituents derived from coal combustion by-products.

### ***The Feasibility Study***

The results of the risk assessments are used to determine the need for and scope of a Feasibility Study (FS). In the FS, the results of the RI and risk assessments will be interpreted, regulatory requirements will be considered, and objectives will be identified.

Once these objectives are identified, potential alternatives (including the no action alternative) will be identified, evaluated, and compared and contrasted against each other.

### ***What happens after the RI/FS?***

Once the RI/FS reports (including the risk assessment reports) have been submitted and approved, USEPA will identify what actions, if any, will need to be taken in the Area of Investigation.

### ***Where are we in the process and what is next?***

The preliminary CSM was provided in the Site Management Strategy (see *Pines Update* No. 2), which was approved in November 2004. The RI/FS Work Plan was approved by USEPA on August 19,

2005. The Work Plan will now be finalized, and the next task of the RI process, the RI Field Investigation, will begin. The timeline for the Field Investigation for the Pines Area of Investigation includes time to plan the field effort, obtain property access agreements, conduct non-invasive investigations, and perform approximately a year and a half of data collection. As the activities are being conducted or upon completion of them, if it is determined that additional data or information is needed, it will be collected in a subsequent phase of field investigation. A draft of the RI Report will then be prepared and submitted to USEPA within 90 days of completing the RI Field Investigation.

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### **Our Commitment....**

NIPSCO and Brown are committed to keeping you informed on the progress of the municipal water service extension and the investigation of the Pines Area of Investigation. Look for future *Pines Updates* (such as this one) to update you to our progress. We have also created a website to provide continual updates on the project:  
**[www.pinesupdate.com](http://www.pinesupdate.com)**

Please contact the Communications Coordinator at the address listed below to be placed on the mailing list.  
**Communications Coordinator,  
Brown Inc.  
720 W. US Hwy 20  
Michigan City, IN 46360**

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Communications Coordinator  
720 W. US Hwy 20  
Michigan City, IN 46360