

May 27, 2014

Mr. Jay Rich Arkansas Department of Environmental Quality 5301 Northshore Drive North Little Rock, AR 72118

Re: Response to ADEQ Correspondence Dated May 12, 2014
Area 1 Soil Investigation Work Plan
Whirlpool Corporation
Fort Smith, Arkansas
EPA No. ARD042755389
AFIN No. 66-00048
CAO LIS 13-202

Dear Mr. Rich:

ENVIRON International Corporation (ENVIRON), on behalf of Whirlpool Corporation, is submitting this soil investigation work plan for the area of soil contamination in accordance with your correspondence dated May 12, 2014. Whirlpool and ENVIRON appreciate the Arkansas Department of Environmental Quality's (ADEQ's) ongoing engagement and support in the implementation of the remedy under the Adaptive Remedy Work Plan submitted to ADEQ on February 24, 2014.

As ENVIRON initiated the implementation of the remedial actions over the past several months, we followed the prescriptive process inherent in the adaptive remedy approach of gathering additional data based upon the baseline of facts to supplement the information previously available when the RADD was issued and the February Work Plan was submitted to ADEQ. By design, this ongoing adaptive remedy anticipates continually gathering and refining further data and then adjusting remedial actions based on the new findings. This process of fact gathering and adjustment is a proven approach making the remedial actions more effective, both on and off the Whirlpool property.

This additional investigative work will continue the science-driven process of each step building on the preceding activities in order to improve the body of available information and enable us to develop the most effective remedial plans. As outlined in the February 24, 2014, Work Plan, extensive field screening of the site was conducted from September 2013 through the end of January 2014. As part of this work, Membrane Interface Probe (MIP) testing, which involves the use of a sensor designed for preliminary screening, indicated a need for additional sampling on the Whirlpool property. Following standard protocol, soil and groundwater samples were collected at the end of December and January to confirm the field screening results. Over the next several weeks the samples were analyzed in the lab. The results were validated and incorporated into the site understanding and discussions about this data began with ADEQ in April once that integration had been completed. As outlined in the RADD, the results of this

Page 2 May 27, 2014

investigational work were publicly reported in the First Quarter 2014 report, which was submitted on May 15, 2014, a few days after your letter of May 12, 2014. The information obtained through this process will provide greater clarity regarding the actions that need to be taken in Area 1.

## SOIL INVESTIGATION WORK PLAN

The requested soil investigation will encompass soils along the former linear drainage feature to further characterize the extent of soil impacts indicated by the MIP screening data from this area. The data from this investigation will be utilized to further enhance the characterization of Vadose Zone soil and saturated soil in the Basal Transmissive Zone to optimize a supplemental remedy for this linear drainage feature, as well as subsequent ISCO injection measures in Area 1.

Specifically, 15 soil probes will be completed to investigate the linear drainage feature. Soil probes will be positioned beginning at the eastern extent of the drainage feature near MW-37 and continuing along the drainage feature at 60 foot intervals to a location at or near the western edge of the drainage feature (Figure 1). At each investigation interval, soil probes will be performed both within the center of the drainage feature and at locations approximately 15 feet north and south of the drainage feature (i.e. three soil probes at each investigation location along the linear drainage feature).

Soil probes will be performed with direct push technology. The soil probes will be continuously sampled to probe refusal at or near the surface of shale bedrock expected to be encountered between approximately 26 feet and 30 feet below ground surface (bgs). Soil samples will be field screened with a photoionization detector (PID) for the presence of volatile organic vapors. Two soil samples will be selected from each boring consisting of one soil sample from the Vadose Zone soil selected from the depth exhibiting the highest field screening measurement in the respective boring, and one saturated soil sample from the Basal Transmissive Zone also selected from the depth exhibiting the highest field screening measurement. Laboratory analyses will consist of analyses of volatile organic compounds (VOCs) using EPA Method 8260.

## **SCHEDULE**

The second round of ISCO injection in Area 1 will commence today and continue through June 6, 2014, and performance monitoring will continue through June and July. The investigational field work for Area 1 is scheduled to commence the week of June 23, 2014, and last approximately one week while ISCO performance monitoring continues in Area 1. Laboratory analysis will require three to four weeks to complete. Therefore, data is anticipated to be available the week of July 28, 2014.

-00000-



If you have any questions or comments please contact me at your earliest convenience.

Sincerely,

**ENVIRON International Corporation** 

Michael F. Ellis, PE

Principal

**LIST OF ATTACHMENTS** 

Figure 1: Area 1 Detail



