

Mr. Mostafa Mehran
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

**RE: Response to May 20, 2015, ADEQ Correspondence
Fourth Quarter 2014 Progress Report
Whirlpool Corporation
Fort Smith, Arkansas
EPA No. ARD042755389
AFIN No. 66-00048
CAO LIS 13-202**

Dear Mr. Mehran:

Date June 25, 2015

Ramboll Environ, on behalf of Whirlpool Corporation, is submitting this response to comments in your May 20, 2015, (received May 26, 2015), comment letter on Whirlpool's response dated May 5, 2015, regarding the Fourth Quarter 2014 Progress Report. Arkansas Department of Environmental Quality (ADEQ) comments are provided in italics below and the respective response follows.

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Section 3, Review of Activities Completed, Fourth Quarter 2014, First paragraph, Third sentence:

Based on the information provided, new wells were only tested for Volatile Organic Compounds. It may not be necessary to sample all the wells for all Monitored Natural Attenuation (MNA) Parameters once baseline trends have been established. However, new wells should be sampled for MNA parameters until proposed changes to the monitoring parameters and frequency are established. This matter was agreed upon in the meeting conducted between ADEQ and Whirlpool representatives on April 17, 2015. Section 10B of the Remedial Action Decision Document dated December 2013 requires monitoring wells to be sampled for both contaminants of concern and MNA parameters. A minimum of four quarters of data should be collected and analyzed in order to determine whether any seasonal variations exist. Please include data from new wells in the future reports.

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Ramboll Environ Response: All monitoring wells identified in the December 2013 Remedial Action Decision Document (RADD) were sampled for MNA parameters and volatile organic compounds (VOCs) as required. New monitoring wells consist of the following wells with the respective number of groundwater monitoring events and monitoring parameters (monitoring through April 2015):

- MW-81 and MW-82 installed in May 2014 in Area 3 and have been sampled for VOCs during five monitoring events and MNA parameters during the first quarter of 2015;

- MW-83 and MW-84 installed in May 2014 in the neck area and have been sampled for VOCs during five monitoring events and MNA parameters during the first quarter of 2015;
- MW-85 and MW-86 installed in May 2014 in Area 1 and have been sampled for VOCs during five monitoring events and MNA parameters during the first quarter of 2015;
- MW-87 through MW-91 installed in June 2014 at the northeast corner of the former manufacturing building and have been sampled for VOCs during four monitoring events and MNA parameters during the first quarter of 2015;
- MW-92 through MW-95 and MW-172 installed in October 2014 immediately south of Area 1 (MW-172 is in Area 1) and have been sampled for VOCs during three monitoring events; and
- MW-96 through MW-99 installed in October 2014 on the Boys & Girls Club property and have been sampled for VOCs during three monitoring events.

Whirlpool respectfully disagrees that all wells must be monitored for VOCs and MNA parameters. Monitoring wells MW-81 through MW-86 were installed within or immediately adjacent to treatment areas where in-situ chemical oxidation (ISCO) was performed. Performance of MNA monitoring at these locations is not recommended since the ISCO process interferes with useful MNA parameters. In addition, several existing wells are adjacent to the new monitoring wells and MNA parameters are monitored in these wells (i.e. IW-77 in Area 3 is adjacent to MW-81 and MW-82; MW-33, MW-34, MW35R and MW-65 in Area 2 are located near MW-83 and MW-84; and MW-25 in Area 1 is adjacent to MW-85 and MW-86). Whirlpool is in the process of developing a scientifically based groundwater monitoring program that will support the long term monitoring needs focusing on monitoring “key” wells in the most efficient manner. The sampling program planned for the third quarter monitoring event will mimic the sampling completed during the second quarter event in 2015 (April 2015) and will consist of VOCs and MNA parameters for the 56 plume boundary, onsite and offsite wells specified in the 2013 RADD, as well as supplemental VOC monitoring at 31 wells to gather information necessary to evaluate ISCO, plume separation, shallow groundwater and potential impact at the Boys and Girls Club (NE corner wells). The third quarter monitoring event is scheduled to commence during the week of July 20, 2015.

As discussed at the April 17 Meeting, a formal request to modify the groundwater monitoring program will be submitted under separate cover since background conditions for various MNA parameters have been established for the north, south and northeast plumes at the site.

Section 3, Review of Activities Completed – Fourth Quarter 2014, Shallow Offsite Groundwater Investigation and Vapor Point Investigation, Second paragraph, Second sentence:

No evidence was provided to support the assertion that groundwater flow would be upward from the basal aquifer to the silty-sand interval. Comparisons should be made between groundwater elevations in deep wells and associated shallow wells to determine the direction and magnitude of the vertical hydraulic gradient. This comparison should be made on a quarterly basis in order to evaluate both vertical migration and seasonal variation. Please include this comparison in future reports.

Ramboll Environ Response: The deeper ¾ inch diameter monitoring wells are constructed with wells screens connecting the basal aquifer and the above shallow silty sand layer in some wells. The basal aquifer is semi-confined and under pressure; therefore, pressurized water (approximately five feet of head or more) is present in the well screen in the shallower zone. The

¾ inch wells are currently being replaced with 2 inch diameter permanent wells with wells screens completed in the basal transmissive zone in accordance with the Offsite Shallow Groundwater Investigation Work Plan approved by ADEQ on January 26, 2015 (work commenced on June 22, 2015). Whirlpool will continue to measure water levels as required by the on-going monitoring program.

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Yours sincerely



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