

## VIA EMAIL

Mr. Clay McDaniel  
Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118

**RE: RESPONSE TO ADEQ CORRESPONDENCE RECEIVED JUNE 12, 2025  
AND AUGUST 15, 2025  
Whirlpool Facility – Fort Smith, Arkansas  
EPA No. ARD042755389  
AFIN No. 66-00048  
CAO LIS 13-202-001**

Dear Mr. McDaniel:

September 12, 2025

We appreciate Arkansas Department of Energy and Environment, Division of Environmental Quality's (ADEQ) reviewing and providing comments on the 2024 Annual Report<sup>1</sup> and 2025 Semi-Annual Report<sup>2</sup> prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) for the former Whirlpool facility located in Fort Smith, Arkansas. Comments on these reports prepared by ADEQ were received on June 12, 2025<sup>3</sup> and August 15, 2025,<sup>4</sup> respectively.

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Ramboll, on behalf of Whirlpool Corporation, has prepared the following responses to address each of ADEQ's comments.

**June 12, 2025 Comment Letter Responses**

**Comments 1 and 3:** Section 4.1.1 North Plume Analytical Results and Section 4.1.2 North Plume Discussion of Results: ...ADEQ agrees that the introduction of additional carbon substrate is needed to control further expansion of the north plume.

**Response:** This will be addressed through the implementation of the ADEQ approved North Plume injection work plan, which is currently planned for Spring 2026, pending final coordination of activities with the affected stakeholders.

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<sup>1</sup> Ramboll. 2025. 2024 Annual Report, Whirlpool Facility, Fort Smith, Arkansas. February.

<sup>2</sup> Ramboll. 2025. 2025 Semi-Annual Report, Whirlpool Facility, Fort Smith, Arkansas. July.

<sup>3</sup> Arkansas Division of Environmental Quality, Office of Land Resources. 2025. 2024 Annual Report dated February 2025, Whirlpool Corporation, Fort Smith, Arkansas, EPA ID No. ARD042755389; AFIN 66-00048; CAO LIS 13-202-001. June 12.

<sup>4</sup> Arkansas Division of Environmental Quality, Office of Land Resources. 2025. 2025 Semi-Annual Report dated July 2025, Whirlpool Corporation, Fort Smith, Arkansas, EPA ID No. ARD042755389; AFIN 66-00048; CAO LIS 13-202-001. August 15.

**Comment 2:** Section 4.1.2, North Plume Discussion of Results, VOC Discussion, first paragraph: Following in-situ chemical reduction (ISCR) treatments in 2018 plume boundary monitoring well MW-194 displayed a decreasing TCE trend reaching below RAL. However, since 1H2022 the trichloroethene (TCE) concentrations have increased with the results from 2023 and 2024 exceeding the remedial action level (RAL). An additional monitoring well is needed downgradient of MW-194 to define the plume extent. (Please see comment #1 above.)

**Response:** Whirlpool agrees that TCE concentrations in water collected from MW-194 have slightly exceeded the TCE remedial action level (RAL) of 5 micrograms per liter ( $\mu\text{g/L}$ ) in recent sampling events (max detection of 9.3  $\mu\text{g/L}$  in April 2024). The planned injections for the North Area (see response to comment 1) includes using MW-194 as a downgradient remedy performance monitoring location. Whirlpool proposes to first implement the North Area work plan, monitor the response at MW-194, and then evaluate the need for installation of an additional monitoring well.

**Comments 4 and 7:** Section 4.3.3 South Plume Stability and Section 7.3 Offsite Investigation Results and Discussion: ... [South Plume ISCR] work plan must include the placement of a monitoring well west (down-gradient) of MW-207 and a treatment to prevent further expansion of the chlorinated ethene plume to the southwest.

MW-207 and HP-36 both have TCE concentration above the RAL. Please submit a work plan to define the limits of the chlorinated ethene plume to the southwest down-gradient of HP-36.

**Response:** As discussed during our in-person meeting on July 23, 2025, Whirlpool proposes to return to the southwest off-site area and install a temporary well in the vicinity of the 2024 boring location HP-36 to confirm prior results. TCE was detected in groundwater collected from HP-36 at 6.59  $\mu\text{g/L}$  in June 2024 (TCE RAL is 5  $\mu\text{g/L}$ ). The confirmation sample results will be used in the evaluation of additional work downgradient of this location.

The proposed temporary well will be installed using a prepack filter screen, developed similar to a permanent monitoring well, and then sampled for volatile organic compounds after formation recovery from development activities. All means and methods for installation and sampling of the temporary monitoring well will be in accordance with the Southwest Investigation Work Plan<sup>5</sup> dated June 1, 2022, and approved by ADEQ on July 5, 2022<sup>6</sup>. As such, no additional work plan is anticipated to be prepared for this effort. This temporary well is tentatively scheduled for installation on September 25-26, 2025.

**Comment 5:** Section 5.2.2 – ISCR Remedial Effectiveness: It should also be noted that at TMW-34 total organic carbon increased from ND to 8.3 mg/l (well within the desired range of 5-10 mg/l). Low level detections of vinyl chloride (VC) and ethene may be the result of chlorinated ethene degradation by aerobic bacteria. DEQ recommends complete QuantArray-Clor analysis in selected monitoring wells,

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<sup>5</sup> Ramboll. 2022. 2022 South Plume Investigation Work Plan, 6500 Jenny Lind Road, Former Whirlpool Facility - Fort Smith, Arkansas, EPA No. ARD042755389, AFIN No. 66-00048, CAO LIS 13-202-001. June 1.

<sup>6</sup> Arkansas Division of Environmental Quality, Office of Land Resources. 2022. Investigation Work Plan Submittals dated June 1, 2022, Whirlpool Corporation, Fort Smith, Arkansas, EPA ID No. ARD042755389; AFIN 66-00048; CAO LIS 13-202-001. July 5

such as TMW-34, to determine the populations of aerobic bacteria that may be active and could account for the low-level detections of lesser chlorinated ethenes.

**Response:** The next sampling event planned to include microbial testing is currently scheduled for October 2025. Microbial testing has been performed by Microbial Insights via their CENSUS qPCR test. This is the same laboratory that performs the QuantArray-Chlor testing. Whirlpool will request the QuantArray-Chlor microbial test for groundwater collected from MW-215 and TMW-34 during the October 2025 annual sampling event. Results from this testing will be assessed and provided within the annual report scheduled for submission to ADEQ in February 2026.

**Comment 6:** Section 5.2.2, ISCR Remedial Effectiveness, East Plume, last paragraph, last sentence: Please submit a work plan to reduce the chlorinated ethene concentrations in off-site groundwater that already exists down-gradient of the East Plume ISCR treatment area.

**Response:** As discussed during our in-person meeting on July 23, 2025, Whirlpool proposes to conduct additional post remedy performance monitoring before committing to additional remedy actions. The March 2023 Updated Remedy Work Plan<sup>7</sup> presented a Site-wide remedy approach that includes groundwater treatment zones along property boundaries or plume fronts and monitored natural attenuation (MNA) for downgradient impacts. The East Area injection program was implemented along the eastern property boundary for the Site and was completed in October 2024 (i.e., less than a full year ago as of this response). Whirlpool proposes to continue review of analytical data collected as part of the East Area performance monitoring program through at least the April 2026 semi-annual groundwater sampling event (i.e., approximately 1 ½ years post-remedy implementation). Contingent remedy actions will be considered and proposed to ADEQ in the event groundwater contaminant trends are not improved by the 2024 injections.

**Comment 8:** Table 4, Summary of Monitoring Well Static Water Level Measurements: Monitoring well RW-1 is missing from the table. Please ensure this information is incorporated into the First Half 2025 Progress Report.

**Response:** While groundwater collected from RW-1 is voluntarily sampled by Whirlpool for analytical testing (i.e., installed after the 2013 & 2015 RADDs and 2016 Revised Groundwater Monitoring Plan), this well has not historically been part of the water level measurement network of wells. This well can be added to the water level measurement well network, however there are eight other wells already monitored for this purpose within 100 feet of RW-1. The addition of RW-1 to the water level measurement network of wells is unlikely to influence the interpretation of water level data.

#### **August 15, 2025 Comment Letter Responses**

**Comment 1:** Section 4.1.2, South Plume Discussion of Results, first paragraph, fifth bullet: MW-206 trichloroethene (TCE) concentrations display an increasing trend and have exceeded the remedial action level (RAL) for the last five groundwater monitoring events. A new monitoring well located southwest (down-gradient) of MW-206 is needed to define the extent of plume migration in this area.

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<sup>7</sup> Ramboll. 2023. Updated Remedy Work Plan, Whirlpool Facility, Fort Smith, Arkansas, EPA No. ARD0427 55389, AFIN No. 66-00048, CAO LIS 13-202-001. March.

**Response:** This October, Ramboll is tentatively scheduled to begin installation of the South Area injection program designed to intercept and treat groundwater upgradient of MW-206. Whirlpool proposes to implement the South Area work plan (approved by ADEQ on August 15, 2025)<sup>8</sup>, monitor response at MW-206, and then evaluate the need for installation of an additional monitoring well based on post remedy performance monitoring results.

**Comment 2:** Section 4.2.2, East Plume Discussion of Results: Eastern plume monitoring wells MW-184, MW-200, MW-99, MW-202, MW-212, and MW-211 display increasing TCE concentration trends and all exceeded the RAL for TCE in the 1H2025 sampling event. Additional downgradient monitoring wells are needed to define the extent of the TCE plume to the east.

**Response:** The potentiometric surface maps prepared for this Site along the eastern plume front have routinely demonstrated a groundwater flow gradient that transitions from easterly by the facility building to a northeastern flow. Groundwater analytical results from MW-183R and MW-98 (downgradient) and MW-212<sup>9</sup> (cross-gradient east) have been and continue to be either non-detect for TCE or detectable at concentrations  $\leq 1.2$   $\mu\text{g/L}$  since 2018 (TCE RAL is 5  $\mu\text{g/L}$ ). Based on the known hydraulic flow gradient of the East Plume and analytical results of existing downgradient and cross-gradient monitoring wells, installation of additional downgradient monitoring wells is not warranted at this time.

**Comment 3:** Section 4.3.2, North Plume Discussion of Results, first paragraph, first bullet, second sentence: Following in-situ chemical reduction (ISCR) treatments in 2018, plume boundary monitoring well MW-194 displayed a decreasing TCE trend reaching below the RAL. However, since 1H2022 the TCE concentrations have increased with results exceeding the RAL since the first half of 2023 sampling event. Additionally, MW-63R located southwest of MW-194 has displayed an increasing trend in TCE concentrations above the RAL. The closest down-gradient monitoring well is MW-97 located approximately 600+ feet down-gradient from MW-194 and MW-63R. An additional monitoring well is needed downgradient of MW-194 and MW-63R to define the plume extent.

**Response:** Whirlpool agrees that TCE concentrations in water collected from MW-194 have slightly exceeded the TCE remedial action level (RAL) of 5 micrograms per liter ( $\mu\text{g/L}$ ) in recent sampling events (max detection of 9.3  $\mu\text{g/L}$  in April 2024). The planned injections for the North Area (see response to comment 1 from the June 2025 ADEQ letter) includes using MW-194 as a downgradient remedy performance monitoring location. Whirlpool proposes to first implement the North Area work plan, monitor the response at MW-194, and then reevaluate the need for installation of an additional monitoring well.

**Comment 4:** Section 6, Summary and Conclusions: This section states, "Of the detected constituents, no COCs exceeded the respective conservative indoor air screening level based on a Hi of 0.1...". Based on the analytical results for indoor and outdoor air, several constituents exceed their respective screening levels. Please update this section to resolve this discrepancy.

**Response:** After reviewing this comment with our team, we concur the referenced summary statement regarding on-site indoor air in Section 6 from the 2025 semi-annual report was partially incorrect. Although indoor air vapor detections of TCE, chloroform, and

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<sup>8</sup> Arkansas Division of Environmental Quality, Office of Land Resources. 2025. Work Plan for South Area Injections dated July 18, 2025, Whirlpool Corporation, Fort Smith, Arkansas, EPA ID No. ARD042755389; AFIN 66-00048; CAO LIS 13-202-001. August 15.

<sup>9</sup> MW-212 was installed in 2024 and was non-detect for TCE in October 2024. The analytical results for this location during the April 2025 sampling event were rejected due to a shipment issue causing the sample temperature to be elevated upon receipt by the laboratory. It is not anticipated at this time that analytical results for MW-212 would have increased since October 2024 or that an increasing trend exists.



isopropanol were not appropriately referenced in this original summary statement, the conclusive portion of this statement regarding cumulative risk estimates as being below or within ADEQ acceptable ranges was correctly stated. Additionally, the risk review statements and supporting data related to the indoor air vapor detections of TCE, chloroform, and isopropanol within Section 5.1 of the report along with Tables 12 and 16 were also reviewed and found to be accurately reported. The referenced summary statement within Section 6 of the report will be replaced with the statement below and the report resubmitted to ADEQ.

"Of the detected constituents within indoor air only TCE, chloroform, and isopropanol exceeded their respective screening levels; however, cumulative risk estimates for the onsite worker were below or within ADEQ acceptable range of non-cancer hazard and cancer target values."

Additionally, a statement within Section 5.1.4 will also be revised as follows to provide appropriate clarity of context.

Original Statement in Section 5.1.4:

"Of the detected constituents, only TCE exceeded its respective indoor air screening level; however, cumulative risk estimates for the onsite worker were below or within ADEQ acceptable range of non-cancer hazard and cancer target values."

Revised Statement for Section 5.1.4:

"Of the detected constituents, only TCE exceeded its respective indoor air and sub-slab vapor screening levels; however, cumulative risk estimates for the onsite worker were below or within ADEQ acceptable range of non-cancer hazard and cancer target values."

**-oo0oo-**

We hope this correspondence provides the necessary clarifications and is responsive to ADEQ's comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Will Campbell". The signature is fluid and cursive, written over a light blue horizontal line.

**Will Campbell, PE**  
Senior Managing Consultant

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